Perinatal Society of Sri Lanka

FOUNDED 2001

Towards healthier mothers and newborns

21st ANNUAL SCIENTIFIC CONGRESS 2022

Perinatal Society of Sri Lanka

"Perinatal excellence through a new evidence-based approach to premature labour, delivery, and baby "

PROGRAMME & ABSTRACTS

4th, 5th of November 2022

Hotel Galadari Colombo, Sri Lanka

Perinatal Society of Sri Lanka

FOUNDED 2001

Towards healthier mothers and newborns

21st ANNUAL SCIENTIFIC CONGRESS 2022

Perinatal Society of Sri Lanka

"Perinatal excellence through a new evidence-based approach to premature labour, delivery, and baby "

PROGRAMME & ABSTRACTS

Edited by
Dr. Deepal Nawarathne

4th, 5th of November 2022
Hotel Galadari Colombo, Sri Lanka.

CONTENT

MESSAGE FROM THE CHIEF GUEST

It is with great pleasure that I issue this message for the 21st Annual Sessions of the Perinatal Society of Sri Lanka (PSSL). The PSSL is the key professional organisation in Sri Lanka providing leadership to improve both maternal and neonatal wellbeing. The society's contribution in maintaining perinatal health during the double burden of COVID pandemic and economic crisis is commendable. This year's theme "Perinatal excellence through a new evidence-based approach to premature labour, delivery and baby" is aimed at improving mortality and morbidity of preterm infants, which is an absolute necessity for the country. I am certain that the guest lectures, research presentation and discussions will fulfil this objective. My heartfelt appreciation goes out to the President and the council of PSSL in organizing an academic activity of this caliber during this difficult period. I wish all success to the 21st Academic session of the PSSL.

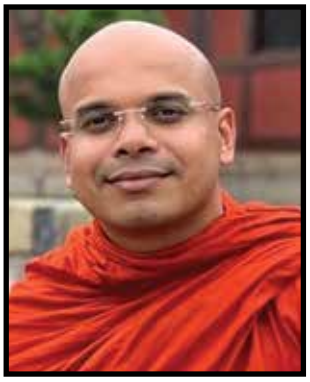
Dr. Asela Gunawardena
Director General of Health Services

MESSAGE FROM THE GUEST OF HONOUR

It gives me great pleasure to send this short message on the occasion of the Annual Perinatal Conference of the Perinatal Society of Sri Lanka year 2022. This organization is a multi disciplinary organization to promote quality health care from preconception to birth of the baby and up to infants. Perinatal Society council meeting and the activity started in the year 2001 and its 1st Annual Perinatal Conference was held in the year 2003. I wish all the best for the Annual Scientific Congress of the Perinatal Society of Sri Lanka for the year 2022 and all the future activities of the Perinatal Society.

Professor Indrajee Amarasinghe
Founder President of Perinatal Society of Sri Lanka

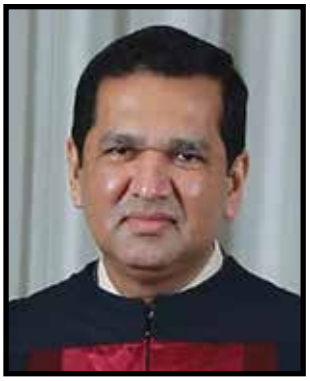
MESSAGE FROM THE SPECIAL GUEST



I am delighted to issue this message for the 21st Annual Sessions of the Perinatal Society of Sri Lanka (PSSL). Its contribution in perinatal health has been enormous over the years, especially during COVID 19 pandemic and recent economic crisis. PSSL's leadership in initiating and delivering "Save a Baby" national campaign together with Seruwila Mangala Rajamaha Viharaya, is one of the main highlights for me this year as we managed to fulfil the national requirement of "infant breathing support machines" for all necessary labor rooms and theaters in the hospitals across Sri Lanka. It will help reduce premature deaths and save thousands of innocent lives every year. My gratitude goes to the President of PSSL Dr.Saman Kumara and all the council members for the great service delivered through the year by PSSL in order to uplift the nation's perinatal health and for organizing this event. I wish all success to the 21st Academic session. May all beings be well and happy!!! Theruwan Saranai!!!

Ven. Aludeniye Subodhi Thero

MESSAGE FROM THE PRESIDENT PERINATAL SOCIETY



It's with my great pleasure and satisfaction that I write this message. I took over the office as the 21st president in January 2022 when the pandemic was just fading off and I was very positively looking forward to the year ahead with an organized plan to serve the country with my energetic council. Unfortunately, and unexpectedly, we were again hit by a massive wave of economic and political crisis. We had to revisit our plans for the year and cancel all planned outstretched academic activities. But we moved on virtually as much as possible.

Today, the Perinatal Society of Sri Lanka marks its proudness at its highest level due to its unmatched contribution to the nation during this year. With the blessings and diligent support from Ven. Aludeniye Subodhi Thero, the chief incumbent of Seruwila Mangala Rajamaha Viharaya, we were able to donate 120 modern neonatal resuscitation units to all main hospitals in the country covering every district of the island. The total cost was 160 million SLR and no other professional organization has done such a massive project within a short span of time.

Halfway through the year we had to change our priorities and came forward to support the health care services in the country by providing lifesaving medications which were critically in short supply due to the financial crisis. We are so happy that we managed to supply many lifesaving medications and consumables through the PSSL and we were the very first organization that started seeking donations from overseas. This created a wave of similar activities from other collages as well. I hope I can smoothly end my tenure as an extremely satisfied president. I would like to thank Ven. Aludeniye Subodhi Thero, the chief incumbent of Seruwila Mangala Rajamaha Viharaya, Dr Asela Gunawardana -DGHS, my council, PSSL staff, all the sponsors, all the donors, event organizers and Galadari Hotel staff for their contribution in making this year and the annual congress a success.

Dr. L. P. C. Saman Kumara
President - PSSL
Consultant Neonatologist

MESSAGE FROM THE PRESIDENT ELECT

At a time when transformations are needed in Sri Lanka, the Perinatal Society brings a strength of commitment from a multi-disciplinary team of professionals. The Annual Scientific session brings further opportunities in understanding ways forward. Undoubtedly , much rationalizing is needed now to preserve the gains in perinatal outcomes, but also not be complacent , but to move forward even with limitations. I believe the exchange of knowledge through this much awaited event , is important not only as scientific experience, but to be connected with one another when we make critical decisions in future.

I look forward to a fruitful exchange of knowledge and experience this year.

Dr. Susie Perera
President Elect - PSSL
Consultant Community Physician

MESSAGE FROM THE CONGRESS CHAIR

We wish to welcome you most cordially, to the 21st Annual Scientific Congress of the Perinatal Society of Sri Lanka (PSSL) this year, an event that has been planned to bring people together, in academic collaboration to face the current economic and political turmoil which threatens all the gains achieved in the health sector over the years.

We never gave up as a professional body but strived hard to overcome all the obstacles to help the health sector and the country steer out of all of the current crises. During this year we did not lose our quench for new knowledge and continued to organize academic activities and clinical meetings bringing all the medical officers together to reorient our approach toward that cherished goal of improving patient care with limited resources.

We have devised our plans to protect vulnerable groups, pregnant mothers and newborns by addressing their very special needs.

Our Annual Scientific Congress is the centerpiece of all academic activities in perinatal care, and it will be held at Hotel Galadari on the 4th and 5th of November 2022. The theme of the PSSL for 2022 is "Perinatal Excellence through a new evidence-based approach to premature labour, delivery and baby". There will be two Scientific Orations, two Plenary Lectures, six Symposia and two Panel Discussions in the scientific sessions, which would charm the academic palate of even the most discerning enthusiast.

This main congress will be preceded by a Pre Congress Workshop, for nurses and midwives which will be held in the same venue with wide participation.

We have organized two Panel Discussions focusing on current issues in the perinatal practice in the country. The selected thematic areas are dilemmas in managing extreme preterm at the limits of viability and optimizing perinatal outcomes in the current crisis in Sri Lanka. The selected panelists represent a well-experienced foreign and local resource team who can share their viewpoints with the audience to improve their insight and understanding of the issues.

We are rapidly learning to survive and deliver our services in a global chaotic situation with food insecurity, an energy crisis, a war in Europe and rising inflation in a post-Covid era. In such a background, we do hope to conduct a successful Annual Scientific Congress this year which meets the new demands of perinatal care with greater leaps into scientific advances.

Dr. Surantha Perera
Chair of the Scientific Committee
Consultant Paediatrician

MESSAGE FROM THE SECRETARY PERINATAL SOCIETY

It is indeed with great pleasure that I welcome all of you to the 21st Annual Academic Sessions of the Perinatal Society of Sri Lanka.

This year, the Perinatal Society of Sri Lanka, under the presidency of consultant neonatologist Dr.Saman Kumara, brings together health practitioners under the theme "Perinatal Excellence through a new evidence-based approach to premature labour, delivery and baby".

This year, we have completed a massive project and donated 120 neonatal resuscitation machines for all hospitals around the country, where deliveries are taking place. Thus, the PSSL has contributed Rs. 160 million to the ministry of health this year. This project will save thousands of lives every year, and we, as the council of the PSSL 2022 are proud that no professional organization has done such a contribution to the nation so far.

We, at the perinatal society never ceased our activities of promoting education within health care personnel, improving knowledge and maintaining proper standards of care.

I thank Dr.Asela Gunawardene, Director General Health Services for gracing the inauguration as the chief guest. My special thank goes out to Professor Indrajee Amarasinghe, the founder president of the PSSL and Ven.Aludeniye Subhodhi Thero, chief incumbent of Seruwila Mangala Rajamahaviharaya for accepting our invitation to be with us at the inauguration.

On behalf of the council, I also extend my gratitude, to the two orators and all international and local resource persons who accepted our invitation to contribute to this important academic event of the year. During the next 2 days, we will unveil an educative pre-congress workshop for nurses and midwives alongside academic sessions.

I cordially encourage all medical and paramedical teams practicing perinatal medicine both locally and internationally to attend our exciting line up of academic activities.

I would also like to express my heartfelt appreciation to everyone who assisted us in different ways throughout these difficult times in organizing this event.

With our concerted efforts, I am confident that the Perinatal Society will continue to rise to challenges ahead and nurture medical personnel for the 21st century.

Thank you!

Dr. Dilusha Atukorale
Secretary
Perinatal Society of Sri Lanka

MESSAGE FROM THE EDITOR PERINATAL SOCIETY

It is great pleasure to write these words for the annual scientific congress of the perinatal Society of Sri Lanka (PSSL) 2022. Even during these challenging times, we have as a team completed a successful year and provided knowledge, skills, and service to society to uplift neonatal and perinatal care. At the end of the year, we are planning this event's annual scientific congress to extend the knowledge and practices to improve standards of medical education within healthcare personnel.

In keeping with our theme for this year, "perinatal excellence through a new evidence-based approach to premature labour, delivery, and baby", we have a line-up of presentations to cover a wide breadth of topics in perinatology.

We also plan to conduct a pre-congress workshop to involve Nurses and Public Health Midwives, where the focus would be on Peripartum management, NICU care, Ethics of perinatal care, Perinatal mental Health, and especially preterm care.

I hope the knowledge shared at this meeting would contribute to the betterment of perinatal care. I would also like to express my heartfelt appreciation to everyone who assisted us in different ways throughout these difficult times in organizing this event.

Dr. Deepal Nawarathne
Editor
Consultant Neonatologist

Perinatal Society of Sri Lanka

Council Members - 2022

Standing from Left to Right **- Dr. Prabodhana Ranaweera** *(Consultant Obstetrician and Gynecologist)*, **Dr. Sanjeewa Thennakoon** *(Consultant Neonatologist)*, **Dr. U. D. P. Rathnasiri** *(Consultant Obstetrician and Gynecologist)*, **Dr. Himali Herath** *(Consultant Community Physician)*, **Dr. Medhani Hewagama** *(Consultant Psychiatrist)*, **Dr. Asiri Hewamalage** (*Consultant Community Physician)*, **Dr. Harendra Dassanayake** *(Consultant Community Physician)*, **Dr. Deepal Nawarathna** *- Editor (Consultant Neonatologist)*, **Dr. Dilani Dehigama** *- Assistant Treasurer (Consultant Neonatologist)*, **Dr. Priyanga Dematawa** *(Consultant Neonatologist)*, **Dr. Shyama Basnayaka** (*Consultant Neonatologist)*, **Dr. Nalin Gamathige** *(Consultant Neonatologist)*

Seated from Left to Right **- Dr. Dilusha Atukorale** *- Secretary (Consultant Paediatrician)*, **Dr. Sandya Doluweera** *(Consultant Paediatrician)*, **Dr. Kapila Hemantha Kankanamge** *(Consultant Paediatrician)*, **Dr. Kapilani Withanaarachchi** *(Consultant Paediatrician)*, **Dr. Nimesha Gamhewage** *- Assistant Secretary (Consultant Neonatalogist)*, **Prof. Sanath Lanarolle -** *Immediate Past President (Consultant Obstetrician and Gynaecologist)*, **Dr. L. P. C. Saman Kumara** *- President (Consultant Neonatologist)*, **Prof. Dulani Gunasekara -** *Journal Editor (Professor in Paediatrics)*, **Dr. Surantha Perera** *- Managing Editor (Consultant Paediatrician)*, **Dr. Susie Perera** *- President Elect (Consultant Community Physician)*, **Dr. Kaushalya Kasturiarachchi***(Consultant Community Physician)*, **Prof. Rasika Herath** *(Professor in Obstetrics and Gynaecology)*, **Dr. Ruwan Silva** *- Treasurer (Consultant Obstetrician and Gynaecologist)*

Absent **- Dr. Sandya Bandara** *(Consultant Paediatrician)*, **Dr. Nishani Lucas** *(Consultant Neonatologist)*

PERINATAL SOCIETY OF SRI LANKA - COUNCIL 2022

President
Dr. L. P. C. Saman Kumara
Consultant Neonatologist

President Elect
Dr. Susie Perera
Consultant Community Physician

Immediate Past President
Prof. Sanath Lanerolle
Consultant Obstetrician and Gynaecologist

Secretary
Dr. Dilusha Atukorale
Consultant Paediatrician

Assistant secretary
Dr. Nimesha Gamhewage
Consultant Neonatalogist

Treasurer
Dr. Ruwan Silva
Consultant Obstetrician and Gynaecologist

Assistant Treasurer
Dr. Dilani Dehigama
Consultant Neonatalogist

Editor
Dr. Deepal Nawarathne
Consultant Neonatologist

Journal Editor
Prof. Dulani Gunasekara
Proffesor in Paediatrics

Managing Editor
Dr. Surantha Perera
Consultant Paediatrician

Council

Dr. Sandya Bandara
Consultant Paediatrician

Dr. Kapilani Vithanarachchi
Consultant Paediatrician

Dr. Sandya Doluweera
Consultant Paediatrician

Dr. Kapila Hemantha Kankanamge
Consultant Paediatrician

Dr. Nishani Lucas
Consultant Neonatologist

Dr. Sanjeewa Thennakoon
Consultant Neonatologist

Dr. Nalin Gamathige
Consultant Neonatologist

Dr. Shyama Basnayaka
Consultant Neonatologist

Dr. Priyanga Dematawa
Consultant Neonatologist

Dr. U.D.P.Rathnasiri
Consultant Obstetrician and Gynecologist

Dr. Prabodhana Ranaweera
Consultant Obstetrician and Gynecologist

Prof. Rasika Herath
Professor in Obstetrics and Gynaecology

Dr. Kaushalya Kasturiarachchi
Consultant Community Physician

Dr. Harendra Dassanayake
Consultant Community Physician

Dr. Asiri Hewamalage
Consultant Community Physician

Dr. Himali Herath
Consultant Community Physician

Dr. Medhani Hewagama
Consultant Psychiatrist

NINEWELLS
A LIFETIME OF CARE

Why Choose Ninewells Hospital

- The only specialised women & childcare hospital in Sri Lanka's private healthcare setup
- Over a decade of nursing and medical expertise in maternity and childcare
- Best Neonatal ICU in Private Sector
- Private labour rooms and 24/7 pain management during labour
- Specialised team for inpatient & outpatient breast feeding support
- Neonatal TSH & Audiometry Testing
- Maternal & paediatric physiotherapy

+ 94 11 204 9999 / 071 035 0216

Perinatal Society of Sri Lanka

FOUNDED 2001

Towards healthier mothers and newborns

Annual Scientific Congress

of the

Perinatal Society of Sri Lanka 2022

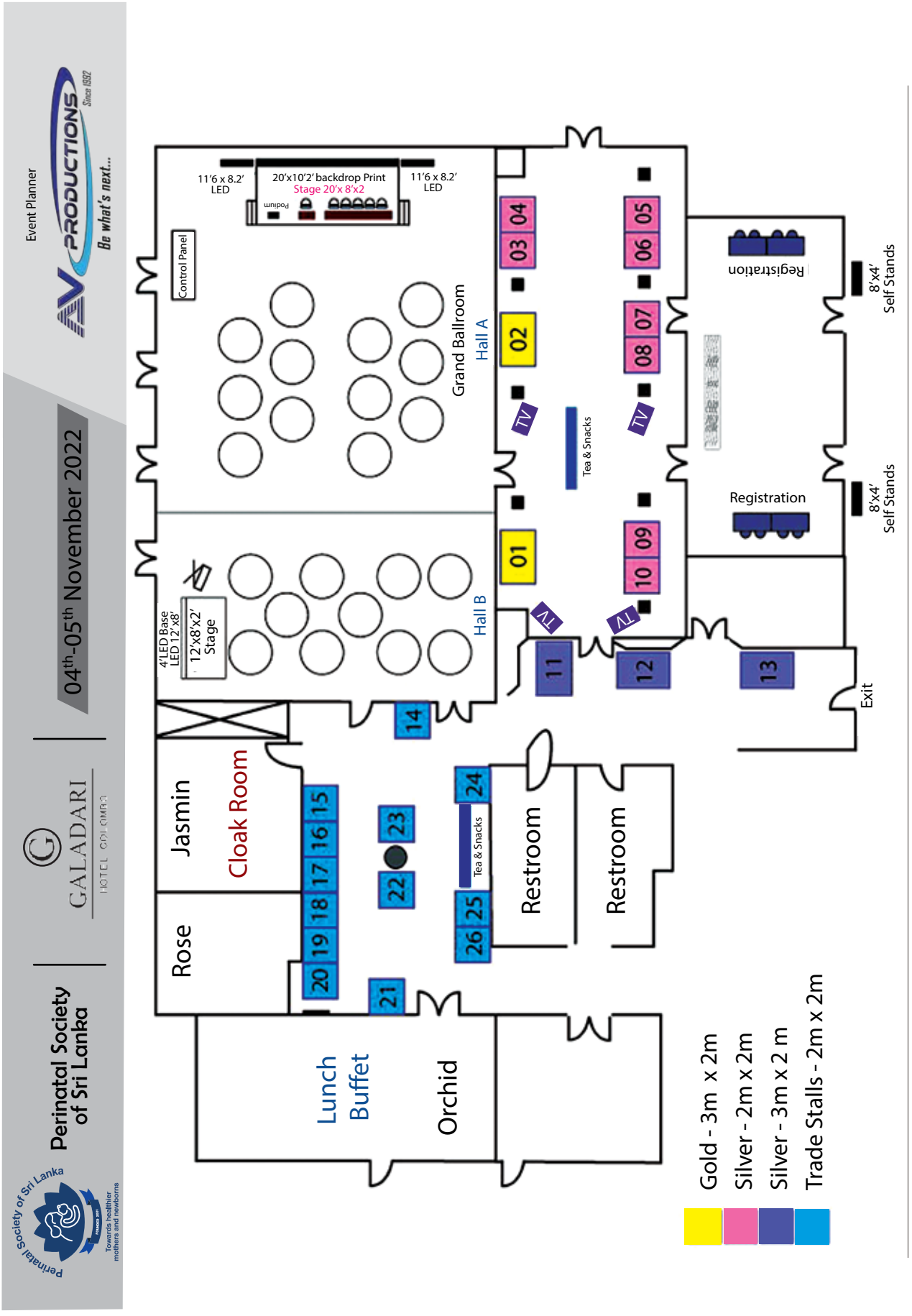
5th of November 2022

Hotel Galadari Colombo, Sri Lanka

PROGRAMME OF ANNUAL SCIENTIFIC CONGRESS

	Hall A	Hall B
7.30 am - 8.00 am	**Registration**	
8.00 am - 9.00 am	**Oral Presentations** *Chairpersons:* Dr. Sandya Doluweera / Dr.Himali Herath	**Oral Presentations** *Chairpersons:* Dr. Ruwan Silva / Dr. Asiri Hewamalage
	Judges: Dr. Kapilani Withanaarachchi Dr. Hemali Jayakodi	*Judges:* Prof. Rasika Herath, Dr. Harendra Dassanayake
9.00 am - 9.30 am	**Plenary 1: Reducing Neonatal Mortality:** Sharing experiences from Japan, the country with the lowest neonatal mortality in the region. *Professor Mariko Hida*	**Plenary 2: New frontiers in Fetal Medicine** *Prof. Tiran Dias*
9.30 am - 10.15 am	**Prof. Indraji Amarasinghe Oration -** *Dr. Rohana Haththotuwa, Senior Consultant Obstetrician and Gynaecologist* **Caesarian Section Rates - A Global tragedy : What can we do?**	
10.15 am - 10.30 am	**Tea**	
10.30am - 12.00 pm	**Symposium 01:** Different dimensions of perinatal care *Chairpersons:* Dr. L.P.C. Saman Kumara Dr. Chithramalee de Silva **a. Noninvasive monitoring of neonates** *Prof. Meena Garg* **b. Perinatal mental health in community setting** *Dr. Kaushalya Kasthuriarachchi* **c. Post-surgical care of a newborn** *Dr. Ananda Lamahewage*	**Symposium 04:** Preterm Labour *Chairpersons:* Dr. Janaki Karunasinghe / Dr. Dilani Dehigama **a. Monitoring and managing preterm labour** *Prof. Sanath Lanerolle* **b. Novel strategies in prevention of preterm labour** *Prof. Rasika Herath* **c. Neonatal perspective of perinatal care of preterm** *Dr. Nishani Lucus*
12.00pm - 1.00 pm	**Panel Discussion:** Dilemmas in managing an extreme preterm at limits of viability *Prof. Hemantha Senanayake,* *Prof. Dominic Wilkinson/ Ms. Avanthi Perera*	**Panel Discussion:** Optimizing perinatal outcomes in current crisis in Sri Lanka *Dr. U.D.P Rathnasiri / Dr. Surantha Perera/* *Dr. Sussie Perera*
1.00 pm - – 1.45 pm	Lunch and Poster Viewing	
1.45 pm - 3.15 pm	**Symposium 02:** Growth and development of preterm infants *Chairpersons :* Dr. Kapila Hemantha, Dr. Sandya Bandara **a. Preterm nutrition** - *Dr. Nalin Gamaathige* **b. Metabolic Bone Disease** - *Dr. Shyama Basnayake* **c. Developmental care** - *Dr. Asiri Hewamalage*	**Symposium 05:** Quality improvement in perinatal care *Chairpersons* : Prof. H. Senanayake, Dr. U.D.P. Rathnasiri **a. Application of Robson classification in audits and feedback -** *Prof. Lubna Hassan* **b. Maternity dashboard in performance and governance -** *Prof. Sir Sabaratnam Arulkumaran* **c. Reducing iatrogenic prematurity** *Dr. Prabhodana Ranaweera*
3.15 pm - 4.45 pm	**Symposium 03:** Respiratory care of the preterm infant *Chairpersons:* Dr. Surantha Perera, Dr. Kapilani Withanarachchi **a. Volume Guaranty Ventilation** *Dr. L. P. C. Saman Kumara* **b. Less Invasive Surfactant Administration** *Dr. Nimesha Gamhewage* **c. Noninvasive Respiratory Support** *Dr. Amit Gupta*	**Symposium 06:** Genetics in perinatal care *Chairpersons* : Dr. Nishani Lucus, Dr. Vindya Subasinghe **a. Ethical issues in prenatal screening and diagnosis** *Dr. U.D.P. Rathnasiri* **b. Challenges in pre implantation genetic assessment** *Dr. Padmapani Padeniya* **c. Neonatal Screening for Birth Defects** *Dr. Deepal Nawarathna*
4.45 pm - 5.00 pm	**Tea**	

FLOOR PLAN


Event Planner
PRODUCTIONS
Be what's next...
04th-05th November 2022
GALADARI
HOTEL COLOMBO
Perinatal Society of Sri Lanka
Perinatal Society of Sri Lanka
Towards healthier mothers and newborns
11'6 x 8.2' LED
20'x10'2' backdrop Print
Stage 20'x 8'x2
11'6 x 8.2' LED
Podium
Control Panel
Grand Ballroom
Hall A
Hall B
4'LED Base
LED 12'x8'
12'x8'x2' Stage
Tea & Snacks
Registration
8'x4' Self Stands
Exit
Jasmin
Cloak Room
Rose
Lunch Buffet
Orchid
Restroom
Restroom
Gold - 3m x 2m
Silver - 2m x 2m
Silver - 3m x 2 m
Trade Stalls - 2m x 2m

FACULTY - ANNUAL SCIENTIFIC CONGRESS

Prof. Lubna Hasan
Pakistan

Prof. Dominic Wilkinson
UK

Prof. Sir Sabaratnam Arulkumaran - UK

Prof. Meena Garg
UK

Dr. Amit Gupta
UK

Prof. Uday Devaskar
UK

Dr. Rohana Haththotuwa
Sri Lanka

Prof. Sanath Lanerolle
Sri Lanka

Prof. Hemantha Senanayaka
Sri Lanka

Prof. Tiran Dias
Sri Lanka

Dr. U.D.P. Ratnasiri
Sri Lanka

Dr. Saman Kumara
Sri Lanka

Dr. Susie Perera
Sri Lanka

Dr. Kaushalya Kasthuriarachchi
Sri Lanka

Dr. Padmapani Padeniya
Sri Lanka

Dr. Nishani Lucus
Sri Lanka

FACULTY - ANNUAL SCIENTIFIC CONGRESS

Dr. Asiri Hewamalage
Sri Lanka

Dr. Nimesha Gamhewage
Sri Lanka

Ms.Avanthi Perera
Sri Lanka

Dr. Shyama Basnayake
Sri Lanka

Dr. Surantha Perera
Sri Lanka

Dr. Nalin Gamathige
Sri Lanka

Dr. Ananda Kumara Lamahewage
Sri Lanka

Dr. Prabhodana Ranaweera
Sri Lanka

Dr. Vinya Ariyaratne
Sri Lanka

Dr. Deepal Nawarathne
Sri Lanka

ABSTRACTS - ANNUAL CONGRESS SCIENTIFIC SESSIONS

Plenary 1

sharing experiences from Japan, the country with lowest neonatal mortality in the region

Prof. Mariko Hida

Plenary 2

New frontiers in fetal medicine

Prof. Tiran Dias

The fetus has always been an enigma that fascinated all who were interested in mysteries of human life. Before fetal imaging came to life, scientists were relentless in their pursuit to get a better understanding of the fetus. From Leonardo Da Vinci's sketches showing fetus within a cadaver in 1500s, we have come a long way in fetal imaging.

Roentograms were introduced in early 20th century which are considered as the earliest forms of imaging in fetal medicine. These were used in diagnosing pregnancy, determining number of fetuses, fetal lie and presentation.

In late 1900s, revolutionary obstetric ultrasonography came to life with first reports on placentography and cephalometry pioneered by Stuart Campbell and Ian Donald. Along with its birth, fetal medicine became an emerging speciality with an optimistic future. With advances in technology and research, it is now possible to identify and at times treat fetal complications in utero. As a result, the field of obstetrics witnessed unfathomable progress over the years. At the peak of the advances, now the technology has allowed us to scan most complex of organs and to have the images in 3 dimension.

Novel modalities like magnetic resonance imaging are now being introduced into the field of fetal medicine. The future of fetal imaging is definitely promising with countless opportunities on our way to broaden the potential.

Prof. Indraji Amarasinghe Oration

Dr. Rohana Haththotuwa, Senior Consultant Obstetrician and Gynaecologist

Symposium 1: Different Dimensions of perinatal care

NON-invasive Monitoring in Neonates

Meena Garg, MD
Professor of Pediatrics, David Geffen School of Medicine at UCLA

Objectives

1. Physiology and applications of non-invasive monitoring of Neonates in intensive care
2. Various options for non-invasive monitoring for oxygenation and ventilation
3. Options for Point of care testing to decrease blood draws on NICU patients
4. Assessment foe adequate Perfusion in critical congenital heart disease and HIE

No Conflict statement

1. The speaker has no financial connections with the equipment manufacturer shown in this presentations
2. Use of images of equipment is to provide examples of displays
3. This talk is not supported by any pharmaceutical company or manufacturer grants Post-partum care pro vision for a COVID 19 affected mother in the field

Perinatal mental health in community setting

Dr. Kaushalya Kasthuriarachchi

Pregnancy and child birth are a time of great joy and happiness for most women and their families. However, for some women this is a very challenging period. The emotional and physical changes that are happening which occur rapidly during pregnancy and postpartum period cause many psychosocial changes including relapses of existing psychological conditions and illnesses.

Mental health conditions during this period cause many adverse effects to the mother, her newborn and the family. Maternal deaths due to suicides are becoming a concern. Around 25 maternal deaths due to suicides are reported annually in Sri Lanka. Most of these deaths could have been prevented if support services are established and freely available. Maternal suicides are the tip of the iceberg where as so many mental health issues go unnoticed. More severe forms of perinatal mental health issues are often associated with impaired functioning, especially in relation to a woman's ability to care for her newborn and the formation of secure infant attachment, which may in turn be associated with poorer social, cognitive, and behavioral outcomes in children.

Primary care is typically the first point of contact of a woman when she is pregnant or planning for a pregnancy. Together with maternity services, primary care services are responsible for the woman's overall care in the perinatal period. Grassroots level public health worker, the Public Health Midwife and the middle level manager, the Medical Officer of Health should play an important role in detecting and managing these conditions. Services should begin at preconception level. All primary healthcare care workers should have a basic knowledge about the perinatal mental health conditions, know what the risk factors are and how to identify and also support by promoting the psychological wellbeing of all women during the perinatal period. Care pathways need to be developed and implemented at the field level. Bereavement services need to be established. Further investments are needed into public health interventions in developing perinatal mental health services, potentially for women and men, to reduce maternal and child morbidity and mortality. This will be beneficial to the general wellbeing of the whole family.

Post-surgical care of a newborn

Dr. Ananda Lamahewage

Perioperative care of newborns is a challenging task for all involved parties. Unfortunately, guidelines on post-operative care are still evolving and available protocols are vague at best. This is unsurprising as neonates as a group compromise a highly complicated and variable physiology and homeostasis in contrast to adults and older children and present with complex congenital abnormalities. Impact of anaesthesia and surgery on their systems are yet to be fully understood. Hence, the need for multidisciplinary involvement and inputs from specialists including, but not limited to paediatric surgeon, anaesthetist, neonatologist, nutritionist, and stoma care nurses cannot be overstated. Attention should be mainly focused on fluid and electrolyte balance, temperature regulation, optimal and safe analgesia, use of antibiotics and prevention of infections, nutrition,

management of tubes and stomas and the surgical wound among others. Available evidence needs to be always accounted for where and when possible and yet the management has to be highly tailored to individual clinical settings and access to facilities. In addition, sound communication between parties involved, good team work and documentation practices spanning the peri-operative period as well as the parental involvement will directly help to improve the short and long term outcomes of newborns in Sri Lanka.

Symposium 4 : Preterm labour

Monitoring and managing preterm labour

Prof. Sanath Lanarolle

Preterm labour is defined as onset (spontaneous) of labour before 37 completed weeks of gestation. Preterm labour occurs in 5-10% all deliveries, among them 2/3rd are spontaneous and 1/3rd are Iatrogenic.In multiple pregnancy nearly 50% are born pre term. As a result of advances in neonatal care and obstetric interventions, threshold of fetal viability is decreasing from 26 weeks to 23-24 weeks.

QUiPP Digital app has been developed to predict preterm birth, based on a woman's individual risk factors, such as previous preterm birth, late miscarriage or symptoms, along with clinical test results. There are several interventions to prevent spontaneous preterm birth, such as Vaginal Progesterone, cervical cerclage and vaginal pessaries.

Interventions to improve perinatal mortality and morbidity of preterm infants less than 34 weeks include steroids, Magnesium Sulphate and antibiotics. Steroids have found to reduce Neonatal deaths, Respiratory Distress Syndrome (RDS), Intraventricular Haemorrhage (IVH), Necrotising enterocolitis and Infant systemic infection in first 48hrs. Magnesium Sulphate is for neuroprotection which is found to reduce the risk of cerebral palsy and gross motor dysfunction. Antibiotics are offered during labour to women who are in pre-term labour.

Neonatal facilities are major determinant of neonatal outcome. Intrauterine transfer to a center with neonatal facilities is considered after liaison with neonatology team, obstetric team at tertiary center. Determination of mode of delivery in preterm labour needs to be individualized and driven by clinical judgement. According to a South Asian study, caesarean deliveries are associated with 12 times more post partum blood loss than vaginal deliveries. According to WHO multi country survey caesarean section was associated with increased odds of MICU admission maternal near miss (but not maternal death) and NICU admission. If the Cesarean section is planned, preoperative counseling, consent, availability of NICU bed and the presence of neonatology team have to be considered. If the membranes are intact, Amnion protective Caesarean section can be done. Immediate neonatal care is advised. If preterm vaginal delivery is planned Skilled practitioner should be available. If instrumental delivery required ,forceps may be used. Counselling, liaising with neonatology unit and clear documentation of instructions to the parents must be carried out after the delivery.

Novel strategies in prevention of preterm labour

Prof. Rasika Herath

Neonatal perspective of perinatal care of preterm

Dr. Nishani Lucas

Advances in perinatal care have led to steadily improving outcomes for babies especially at lower gestational ages in Sri Lanka. Perinatal care for preterm babies should be individualised and led by senior staff in midwifery, nursing, obstetrics and neonatology to obtain the best outcomes. Parents should be included in discussions about perinatal care, while exploring their hopes and expectations honestly and compassionately. Decisions should be made together with parents, based on the best available evidence about the prognosis for the individual baby and not simply gestational age., while being mindful of the need to act in the baby's best interests. While prevention of preterm birth is of utmost importance, management of preterm birth once it is imminent is also equally important. Extreme or very preterm births should occur in a Level III Neonatal Unit that is closest to the parents. Timely in-utero transfer is of vital importance, as transferring the baby in-utero rather than ex-utero contributes to a massive improvement in the outcome. Antenatal steroid therapy as well as intravenous magnesium sulphate play an important role in improving the neurodevelopmental outcome. Intrapartum antibiotic prophylaxis is indicated only in the event of prelabour rupture of membranes. Delayed cord clamping from 1-3 minutes improves neurodevelopmental outcomes. Thermoregulation is also of vital importance, as hypothermia is an independent risk factor for intraventricular and pulmonary haemorrhage, leading to mortality and poor neurodevelopmental outcomes. Expression of breastmilk within the first hour of birth, to ensure provision of own mother breast milk and early skin to skin care within the first 1000 minutes lead to shorter hospital stays and better neurodevelopmental outcomes. Supporting the family to cope with the stress on the birth of a preterm baby is also important and will require liaison with psychologists and psychiatrists. Provision of developmental care in the neonatal unit as well as neurodevelopmental assessment and early intervention are also important components in ensuring better neurodevelopmental outcomes in perinatal care.

Panel Discussion : 1

Dilemmas in managing an extreme preterm at limits of viability

Prof. Hemantha Senanayake, Prof Domonic Wilkinson, Ms Awanthi Perera

Panel Discussion : 2

Optimizing perinatal outcomes in current crisis in Sri lanka

Dr. U.D.P. Rathnasiri, Dr. Surantha Perera. Dr. Sussie Perera

Symposium 3 : Growth and Development of preterm infants

Preterm nutrition

Dr. Nalin Gamaathige

Preterm births are the second leading cause of newborn deaths after congenital anomalies in Sri Lanka. Although there has been an improvement in the overall mortality in extremely premature infants in recent times, there is a rising need to develop newer strategies for lowering the potential complications of preterm birth.

Preterm birth survivors are at a higher risk of growth and developmental disabilities compared to term newborns. Development of strategies to lower the complications of preterm birth forms the rising need of the hour. Appropriate nutrition is essential for the growth and development of preterm infants. Increased energy

and protein intakes both early in hospitalization and across its entire duration are associated with higher free fat mass at discharge which is closely linked to brain development. Therefore early administration of optimal nutrition to preterm birth survivors lowers the risk of adverse health outcomes and improves cognition in adulthood.

Metabolic Bone Disease

Dr. Shyama Basnayake

Metabolic Bone Disease (MBD) of prematurity remains a significant problem for preterm,chronically ill neonates.The definition and recommendations for screening and treatment of MBD vary in the literature.

We define MBD as decreased bone mineral content relative to the expected level of mineralization for a fetus or infant of comparable size or gestational age. Most commonly ,MBD occurs as a result of inadequate calcium and phosphorous status exacerbated by inadequate intake and the high degree of skeletal growth occurring in the early post natal life.MBD typically presents within 6-16 weeks after birth.

Bio chemical changes of MBD include hypophosphatemia,hyperphosphatasia and secondary hyperparathyroidism. Significant loss of bone mineralization is needed before characteristic changes are visible on radiograph. Early identification and treatment is important to prevent short -term and potential long -term complications. Therefore routine screening of high risk babiesat ------weeks is quite important. Serum Alkaline phosphatase (ALP) >900IU/l with S.Phosphorous levels <5.6mg/dl (1.8mmol/l)yields 100% sensitivity with 70% specificity.

Monitoring of bio chemical marker is not only necessary for diagnosis and assessment of therapeutic response ,but also to screen for complications of mineral supplentation. The role of vit D deficiency in MBD remains to be seen. Radiographic changes of MBD include demineralization or osteopenia.rachitic changes,fractures.

The primary prevention and treatment for MBD include optimizing nutrition,especially calcium ,phosphorus and vit D .Limiting prolonged exposure to commonly prescribed medication which further reduce mineral stores or increase bone resorption. The goal is not only to maintain normal S.levels but also mimic in utero bone accretion rates for calcium ,phosphorous .

Developmental care

Dr. Asiri Hewamalage

'Thriving beyond survival' is a front-line agenda of the 2030 sustainable development goals (SDG) global strategy of the United Nations to which Sri Lanka also has ratified. Applying to the area of perinatology, this urges us to think ahead of the 'neonatal mortality rate (NMR)', even though we are still struggling to traverse the last mile of reducing the NMR. While we are investing on latest technological advancements and high-end therapies in neonatal medicine, it is mandatory to address newborns thriving beyond survival. Hence, the Sri Lankan child health priorities should focus on improving the lives of survivors of conditions such as prematurity, neonatal encephalopathy and neonatal infections.

One of the main challenges faced by the neonatal survivors is the neurodevelopmental disabilities which are caused due to an insult to the developing brain during the antenatal or perinatal period. Cerebral palsy, autism spectrum disorder, dyslexia and intellectual impairment are example of such developmental disabilities which are common. Therefore, a close neuro-developmental follow-up of these high-risk newborns is essential for

early detection of any brain damage, to prevent or restrict a poor neuro-developmental outcome through early intervention.

Intervention is particularly beneficial during the first thousand days of life due to rapid brain growth and neuroplasticity, with impact demonstrated on child development as well as educational achievements and higher earnings later in life. The importance of developmentally conducive interventions starts from day one in life and for the high-risk neonates this includes the days they stay in neonatal intensive care units (NICUs) as well. The early interventions (EIs) for high-risk neonates could begin from the NICU itself, even though literature specify it is usual to start such programs during the first year of life. There are several key components of such programs. These include 1) NICU environmental enrichment, 2) Responsive parenting, 3) Early screening and early intervention, and 4) Referral, follow-up and transition Thus, the developmental care of the newborn encompasses all the above.

Symposium 5 : Quality improvement in perinatal care

Application of Robson classification in clinical Audit and feedback

Prof. Lubna Hassan. FRCOG

Caesarean section (CS) is a lifesaving procedure for the mother and infant in certain situations, however in a growing number of cases CS is performed for questionable clinical indications, under suboptimum conditions. The recent rise in the CS rate, has been shown to negatively impact maternal and perinatal outcomes and demands evidence-based strategies to safely optimize CS use.

At the present time there are 2 pathways for evidence-based care: randomized controlled trials (RCTs) and perinatal audit. RCTs are considered the highest form of evidence and undoubtedly often are. However, in complex situations such as labor and delivery, perinatal audit in an organized and structured way with adequate training may become more useful.

The clinical audit cycle has been defined as a ‘quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change’. Essential elements of the cycle include (1) measuring care against standards, (2) taking action to improve care and (3) monitoring to sustain improvement.

Audit and feedback is a variation of the clinical audit cycle where, after initial measurement, the key action is fed back to the relevant staff as a strategy to modify behaviour. The clinical audit cycle and, in particular, audit and feedback have been used to change behaviour in a variety of clinical contexts including the reduction of CS rates, with mixed results.

As a prospective, objective, and replicable classification system, the Robson classification is well suited to help with the three core components of the clinical audit cycle. Its widespread adoption allows standardised comparisons of CS rates across time and settings and the prospective identification of specific groups of women which most contribute to the overall CS rate.

This makes the Robson classification an appealing tool within audit and feedback cycles. The TGCS was on its own never intended to answer all questions. The processes that vary between labor and delivery units such as diagnosis of labor, rupture of membranes, diagnosis and treatment of dystocia, diagnosis of fetal distress, use

of epidural analgesia, induction of labor, and many others are all important to understand when interpreting the TGCS results in a particular data set. Moreover the TGCS does not include indications for CS and in order to plan a strategy indications for CS in each group would need to be studied thus the Robson classification is the starting point of a process for more in-depth review .

Maternity Dash Board – A Clinical Governance Tool to Improve Safety and Quality of Care

Prof. S. Arulkumaran, Head of Obstetrics & Gynaecology,
St George's University of London, Cranmer Terrace, London SW17 0RE.

Clinical Governance is defined as "A framework through which Health Service organisations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish". Clinical governance aims to merge managerial, organisational, and clinical approaches to improve quality of clinical care by developing systems and processes that would provide us with an opportunity to safeguard existing good clinical practice, while enabling us to improve our care. It will assess capacity and facilities of the workplace, numbers and fitness of health care providers, existence of evidence based clinical guidelines, multisource training to deliver care, audit of adherence to guidelines, analysis of risk incidents and response to complaints.

Benchmarking is about setting standards, against which we could monitor our performance, which can be assessed using clinical indicators (e.g. Health improvement, Fair access, Effective delivery of appropriate healthcare, Efficiency, Patient and carer experience, Health outcomes of care). Maternity dash boards help to monitor the monthly, workload, staffing numbers and adequacy, ongoing teaching and training programs, operative interventions, clinical outcomes of admission to ICU, risk incidents and complaints. Based on the regular returns of this audit of structure, process and outcomes, actions can be taken to rectify deficiencies and to improve quality and safety of care. This should enable us to appreciate and safeguard our high standards of care, while at the same time, identify areas that need improvement. The overall aim is to develop and sustain an environment that facilitates, encourages, promotes and values clinical excellence.

Clinical Performance and Governance Score Card or Dashboard is a tool that could be employed to monitor the implementation of principles of clinical governance 'on the ground'. It helps us to benchmark our activity and monitor our performance against the standards we have set for our maternity unit (i.e. locally), on a monthly basis. Hence, it is just like a 'Dashboard' of a car, which gives us contemporary information about the amount of fuel in the tank, speed, battery, temperature of the engine, etc., so that we could take appropriate action, if indicated. The purpose of the 'Clinical Performance and Governance Score Card' is to provide us with contemporary information about our resources, clinical activity, risk management issues, user views etc. thus enabling us to identify and respond to 'deviations from our goals' timely and appropriately, to avoid patient safety incidents and to improve clinical care.

Individual Units could set local goals for each of the parameters monitored and to set upper and lower thresholds. A suggested approach is to use Green (when the goals are met, i.e. within the lower threshold), Amber (when the goals are not met. i.e. above the lower threshold, but still within the upper threshold) and Red (when the upper threshold is breeched). If a parameter is in Amber, it indicates that action is needed, if one is to avoid entering the red zone. If it is in the red zone then immediate action is needed from the highest level to maintain safety and to restore quality. Increasingly hospitals are monitoring clinical governance using this system to improve services. It is the responsibility of the Professional organisations to work with the Government and Medical Council to build the clinical governance framework for the improvement of safety and quality of care.

Reducing iatrogenic preterm birth

Dr. Prabhodana Ranaweera

Iatrogenic preterm birth is a planned delivery that occurs before 37 weeks of gestation. However, in some cases, such deliveries also occur with no apparent medical indication. The increasing numbers of iatrogenic preterm deliveries worldwide have led to identify modifiable causes of preterm Labour. This will enable preventive strategies to be implemented to reduce preterm deliveries. The main four causes of iatrogenic preterm Labour are

1. Obstetrics causes
2. Fetal causes
3. Maternal health causes
4. Non medical causes

In this presentation strategies to reduce preterm Labour in above four categories will be discussed. The importance of dating all pregnancies by ultrasound scan cannot be underestimated. Prevention of hypertensive disorders in pregnancy plays a key role in reducing iatrogenic preterm deliveries. Single embryo transfer policies to prevent multiple pregnancies as a substantial contributor of iatrogenic preterm birth. Reduction of unnecessary cesarean sections must be warranted, and mechanisms to ensure the appropriate time of delivery and strengthening of education and communication processes must be pursued.

Symposium 3 : Respiratory care of the preterm infant

Volume Guarantee ventilation

Dr. L.P.C. Saman Kumara
President-PSSL 2021/2022 & Consultant Neonatologist, Castle Street Hospital for Women

There are number of confusing modes of mechanical ventilation. The biggest disadvantage associated with any mode is “ventilator induced lung injury” (VILI). The newer modes of mechanical ventilation help minimize VILI. In mechanical ventilation, which ever mode is used, the expected target is to send a physiological volume of gas (tidal volume) into the lungs during the inspiration. In pressure controlled ventilation, there is no control of tidal volume and it could be inadequate or too much causing lung damage in either situation. Increased awareness of the role of volutrauma, and lung over distension in the pathogenesis of ventilator-induced lung injury in animal models and adults has led to the development of volume-targeted modes of ventilation for neonates. The pressure required to inflate the lungs of very preterm infants varies considerably owing to changes in their lung disease, the size of their spontaneous breaths, surfactant treatment, the use of un-cuffed endotracheal tubes with a variable leak and different ventilation strategies. Volume guarantee (VG) ventilation aims at ensuring a consistent expiratory tidal volume by varying the peak inflating pressure (PIP) for each inflation. With the improvement of lung parenchymal disease, the pressure required to deliver the same tidal volume becomes smaller and thereby the PIP is weaned automatically. This mode of ventilation is found to be safer for new born babies and becoming more and more popular in neonatal units across the globe and its very important to be familiar with it.

Less Invasive Surfactant Administration

Dr. Nimesha Gamhewage

Respiratory distress syndrome (RDS) is extremely common among preterm infants. RDS is due to surfactant deficiency, resulting in increased surface tension of alveoli, leading to alveola collapse. Babies develop significant respiratory distress needing respiratory support and supplementary oxygen. Surfactant therapy has changed the natural history of RDS, and reduces the mortality, morbidity, and incidence of chronic lung disease in preterm infants. Provision of non-invasive respiratory support is preferred. Yet, significant proportion of infants fail non-invasive support, needing surfactant administration. To avoid lung injury related to mechanical ventilation, alternative approaches of surfactant delivery have been developed. The most applied method is the INSURE (intubate- administer surfactant- extubate) technique. However, some infants cannot be extubated immediately after surfactant treatment. Therefore, less invasive surfactant administration was introduced, where surfactant is administered via a thin catheter, while the baby is still receiving non-invasive respiratory support, preventing the need for intubation. Recent studies demonstrate that compared to INSURE technique, LISA is associated with reduced incidence of mechanical ventilation, bronchopulmonary dysplasia, intraventricular haemorrhage and mortality.

Noninvasive respiratory support

Dr. Amit Gupta

Symposium 6 : Genetics in perinatal care

Ethical issues in Prenatal Screening Diagnosis and Management

Dr. U. D. P. Ratnasiri

Screening-Surveying a population, using a specific marker or markers and defined screening cut-off levels, to identify the individuals in the population at higher risk for a particular disorder and diagnosis is applied at the individual patient level.

Diagnostic outcomes of prenatal testing can be classified for purposes of ethical discussion into the following categories:

l) disorders with lethal or severely debilitating, non-treatable malformations for which selective abortion is considered
2) disorders for which immediate postnatal treatment is available
3) disorders that may be treated in utero with medication, hormones, or surgery;
4) fetal characteristics not ordinarily thought of as ‘ ‘diseases” that are either sought intentionally (e.g., fetal sex), or found incidentally (e.g., XYY karyotype), and that may lead to a choice for selective abortion. Most current ethical debate is focused on the latter two categories

Before beginning, we need to consider how a moral analysis of the diagnostic evaluation of the fetus might differ from an analysis involving a child or adult. The major underlying ethical motivation, based on the principle of beneficence (i.e., doing -what is best for the patient), is the same: to identify illness so that outcome can be improved. With increasingly detailed cytogenetic testing there is a need to provide families with sufficient pre- and post-test counselling, as well as consider the ramifications for them and the fetus.

The case can be made, however, for at least two additional motivations in the case of fetal diagnosis: l) providing the mother (and family) with information regarding the pregnancy in order to promote her (their) autonomous decision making regarding the outcome of the pregnancy;

2) identifying severely affected pregnancies that may choose to terminate, with a societal goal of reducing the economic and social burden of caring for seriously disabled individuals. These considerations are each controversial, in part because they make the interests of the fetus secondary to those of the family and society, respectively. Pretest and posttest information counseling is also critical because one of the outcomes of a prenatal diagnostic may be pregnancy termination. The model of genetic counseling most widely accepted is that of nondirective counseling.

The ethical basis of this model would seem to be that of promoting autonomous decision making by the responsible parties, in most cases the parents. As prenatal diagnostic techniques are used more widely, there will be pressures for individual physicians to offer these tests in their offices. No patient should be forced to undergo a diagnostic test that is not considered to be standard practice.

There is evidence that many physicians are inadequately informed about certain chromosomal abnormalities. There is a strong ethical mandate to centralize testing when appropriate and to provide rigorous training for individual physicians who choose to provide testing in their offices.

Challenges in pre-implantation genetic assessment

Dr. Padmapani Padeniya

Reproductive genetics has become an important discipline in today's obstetrics and gynecology practice. Perfect timing of the application of genetic knowledge in reproductive medicine is critical. If the application is at the right time, early prevention and prediction of a genetic disorder are effortless. Hence pre-conceptional, pre-implantation, and peri-conceptional phases are important in reproductive genetics and genetic testing.

Preimplantation genetic testing (PGT) comprises a group of genetic assays used to evaluate embryos before being transferred into the uterus. Hence PGT is always performed in conjunction with In- Vitro Fertilization (IVF). Embryo biopsy is crucial in PGT since it is the determinant of the final test results. A biopsy can be performed at the polar body level, early blastocyst stage level, and blastocyst stage level. Genetic testing platforms for embryo biopsy are different and multiple. Polymerase chain reaction-based arrays, Fluorescent In Situ Hybridization based technology, and Next Generation Sequencing based technology are a few of them. All chromosomal aneuploidies, structural rearrangements, and single gene disorders can be detected in an embryo through the Next Generation Sequencing-based platform.

Undue client expectation is one of the major challenges in PGT practice. PGT for deciding good baby concepts without ever comprehending the limitations of PGT practice is another key challenge. Prohibitively expensive technology, particularly for PGT-M, incapacity to find an adequate number of eggs, particularly in advanced maternal age, and technical difficulties are some of the other concerns in PGT technology. Proper preassessment and pre-procedure genetic counseling can overcome most of these barriers.

Neonatal screening for birth defects

Dr. M. V. Deepal Nawarathne

Congenital anomalies (birth defects) can be defined as structural or functional anomalies (e.g., metabolic disorders) that occur during intrauterine life and can be identified prenatally, at birth or later in life. Congenital anomalies are also known as birth defects, congenital disorders, or congenital malformations. Congenital anomalies are the major cause of newborn deaths within four weeks of birth and can result in long-term disability with a significant impact on individuals, families, societies, and health-care systems.

According to the World Health Organization (WHO) in 2010, an estimated 270 000 deaths during the first 28 days of life were reported due to congenital anomalies globally.

Approximately in 50 percent of birth defects a specific cause is not known. However, known causes can be divided broadly into two groups:

- Preconception causes are genetic and partially genetic, originating mostly before conception. Birth defects are due to abnormalities of the genetic material–chromosomes and genes including chromosomal abnormalities, single gene defects and multifactorial disorders (which are caused by the interaction of genes and the environment).

- Post-conception causes develop after conception, but before birth. Birth defect is caused by an intra-uterine environmental factor. This includes teratogens that interfere with normal growth and development of the embryo or foetus, mechanical forces that deform the foetus, and vascular accidents that disrupt the normal growth of organs

Primary prevention is an important aspect in the prevention of congenital anomalies. Secondary prevention aims to reduce the number of children born with birth defects. With the use of medical genetic screening and prenatal diagnosis, birth defects are detected, and the couple offered genetic counselling and therapeutic options. Tertiary prevention is directed towards the early detection and management of problem once a child with a birth defect is born.

Hall A - OP 1 : CAN CORD BLOOD PREDICT BODY COMPOSITION?

Lucas, MN[1], Ranatunga, KDSU[1], Senarath, U[2], Lanerolle, P[3], Hills, A[4], Wickramasinghe, VP[1]

[1]Department of Paediatrics, Faculty of Medicine, University of Colombo,
[2]Department of Community Medicine, Faculty of Medicine, University of Colombo,
[3]Biochemistry and Molecular Biology, Faculty of Medicine, University of Colombo,
[4]Department of Sports and Exercise Medicine, University of Tasmania, Australia

Introduction
The simplest 2-compartment model of body composition describes our body content as fat mass (FM) and fat free mass (FFM). Cord leptin, which is mainly secreted from fetal adipocytes and cord insulin, which is produced by the fetal pancreas is directly proportional to the fetal fat mass whereas cord adiponectin, which is secreted by fetal adipose tissue and cord IGF-1, which is secreted by the placenta is directly related to fetal fat free mass.

Objective
To assess the relationship between cord leptin, insulin, adiponectin and IGF-1 with infant body composition

Methods
Body composition was measured at 3,6,9,12,18 and 24 months based on the deuterium-dilution-method using saliva sample analysis, in healthy, term babies as part of a longitudinal study from 2015-2019, at Professorial Unit, De Soysa Hospital for Women, Colombo. Cord blood collected at birth was centrifuged and stored at -800C. DRG-Leptin-Sandwich-ELISA-EIA-2395, DRG-Insulin-Sandwich-ELISA-EIA-2935, Demeditec-Adiponectin-ELISA-DEE009 and Demeditec-IGF-1-600-ELISA-DE4140 was used for analysis. Ethics approval was obtained from Faculty of Medicine, University of Colombo. Graph Pad Prism 9 for mac OS, version 9.1.1(223), GPS – 2127662 was used to generate the standard curves. Data was analysed via SPSS v27 using linear regression, to determine whether cord blood factors can predict body composition of infants, after ensuring that assumptions of normality, linearity, multicollinearity and homoscedasticity were met.

Results
A total of 250 cord blood samples were analysed. Mean and SD for cord blood were 7.3 ± 9.9 ng/ml for leptin, 6.4 ± 5.2 mIU/ml for insulin. 60.6 ± 39.9 ng/ml for IGF-1 and 31.3 ± 14.8 µg /ml for adiponectin. Each ng/ml increase in adiponectin decreased FFM index (FFMI) by 0.1g/cm at 3 months of age[beta= -0.022, p=0.008, r2=0.074, F(1,91)=7.251, p=0.008] and 0.3g/cm at 9 months of age [beta= -0.027, p=0.013, r2=0.078, F(1,77)=6.518, p=0.013]. , each mIU/ml in insulin increased FM by 0.05g at 24 months of age [beta=0.046, p=0.044, r2=0.125, F(1,31)=4.425, p=0.044] and each ng/ml increase I IGF-1 increased FFMI by 9g/cm at 9 months of age [beta=0.009, p=0.041, r2=0.053, F(1,77)=4.308, p=0.041].

Conclusion
Cord blood insulin, adiponectin and IGF-1 can be used to predict body composition within the first 2 years of life.

Hall A - OP 2 : PROSPECTIVE ANALYSIS OF NEONATAL SURGICAL EMERGENCIES MANAGED BY THE PIONEERING PAEDIATRIC SURGICAL TEAM OF COLOMBO NORTH TEACHING HOSPITAL RAGAMA

Ranawaka R[1], Thennekoon S[1], Wickramaratne S[1], Jayawardhana N[1]

[1]Colombo North Teaching Hospital Ragama

Introduction

Prospective analysis of neonatal surgical emergencies managed by the pioneering paediatric surgical team of Colombo North Teaching Hospital Ragama since establishment of the service 10 months back was performed. All neonates were provided multi-disciplinary care at the two special care baby units of the hospital.

Objectives

To study spectrum of pathologies and assess quality of care.

Method

Data of all neonatal surgical interventions performed from 2021.11.01-2022. 08.31 was collected from first author's personnel operations log book

Results

Total number of surgical neonates: 10

There were 5 neonates with left congenital diaphragmatic herniae (CDH). All 5 were intubated at birth. Four underwent reconstruction after maximum possible stabilisation. First baby to undergo a neonatal laparotomy at the hospital was born as term NVD weighing 1.68kg. He had an uneventful recovery. Second baby born as term NVD weighing 2.5 kg had severe pulmonary hypertension and cardiac defects. He survived only 24 hours post-operatively. Third baby born at term as emergency LSCS weighing 2.4kg had uneventful surgical recovery. Fourth baby born as NVD at 27/52 POG weighing 0.8kg, was unstable to undergo surgery and survived <24 hours. Fourth baby born at term weighing 2.4kg had uneventful surgical outcome.

Two had congenital gastro-intestinal pathologies. A baby with type 3b apple peel type of ileal atresia with ileal perforation and large meconium cyst had laparotomy with end to end ileal anastomosis. After treatment for septicaemia, he was sent home. One with gastroschisis with 25/52POG weighing 0.9kg underwent repair within few hours of diagnosis. He succumbed after 48 hours.

There were 3 pre-term babies with NEC requiring surgical intervention. All having birth weights ranging from 1.34-1.8kg. Two born as NVD had insertion of peritoneal drains. One recovered well. Second baby recovered bowel functions but succumbed to septicaemia after 2 days. Third baby was second of a twin with syndromic-facies having NEC and intra-peritoneal haematoma. He underwent laparotomy for decontamination and is on supervised feeding 2weeks after laparotomy.

Conclusions

Pioneering Neonatal Surgical Team of THCN managed 34 neonates over 10 months since establishment. The multi disciplinary teams of two special care baby units of hospital facilitated improved surgical outcome.

Hall A - OP 3 : ASSOCIATION BETWEEN NEUROMOTOR ASSESSMENTS AND THE DEVELOPMENTAL OUTCOMES OF HIGH-RISK INFANTS AT 9-24 MONTHS

Fernando WPN[1], Safinaz ZMFZ[1], Wansha KLJ[1], Karunathilake KGLRAD[1], Vipulaguna, DV[1, 2], Sumanasena SP[1]

[1]Ayati National Center for children with Disabilities, Ragama

[2]RDHS Gampaha

Introduction

Early detection of neuro-developmental (ND) disorders enables infants to be promoted to early intervention services.

Objective

This study aimed to evaluate ND outcomes in high-risk infants by examining the association between the neuro-motor assessments at 3 and 6 months corrected age (CGA) with the neuro-developmental assessments at 9 months to 24 months.

Method

A retrospective cohort study of the infants recruited to Ayati Centre. The Hammersmith Infant Neurological Examination (HINE) at CGA 3 and 6 months and Bayley Scales of Infant and Toddler Development III (BSID-III) assessment at CGA 9 to 24 months were analyzed. The evidence shows HINE scores of less than 57 and 73 at CGA 3 and 6 months respectively indicating a high risk for CP. Based on these scores the infants were grouped into normal and abnormal HINE scores. An index composite score of more than 85 in BSID-III was considered as typical development. The confidentiality of the study participants was preserved. Statistical analysis was done using SPSS version 22.0.

Results

Fifty-nine infants (35 males and 24 females) were eligible for the study. The mean CGA at presentation was 11.09±7.425 weeks. The mean birth weight (BW) was 2.12±0.89 kilograms and the mean gestational age (GA) was 35.83±5.601 weeks. Common risk factors included neonatal sepsis (64.4%) and prematurity (55.9%).

Seventeen children had normal HINE scores and 60 children had abnormal HINE scores between 3 to 6 months of age. Thirty of the 38 infants with absent fidgets had abnormal HINE scores at 3 to 6 months. Out of the 59 infants who were recruited, 36 children were identified as having typical neuro development. Five infants were diagnosed with cerebral palsy.

Eighteen children were identified as having motor developmental concerns which is higher compared to the number of children having cognitive (n=12) and language (n=11) developmental concerns. There is no significant association between presence of fidgets and the cognitive, language and motor development($p>0.05$). There is no significant association between HINE scores at 3 to 6 months and the cognitive, language and motor development($p>0.05$).

Conclusion

Early neuro-motor assessments help predicts neuro-developmental outcomes of at-risk infants.

Keywords

HINE;BSID-III;GMs;Neurodevelopmental outcome;Infants

Hall A - OP 4 : NURSES' PERCEPTION AND PRACTICES OF ASSESSMENT AND MANAGEMENT OF NEONATAL PAIN. AN ISLAND WIDE SURVEY.

Gamhewage NC[1], Gamage M[2], Sivaranjan N[3]

[1.]Senior Lecturer in Paediatrics, Faculty of Medical Sciences, University of Sri Jayewardenepura

[2.]Professor in Paediatrics, Faculty of Medical Sciences, University of Sri Jayewardenepura

[3.]Demonstrator, Faculty of Medical Sciences, University of Sri Jayewardenepura

Introduction

Newborns admitted to intensive care, undergo multiple painful interventions. Pain in the newborn is associated with acute and long-term negative consequences. However, despite the recommendations and guidelines, research shows that neonatal pain is a neglected entity.

Objective

To assess the nurses' perception and practices regarding non-pharmacological pain management in neonates.

Methods

This is a cross-sectional, descriptive study. Data collection was done through a self-administered questionnaire circulated as a google form among nurses working newborn care units around the country. Nurses working exclusively in post-natal wards and mother- baby units were excluded. We expected to collect 100 responses. Ethical clearance was obtained from the hospital's ethics review board. Data were collected between June 2022 to August 2022 and were analyzed using SPSS.

Results

Altogether, 107 nurses from nine districts of the island responded to the google form. Majority (40.2%) of nurses have work experience of 1-5 years in a neonatal unit. 93% of nurses have never received training on neonatal pain management during their carrier. While 90% were aware of acute complications of pain, only 68.8% were aware that of long-term consequences. 39% of participants have never used a pain assessment tool and 45% use it occasionally. 20-25% attend to pain management while performing intercostal tube insertion and intubation, while it is 65-70% for venipuncture, heel prick and 55% for lumbar puncture. Those who had knowledge on acute and long-term consequences of pain were more likely to use adequate measures to alleviate pain ($p= 0.01$ and 0.005 respectively). Knowledge and use of pain relieving measures when performing painful procedures were not associated with age, experience and availability of a protocol in the unit.

Conclusion

Neonatal pain is underestimated and use of measures to assess and control pain is insufficient. Majority of nurses lack training.

Hall A - OP 5 : AUDIT ASSESSING THE KNOWLEDGE, ATTITUDES & PRACTICE OF PREVENTING HYPOTHERMIA IN NEWBORNS AT TH-MAHAMODARA.

Manawadu,M.H[1], Hapuarachchi,G.[2],Withanarachchi,K.[3]

[1,2]TH Mahamodara

[3]TH Karapitiya.

Introduction

Newborns(NB) especially preterms are more prone to hypothermia. Maintaining body temperature is critical for survival as hypothermia increases mortality & morbidity. Hypothermia(<36.5˚C/<97.7˚F) alone could increase risk of neonatal death.Standards of maintaining normothermia includes warm chain concept e.g. maintaining warm delivery room, skin-to-skin contact & breast feeding(BF) sooner. The key to manage hypothermia is recording temperature, early detection & rewarming where necessary.BF is 1 best way of preventing hypothermia & rewarming.

Objectives

- Set standards for management of hypothermia
- Pre intervention knowledge assessment of staff
- Audit Intervention by education
- Post intervention knowledge assessment
- Giving recommendations for improvement & consistency

Existing practice was assessed by using randomly selected 110 bed head tickets (last2weeks-July-2021). Obtained temperature recording at 1h after birth.This was done in 3 labour rooms&2 operating theatres and also on arrival at 3 Post-Natal(PN) wards. Temperature recording at NICU was obtained on 1randomly selected day. Time taken to initiate BF was checked. Pre-education questionnaire was used to assess knowledge. Data were analysed to identify deficient areas. Education was done through lecturing & posters.Post-education-questionnaire was used to assess improvement.Re-Audit was done (last 2weeks-October-2021) in the same manner.

Results

Pre-intervention overall knowledge was 90% & Post-intervention was 97%.At all delivery settings percentage of temperature checking at 1hour had improved. Among the 3 PN-wards only 1 postnatal ward showed improvement in documentation of temperature on arrival. At all settings, time of commencing BF had improved.

Conclusion

Although knowledge was satisfactory its clinical application was deficient leading to suboptimal diagnosis of hypothermia.After educating &thereby changing attitude, commencing BF within 1 hour was improved. Inadequate number of nursing staff in PN-wards, made it difficult to check temperature on arrival.Therefore we recommend to practice the warm chain, to maintain condition of warmers regularly& to specify 1nursing-officer for each shift for recording temperature on arrival &also to add a cage for temperature recording on arrival to PN-ward in H-1162-form & suggest that temperature chart used should be1 that include hypothermic range.

Hall B - OP 1 : A SURVEY ON PERINATAL AND FOLLOW-UP OUTCOMES OF FETAL ANOMALIES WITH MULTIDISCIPLINARY CONSULTATION

Perinpanayagam K[1], Dissanayake VHW[2], Dias T[1]

[1]Professorial Obstetrics and Gynaecology Unit, North Colombo Teaching Hospital, Sri Lanka.
[2]Department of Anatomy, Genetics and Biomedical Informatics, Faculty of Medicine, University of Colombo

Abstract

Introduction and objectives: Fetal anomaly increases the risk of infant death as well as causes great pain to the family. We aimed to investigate the frequency of different types of fetal anomalies and their outcome after a multidisciplinary consultation by a team consisting of Obstetricians, Paediatricians and Clinical Geneticists.

Methods

A retrospective study was conducted in pregnant women who were diagnosed with fetal anomaly by ultrasound between April 2021 and September 2021. Patient's information and the ultrasound findings were obtained from the database at the centre and outcome and follow up details were obtained by contacting the patients over the phone.

Results

There were 33 women. The anomalies affected central nervous system (n=9, 27.27%), genitourinary system (n=8, 24.24%), multiple malformations (n=7, 21.21%), cardiovascular system (n=4, 11.42%), gastrointestinal system (n=3, 9.09%), and musculoskeletal system (n=2, 6.06). 24 (72.72%) of pregnancies were carried to the third trimester. Of them 12 (50 %) were normal deliveries and 12 (50%) were caesarean sections. The outcome was a stillbirth (16.66%, n=4), neonatal death (37.5%, n=9), live with CNS anomalies (20.83%, n=5), live with renal anomalies (8.33%, n=2), or live with minor abnormalities (16.66 %, n=4). The neonatal deaths were due to renal anomalies (33.33%, n=3), congenital diaphragmatic hernia (22.22%, n=2), cardiac abnormalities (22.22%, n=2) gastrointestinal abnormalities (11.11%, n=1), and skeletal dysplasia (11.11%, n=1). The still births were due to heart diseases (50%, n=2), CNS anomalies (25%, n=1), and renal abnormalities (25%, n=1). Of the babies delivered by Caesarean Section, 50% (n=6) were alive. Of those delivered normally 33.33% (n=4) were still births, 25%, (n=3) were neonatal deaths, and 41.66 % (n=5) were alive. Of the babies who were alive only 5 (45.45%) were developmentally normal or near normal.

Conclusion

Fetal anomalies are associated with poor pregnancy as well as poor long term outcomes for surviving babies. The establishment of a multidisciplinary consultation team is necessary to manage and support these families.

Keywords

multidisciplinary consultation, fetal anomalies, pregnancy outcome

Hall B - OP 2 : AUDIT ON MAINTENANCE OF MODIFIED NATIONAL PARTOGRAM IN LABOUR MANAGEMENT IN A TERTIARY CARE HOSPITAL

Ranaweera, UDHJ [1], Adikari ,AMLM [2], Magedara, DPLSK[3]

[1]*Consultant Obstetrician and Gynaecologist, District General Hospital, Dambulla.*

[2]*Registrar in Obstetrics and Gynaecology, Teaching Hospital, Anuradhapura.*

[3]*Intern Medical Officer, District General Hospital, Dambulla.*

Introduction

The partogram is used in intrapartum assessment of progress of labour and fetal and maternal wellbeing.

Objective

The aim of the study was to assess the proper maintenance of the national partogram in District Base Hospital Dambulla.

Method

This was a retrospective audit carried out on a sample of obstetric records of parturients who gave birth from 1st of July 2022 to 15th of August 2022.A total of 200 partograms were analysed. The gold standard considered was 100% accurate maintenance of all the components with 100% accurate intervention where indicated.

Results

From the 200 partograms studied, the basic details including name , age, parity and the blood group was documented in all.But the anenatal risk factors and specific instructions were mentioned only in 158 (79%). Regarding the fetal well being assessment fetal heart rate and the liquor assessment was properly documented in 194(97 %) and 158 (79 %) respectively. Among parameters for labour progress, cervical dilatation and descent of the head were assessed and recorded in 156(78%) and 154 (77%) respectively.Action line was drawn in 157 (78%) and the alert line in 163 (81%). But the oxytocin dosage and the titration was mentioned only in 126(63%) and uterine contractions were documented only in 120 (60%) Maternal Blood pressure and the pulse rate mentioned in 174 (87%). But the necessary actions were taken in almost all cases to achieve optimal fetal outcome.

Conclusion

Although there was good fetal outcome, substandard maintenance was observed in all the components of the partogram except the basic details of the patient. The documentation of uterine contractions and the oxytocin dose titration was far below the standard.This should be improved with proper education of all the Labour room staff members regarding the importance of proper maintenance to achieve a 100% target and mainly regarding the method of marking the contractions and the oxytocin dosages.Re audit will be planned after appropriate interventions.

Hall B - OP 3 :PRECONCEPTIONAL, ANTEPARTUM AND POSTPARTUM FOLIC ACID INTAKE, FOLIC ACID AWARENESS AND ASSOCIATED FACTORS AMONG MOTHERS IN GALLE MUNICIPAL COUNCIL MEDICAL OFFICER OF HEALTH AREA

Miyurangi, DGM[1*], Malshani,WVPL[1], Martinus, HDSCC[1], Medini, HVT[1], Minhara, MNF[1], De Silva, KKWJC[2]

Corresponding Author: maheemiyusnow@gmail.com

[1]Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka

[2]Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka

Introduction

Folic acid (FA) is an important micronutrient before and during pregnancy because of its vital role in the prevention of neural tube defects, orofacial clefts and anemia.

Objectives

This study was carried out to determine the FA awareness; preconceptional, antepartum and postpartum FA intake and associated socio-demographic factors among mothers in Galle Municipal Council (MC) Medical Officer of Health (MOH) area.

Methodology

A cross-sectional study was carried out recruiting 368 mothers of children aged up to one year, attending the Child Welfare Clinics conducted by the Galle MC MOH office. Data were obtained through a self-administered questionnaire and analyzed using SPSS version 26.0. Chi-Square test was used to find out the associations between variables. $p<0.005$ was considered as the level of significance.

Results

The majority of the mothers were Sinhalese (n=214, 58.2%) and educated above grade 11(n=246, 66.8%). The mean age of the mothers was 30.4 years (SD=+5.3, range 18-45 years).

The mean percentages of awareness on FA and importance of FA in relation with pregnancy among mothers were 50.3% (SD+19.6) and 54.0% (SD+19.3) respectively. Age, ethnicity, occupation, educational level and monthly income ($p<0.05$) were associated with a satisfactory overall awareness on FA. The mean percentages of FA intake during preconceptional, antepartum and postpartum periods were 62.6% (SD+40.5), 90.8% (SD+24.0) and 44.8% (SD+43.6) respectively. Ethnicity, monthly income, educational level and occupation were associated with FA intake during preconceptional, antepartum and postpartum periods ($p<0.05$). The major source of information on preconceptional FA was Public Health Midwife (PHM) (47.23%) while consultant obstetrician and their clinics were the main sources during antepartum (48.28%) and postpartum (47.57%) periods. The major reason for not to have preconceptional FA (44.45%) was lack of knowledge while forgetfulness was the main reason for lack of compliance during postpartum (65.8%) period.

Conclusions

The awareness on FA among mothers in Galle MC MOH area was moderate. The intake of FA during preconception and postpartum periods were significantly low compared to that of the antepartum period. Therefore, measures to increase FA awareness, and intake of FA during preconceptional and postpartum periods should be strengthened further.

Hall B - OP 4 : AUDIT TO STRENGTHEN THE CURRENT INTERPRETATION OF A CARDIO-TOCOGRAPH (CTG) AND ITS DOCUMENTATION IN THE ANTENATAL WARD OF ASIRI CENTRAL HOSPITAL

Imtiaz,FN[1] Imtiaz,FM[2] , Rishard, M[3]

[1] Asiri Central Hospital, Colombo 10, Sri Lanka.

[2] Newcastle University of Medicine, Juhoor, Malaysia

[3] De Soyza Maternity Hospital, Colombo, Sri Lanka

Introduction

The antenatal unit of Asiri Central Hospital performs CTG on patients admitted into the unit with a gestational age of 28 weeks and above. The unit has never audited the practice of CTG documentation and interpretation. The main aim was to conduct a retrospective audit to quantify the gaps and to improve the quality of practice.

Objective

To assess current practices of CTG documentation, to identify gaps in the current practice of documentation and to estimate current practices against standard practices.

Methodology

Records from 1st September 2021 to 30th November 2021 were analysed after obtaining consent from the hospital management. Each CTG was reviewed with standard view tools the NICE and SLCOG guidelines and data was analysed.

The audit tools utilised were Name of patient, Bed head Ticket no, Date, Maternal temperature, Pulse, baseline foetal heart rate, Accelerations, Decelerations, Variability and the Interpretation of CTG.

Results

A total of 97 CTG's were taken into consideration. The comment on the CTG was best documented in nearly 1/3rd. The baseline heart rate was recorded in 55%. Acceleration was documented in 56% while deceleration in 54%. Variability was documented in 58% of the entries.

Name of patient, bed head ticket number and date were documented in all patients (100%). Pulse recorded in 3/4th of the patients, while temperature was documented in 81%. Nearly 36% had all indicators documented, constituting one third of the population involved in the audit.

Conclusion

Gaps in documentation and interpreting of CTG were identified. Capacity building workshops, unit protocol for CTG documentation and use of checklists were proposed. A reaudit is planned in six months to establish change in practice.

Hall B - OP 5 : EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION THERAPY ON REDUCING ANXIETY, STRESS AND IMPROVING PREGNANCY OUTCOMES IN PRIMIGRAVIDA ANTENATAL MOTHERS: A RANDOMIZED CONTROLLED TRIAL

Nishshanka N.M.C.L.[1], Waas M.D.I.A.[2], Goonewardena C.S.E.[3], Kasturiarachchi K.[4], Kulathunga K.A.C.J.R.[5], Gamagedara N.S.[6]

[1]Senior Registrar in Community Medicine, Family Health Bureau, Colombo
[2]Department of Psychiatry, Faculty of Medical Sciences, University of Sri Jayewardenepura
[3]Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura
[4]Family Health Bureau, Ministry of Health, Colombo
[5]Faculty of Management Studies & Commerce, University of Sri Jayewardenepura
[6]World Health Organization, Timor-Leste

Introduction
Anxiety and stress during antenatal period cause many adverse effects on pregnancy outcomes; therefore require early screening and management.

Objective
Our objective was to evaluate effectiveness of progressive muscle relaxation therapy in reducing anxiety, stress and improving pregnancy outcomes among primigravida mothers in Badulla district.

Methods
A community-based cluster randomized controlled trial was conducted among 288 primigravida mothers in latter stage of second trimester who screened to have anxiety or stress or both (Anxiety Score > 16, Stress Score > 20) by Depression Anxiety Stress Scale-21 (DASS-21). Primigravida mothers numbering 144 were recruited to each intervention and control arms; 18 clusters from selected Medical Officer of Health areas in Badulla. Mean scores of anxiety and stress between intervention and control arms were compared at pre intervention and 6 weeks post intervention using independent sample t test and paired t test. Pregnancy outcomes were assessed in both arms at one month post-partum and relationship between stress, anxiety and pregnancy outcomes were determined calculating Pearson's correlation coefficient.

Results
No significant difference in anxiety and stress between two arms was identified at pre-intervention stage ($p>0.05$). Both anxiety and stress were significantly reduced in intervention arm after six weeks of intervention (Anxiety: $p<0.001$ and Stress: $p<0.001$). Both anxiety and stress were significantly increased in control arm after six weeks of recruitment (Anxiety: $p < 0.001$ and Stress: $p < 0.001$). Pregnancy outcomes at one month post-partum in two arms showed significant differences in caesarean section or assisted vaginal delivery (OR = 2.44; 95% CI = 1.34, 4.46), delivery of baby before 37 weeks of gestation (OR = 2.35; 95% CI = 1.31, 4.21), prolong labour (OR = 4.93; 95% CI = 1.05, 23.27) and experienced post-natal complications in babies (OR = 2.12; 95% CI = 1.03, 4.35) in the control arm compared to the intervention arm.

Conclusion
Progressive muscle relaxation therapy was effective in reducing anxiety, stress and improving pregnancy outcomes in primigravida mothers.

Key words
Anxiety, Stress, Progressive Muscle Relaxation, Primigravida mothers, pregnancy outcomes

Hall B - OP 6 : AUDIT ON EVALUATION OF DECISION-TO-DELIVERY INTERVAL AND DECISION-TO-ARRIVAL TO THEATER IN EMERGENCY CESAREAN SECTION IN A TERTIARY CARE HOSPITAL IN SRI LANKA.

Fernando, SER[1], Ruwanpathirana, SA[2]

[1] Registrar in Obstetrics and Gynaecology, De Soysa Maternity Hospital for Women, Colombo, Sri Lanka.

[2] Obstetrician and Gynaecologist, De Soysa Maternity Hospital for Women, Colombo, Sri Lanka.

Introduction

NICE guidelines recommend that "in cases of suspected or confirmed acute fetal compromise, delivery should be accomplished as soon as possible, accounting for the severity of the fetal heart rate abnormality and relevant maternal factors" (1) & proceeding with an emergency cesarean section less than 30 minutes interval from the time of decision making. Evidence shows poor fetal and maternal outcomes if a delay of more than75 min in the presence of maternal or fetal compromise (2).

several factors can influence the decision-to-delivery interval(DDI). Those are related to obstetricians, anesthesiologists, and other staff, as well as lack of theater time and technological difficulties. But most of the factors can be avoidable.

Objectives

To take an idea about DDI and decision-to-arrival to the theater in the emergency cesarean section(CS) as well as to analyze whether the meantime for decision-to-delivery meets the current standards in ward 16 De Soysa Hospital Colombo.

Material and Methods

The data were collected retrospectively for the decision to arrive at the theater, reaching the anesthesia, and the DDI of the baby in all consecutive women undergoing emergency CS (Category 1,2 and 3) [12] for a period of 3months, which was defined as the study population (n = 92). The data collected for the study included age of the mother, parity, indications for CS, category of the urgency of CS, time of decision-making, time of transfer to operating theatre. The primary outcome measures of the study were duration to reach the theater from decision and decision to delivery interval. The DDIs for each category of cesarean sections were compared with recommended standards as part of an audit and quality improvement process. The data analysis was done with a simple analysis technique.

Results

The mean of the decision to the patient reaching the theater in the category 1 CS was 31 minutes and 1 second, the category 2 CS was 42 minutes and 1 second and category 3 CS was 51 minutes and 2 seconds.
The mean of the decision to the delivery interval in category 1 CS was 52 minutes and 37 seconds, in category 2 CS was 74 minutes and 42 seconds and in category 3 CS was 79 minutes and 25 seconds.

Conclusion

In study sample, decision to delivery interval does not meet the current standards. According to results, improving the time delay when transferring patients to the theater will remarkably reduce the DDI and can improve the quality of care.

PP1 : CAYLER CARDIOFACIAL SYNDROME: ASYMETRIC CRYING FACE+CONGENITAL HEART DISEASE.
A RARE CONDITION IN NEWBORN.

Sulakshi R.U[1] ,Thennakoon. L [2] , Subasinghe S.M.V [3]

[1,2] General Hospital, Matara.
[3] Lady Ridgeway Hospital for Children,Colombo.

Introduction.
Cayler Cardiofacial Syndrome (CCS) is a rare condition, characterized by asymmetric crying face due to Hypoplasia of the Depressor Angularis Oris Muscle (HDAOM) with congenital heart disease. We report a 7 months old baby with CCS.

Case Report
A 7 month old diagnosed child with Tetralogy Of Fallot , was admitted to pediatric ward with loose stool and managed as acute gastroenteritis .During hospital stay he was detected to have asymmetric crying face while crying, normal face while sleeping or silent. But no difficulties in closing eyes, loss of nasolabial folds, drooling saliva, or sucking difficulties to suspect facial nerve palsy. Clinical diagnosis was made as HDAOM.

This was detected at birth but has documented as L/facial nerve palsy. He is also having R/ hand Synpolydactily, L/pre auricular tag and Hypospadias. Baby was born at term as the 2nd child of non-consanguineous parents, through normal vaginal delivery with birth weight of 2.9 kg. Antenatal period was uneventful anomaly scan was not done.

No history of convulsion or recurrent infections. Weight gain was good with marginal gross motor delay. Serum calcium normal. USS Chest, Neck and KUB –normal thyroid gland, thymus and KUB .THS/T4 –normal. Chromosome 22q11.2deletion not detected in FISH analysis. Hearing and vision checked and normal. OT, PT was started.

Discussion
CCS is a combination of asymmetric crying face due to HDAOM with congenital heart disease. It may be sporadic or associated with 22q11.2deletion (29%). Common heart defects associated with CCS are TOF, VSD and PDA.

Associated malformations are microcephaly, micrognathia, VACTER, genitourinary abnormaity (renal hypoplasia, VUR, hypospadias), limb anomalies like syndactyly and polydactyly.

Learning difficulties and mental retardation can present if associated with 22q11.2 deletion. Our baby is having CCS characterized by HDAOM and TOF with association of synpolydactyly, hypospadias and pre auricular tag with negative 22q11.2deletion. He was awaiting TOF corrective surgery at 9 months.

Conclusion
CCS should be suspected if a baby has asymmetric crying face and normal face while sleeping, must be evaluated with ECHO and other associated anomalies.

PP2 : THE FIRST SRI LANKAN REPORT OF PARTIAL TRISOMY 20P OF PARENTAL ORIGIN: A RARE CAUSE FOR MULTIPLE CONGENITAL ABNORMALITIES & FACIAL DYSMORPHISM

Subasinghe, SMV[1], Samarasinghe, D[1], Gamaathige, N[2], Dissanayake, VHW[3]

[1] Lady Ridgeway Hospital for children, Colombo
[2] De Zoysa Maternity Hospital, Colombo
[3] Department of Anatomy, Genetics & Biomedical Informatics, Faculty of Medicine, University of Colombo

Introduction
Partial trisomy 20p or duplication 20p is a rare chromosomal disorder resulting from duplication of part of the short arm of chromosome 20. Up to date, less than 40 patients have been reported worldwide. It may occur de novo or arise from a reciprocal translocation of one of the parents.

Case presentation
A 10-day-old neonate, born to healthy non-consanguineous parents with no history of subfertility or miscarriages had been referred for genetic evaluation. Antenatal anomaly scan detected partial agenesis of corpus callosum, ventricular septal defect, aortic valvular stenosis, and small mandible. The baby was delivered vaginally at term with a birth weight of 2110g.

On examination, he had dysmorphic features such as microcephaly, sloping forehead, midfacial crowding and micrognathia. His limbs had overlapping fingers and toes, camptodactyly, wrist flexion deformity, single palmar creases, clinodactyly, proximally placed thumbs and rocker bottom feet.

Postnatal echocardiography detected a double outlet right ventricle, small ostium secundum atrial septal defect, large outlet ventricular septal defect, and slightly small arch. Brain imaging confirmed the presence of partial corpus callosal agenesis.

Karyotyping of the baby revealed 46, XY, der (1)t(1;20) (q44; p12) and the parental screening confirmed the father to harbor a balanced translocation. Father: 46, XY, t (1;20) (q 44; p12), Mother: 46, XX.

Unfortunately, the baby succumbed on day twenty-one of life due to heart failure. Genetic counselling was carried out to explain the risk of recurrence in subsequent pregnancies.

Conclusions
Arriving at a definitive genetic diagnosis is vital in neonates with congenital abnormalities and dysmorphism. Karyotyping was performed as the first line genetic testing to detect chromosomal abnormalities. Detection of extra chromosomal material in the proband warranted screening the asymptomatic parents for balanced translocation carrier status. Thus, determining recurrence risk and appropriate genetic counselling. This is the first report of partial trisomy 20p of Sri Lankan origin.

PP 3 : AUTOSOMAL DOMINANT EPIDERMOLYSIS BULLOSA WITH APLASIA CUTIS - A RARE CASE OF BART SYNDROME

De Abrew, KGL[1], Jayawardhane,HANC[1], Subhasinghe,V , Senevirathne,J[2], Gamaathige ,N [1]

[1.]De Soysa Maternity Hospital, Colombo, Sri Lanka
[2.]Lady Ridgeway Hospital for Children, Sri Lanka

Introduction

Epidermolysis Bullosa (EB) is a rare inherited skin disorder resulting in increased skin fragility. There are several varieties of EB, and Epidermolysis Bullosa Simplex is the commonest type which can be seen in childhood. This skin condition is characterized by skin ulcerations and blister formation. EB is rarely associated with a variant of Aplasia Cutis Congenita (ACC) which manifests as absence of a part of skin. This rare combination of both variants of skin conditions is called "Bart Syndrome".[1] Its severity ranges from mild to severe forms. We report a rare case of Bart Syndrome of a newborn baby who was managed conservatively.

Case Report

A baby boy was born at term by vaginal delivery to non-consanguineous parents with birth weight of 4.030kg. Baby was otherwise well at birth except few ulcerated skin lesions found during examination of the baby, involving right foot and left hand, and hyperpigmentation of nails of both thumbs.

There was a family history of similar skin lesions and nail involvement in mother, elder sibling, and maternal grandfather. But all of them developed only mild symptoms in later stages in childhood and those were not present at birth. On examination, mother had scarred skin lesions in bilateral lower limbs due to initial blister formation and nail deformities in all the toes.

Baby was clinically diagnosed with Epidermolysis Bullosa and the hyperpigmented nails were identified as aplasia cutis. It was recognized as a case of Bart Syndrome as the baby presented with EBS and aplasia cutis with autosomal dominant type inheritance. Genetic tests to identify the definite mutation or immunofluorescent studies were not performed due to limited facilities and high cost. The ulcerated skin lesions were managed conservatively with Vaseline dressings and antibacterial local application to avoid infections. Parents were educated on daily bathing and avoiding trauma to the skin. Antibiotics were not started, and baby didn't require surgical intervention. He was further followed up at pediatric dermatology unit to assess the epithelialization of skin lesions.

Figure 1: ulcerated skin lesions in Right Foot of baby

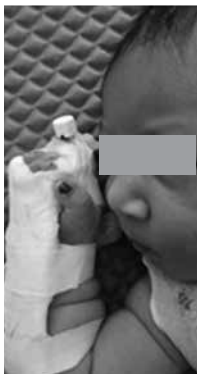


Figure 2: Aplasia Cutis in thumb nail of Right hand of baby

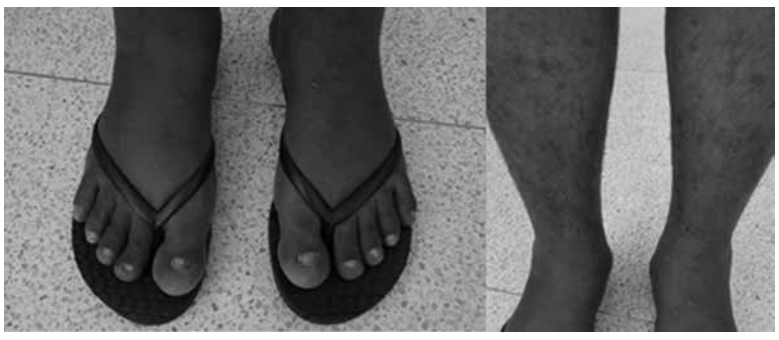


Figure 3: healed skin lesions and nail deformities in mother

Discussion

Presentation of EB with aplasia cutis or Bart syndrome is very rare. Our case presents a rare presentation

of Bart syndrome with a strong family history of EB from maternal side. Though it is commonly inherited as autosomal dominant pattern as in the index case, Alfayez Y, Alsharif S, Santli A reported a sporadic case of mild form of Bart syndrome. [1]

Some of the severe cases of Bart syndrome can be associated with other anomalies, such as pyloric stenosis, renal abnormalities like ureteral stenosis and subtle facial dysmorphic features like flat nasal bridge, broad set eyes and ear abnormalities which were not seen in our patient.[2] Mild and intermediate varieties of EB present in later stages of childhood and resolve by adulthood. Some of the severe EB and unusual pathogenic variants may present at birth with nail deformities.[3] In our case, the baby had symptoms at birth unlike in rest of the affected family members who had possibly mild degrees of EB.

EB is diagnosed clinically by the presence of characteristic skin lesions with the positive family history as seen in our case. Immunofluorescent mapping or genetic test is needed for definite diagnosis of the exact type. In our case, genetic tests were not performed due to unavailability of ligand specific genetic tests in the country and high cost of whole exome sequence which still wouldn't detect exact genetic involvement. Management of Bart Syndrome depends on its severity. Mild cases can be managed conservatively as in our case while severe forms of the disease might require surgical intervention including even skin grafting. Primary intention of conservative management is to prevent infections, to avoid further skin trauma, and to maintain good hydration.[4] Vaseline dressings (petroleum dressing) and antibacterial applications for wound care, were used in our case.

Conclusion

This case report presents a case of Bart syndrome, rare inherited skin disorder of a mixed clinical presentation of epidermolysis bullosa and aplasia cutis. This highlights the importance of taking a good family history to arrive at a diagnosis in the absence of facilities for advanced genetic studies and importance of early diagnosis, timely management and follow up until the complete healing of skin lesions.

EB - Epidermolysis Bullosa **ACC**- Aplasia Cutis Congenita

PP 04 : SHORT RIB THORACIC DYSPLASIA 16 WITH POLYDACTYLY – IN CONSECATIVE PREGNANCIES

B.T Hettiarachchi[1], R. Mathan[1], K.R Hettiarachchi[1], J.A.P.M Jayasinghe[1], Lucas MN [1],[2]

[1]Neonatology Unit, De Soysa Hospital for Women, Colombo 08, Sri Lanka

[2]Department of Paediatrics, Faculty of Medicine, University of Colombo, Sri Lanka

Introduction

Short-rib thoracic dysplasia (SRTD) refers to a group of autosomal recessive skeletal ciliopathies that are characterized by a constricted thoracic cage, short ribs, shortened tubular bones, and a 'trident' appearance of the acetabular roof. Type 16; neonatal lethal form, occurs as a result of mutations in the IFT52 gene.

Case Report

A baby girl weighing 3.7kg was delivered at term by EL/LSCS to second degree consanguineous parents with a past history of two early infantile deaths. First pregnancy, a term baby girl was managed as Jeune Syndrome due to compatible clinical and radiographic features, and expired on 34 days of life while on the ventilator. Second baby, with similar clinical and radiographic features was managed and discharged on D70 of life with home oxygen. His whole exome sequencing revealed the genetic diagnosis of "short rib thoracic dysplasia 16 with polydactyly" and the baby expired at 2 1/2months of age. Unfortunately, the amniocentesis performed in 3rd pregnancy at POA of 15 weeks revealed the same genetic diagnosis as

their second baby. The baby had APGAR of 1,8,9 at 1,5 and 10 minutes respectively requiring resuscitation at birth. She had short narrow thoracic cage, short upper and lower limbs, polydactyly in both upper limbs and syndactyly in both lower limbs, facial dysmorphism including frontal bossing, low set ears and micrognathia. There were no cardiac murmurs on auscultation. She was started on nasal prong oxygen 2l/min and expressed breast milk was started via NG. Parents were counselled regarding the diagnosis, poor prognosis, recurrence risk in subsequent pregnancies and they were referred for genetic counselling. The baby expired after 6 hours of life.

Discussion

Shor rib thoracic dysplasia encompasses Jeune syndrome and Ellis-van Creveld syndrome (EVC).

Here, both second and third pregnancies had same homozygous mutations causing severe phenotypic manifestations leading to short life span. Most probably the first baby might have had the same condition as the clinical and radiographic features were compatible.

Genetic counselling is extremely important in view of adopting a baby or sperm/ova donation method as three consecutive babies are already affected with this lethal condition in a background of consanguinity.

PP 05 : A CLINICAL AUDIT ON ASSESSMENT OF BEDSIDE SOUND LEVELS IN NEONATAL INTENSIVE CARE UNIT, DE SOYSA HOSPITAL FOR WOMEN

Hettiarachchi BT [1], Mathan R [1], Hettiarachchi KR [1], Lucas MN [1,2]

[1]Neonatology Unit, De Soysa Hospital for Women, Colombo 08, Sri Lanka

[2]Department of Paediatrics, Faculty of Medicine, University of Colombo, Sri Lanka

Introduction

Infants in the neonatal intensive care unit (NICU) are subjected to stress, including high intensity sound. The maximum acceptable sound level in NICU is 45 dB recommended by the American Academy of Pediatrics. Hearing impairment is diagnosed in 2% - 10% of preterm infants versus 0.1% of the general paediatric population. Noise may cause apnoea, hypoxemia, alternation in oxygen saturation, and increased oxygen consumption secondary to elevated heart and respiratory rates and may, therefore, decrease the amount of calories available for growth.

Objectives

To assess the bedside sound levels in a level 3 neonatal intensive care unit (NICU) in De Soysa Hospital for Women, Sri Lanka.

Method

A hospital based prospective observational study was conducted over a period of 2 months at NICU, DMH. Sound level (dB) was checked at the center of the NICU and bedside using a standard sound level meter phone application. Readings were taken within selected 1 hour period of each duty shift (morning: 8-9am, evening: 2-3pm, night: 7-8pm) including consultant ward round and nurses handing over time whenever possible. Average noise level was analyzed at the center of the NICU and at each NICU bed for three duty shifts separately.

Results

Average noise level recorded in NICU was 62 dB in the morning, 62 dB in the evening and 60 dB during

night time. Average noise levels at all NICU beds during morning, evening and night shifts were at the range of 61-63 dB, 60-62dB, 60-61dB respectively. Higher noise levels were noted during consultant ward round (62dB – 64dB) and nurses handing over time (63dB - 67dB). Other than the human voice, multiple alarms and machine sounds were noted with high intensity during the study period.

Conclusion
Noise levels recorded at the bed side of NICU in De Soysa Hospital for Women covering all three duty shifts were higher than the recommended noise levels. Machine alarms and conversations were the main contributory factors.

PP 06 : THANATOPHORIC DYSPLASIA : A CASE REPORT

Gunaratne, BRRN[1], Bandara, MSSK[1] ,Herath, HMMY[1]

[1]Teaching Hospital, Peradeniya, Sri Lanka

Introduction
Thanatophoric dysplasia is a rare, lethal disorder inherited autosomal dominantly or caused by denovo mutations, and is diagnosed antenatally after 22 weeks of gestation or at birth, associated with polyhydramnios and premature delivery. Diagnosis is based on clinical features, radiological findings and family history.

Case Presentation
The case we report is of a baby girl born to young, second degree consanguineous parents with no significant family history, after 4 years of primary subfertility. Antenatally, mother was diagnosed with gestational diabetes mellitus in the second trimester. Anomaly scan at 24 weeks showed short femur with slight bowing and paravertebral echogenic structures that resemble malformed kidneys and patent foramen ovale, atrial septal defect and a large ventricular septal defect in fetal echocardiography. There was absent liquor since 25 weeks. Baby was delivered at 31 weeks of gestation with a weight of 1.6 kg, due to preterm labour. She had multiple limb anomalies with no spontaneous breathing and a heart rate of 25/min, and survived only for 4 hours. Baby had very short limbs, short neck, narrow thorax and large head with midfacial hypoplasia. Skeletal radiographs showed cloverleaf skull, small scapulae, short horizontal ribs, platyspondyly, hypoplastic iliac bones with small squared iliac wings and bowed, telephone receiver shaped femurs. Also there was thickened soft tissue in extremities. A diagnosis of thanatophoric dysplasia type-1 was made based on clinical and radiological features.

Conclusion
This case emphasizes the importance of prenatal diagnosis of thanatophoric dysplasia and counseling of parents regarding its poor prognosis, even with intense respiratory support due thoracic abnormalities and lung hypoplasia. Prenatal screening for subsequent pregnancies can be offered after genetic counseling.

Keywords
Thanatophoric dysplasia, Lethal disorder, Limb anomalies, Autosomal dominant, Mutations

PP 07 : A CLINICAL AUDIT AND RE-AUDIT ON SCREENING OF HIGH RISK BABIES FOR NEONATAL HYPOGLYCEMIA IN T.H.MAHAMODARA.

Sulakshi,R,U[1],HapuarachchiG,K[2],Withanaachchi,K[3], Hassan,S[4]

[1,2,4]H.Mahamodara,Galle,Sri Lanka.l

[3]T.H.Karapitiya,Galle, Sri Lanka.

Introduction
Significant Neonatal hypoglycemia is considered as a major risk factor for neurodevelopment problems in children. The National Guideline for Newborn Care -2020 is currently recommended for screening of high risk babies for hypoglycemia and manage them early to prevent adverse neurological outcome. Recommendation is to monitor Capillary Blood Sugar (CBS) as follows.1st CBS within 3-4 hrs after birth, 3-4hrly within 1st 12 hrs, 4-6 hrly for 12-24 hrs , 12hrly from 24-48hrs.

Objectives
1.To determine adherence to national guideline on the screening of Neonatal hypoglycemia.

Method
The audit was conducted at postnatal wards T.H.Mahamodara from 1st -31st July 2021. Bed Head Tickets (BHT) of all the mothers and babies admitted to postnatal wards were reviewed to gather information. Data was analysed manually. Next step was to educate the health team on whom to screen, frequency and duration of CBS monitoring. A poster was demonstrated in wards.Then a re-audit was conducted from 1st -30th September 2021

Results
Total number of admissions in July were 617.Out of that 237 babies were eligible for Screening.Only168 (70 %) were screened. 1st CBS monitoring at 3-4 hrs of birth was 59 (36%), within 2rhs was 68(40%), >4hrs was 43(24%). Frequency of monitoring 3hrly within 1st 12 hrs was 60 (36%), then 6hrly was 66 (39%),12hrly was 22 (25%).Duration of monitoring up to 12 hrs was 57(33%) 12-24 hrs (64%).

Re audit results were as follows.Total admissions in September was 730 , Out of that 254 babies were eligible and 218 has been screened. 1st CBS monitoring within 3-4 hrs of birth was improved to 156 (72%). Frequency of monitoring ,3hrily within 1st12 hrs was 123 (56%) then 6 hrly was 62 (28%),12hrly was 33 (15%)

Duration of CBS monitoring upto 12 hr was 46(22%), 12-24 hrs was 172 (78%).

Conclusion
Screening of high risk babies was (70 %). But majority were not screened according to the recommended time and frequency in National Guidelines 2020. In re audit percentage of screening was improved (85 %) along with the recommended time and frequency.

PP 08 : UMBILICAL MYIASIS IN A FIVE-DAY-OLD NEONATE; A RARE PRESENTATION

Nawarathne MVD [1], Fonseka J R [1], Punchihewa, D S G [1], Dayarathna R M A N [1],Ruwanpathirana U [1]

[1] Teaching Hospital, Anuradhapura

Abstract

Myiasis is the parasitic infestation of fly larvae (Maggots) which can grow inside the host while feeding on its tissues. This is usually correlated with poor hygiene conditions. The index case is a five-day-old female neonate born via normal vaginal delivery, who presented to the postnatal ward of Teaching Hospital Anuradhapura with a worm infestation in the umbilicus, 18 hours after the umbilical stump had fallen off spontaneously. On examination, the child was clinically well except for mild periumbilical erythema and the larvae in the umbilicus. Investigations revealed a negative Septic screen. Ultrasonography of the abdomen did not reveal any evidence of deep infiltration. After the application of 50% dextrose solution, nearly 100 worms were mechanically removed with the help of forceps, and two further wound toilets were carried out under general anaesthesia. The baby was given broad-spectrum antibiotics for 4 days followed by oral antibiotics for 5 days. Follow-up reviews were normal with no signs of reinfection. Umbilical myiasis is a very rare, but preventable condition that is avoided by practising proper hygiene measures.

PP 09 : AGNATHIA-OTOCEPHALY SYNDROME - A CASE REPORT

Amarasinghe, AAGP[1] ,Bandara, MSSK[1]

[1]Teaching Hospital, Peradeniya, Sri Lanka Introduction

Agnathia-otocephaly syndrome is a rare congenital malformation affecting less than 1 in 70000 live births. It is an anomaly of the first branchial arch due to defective migration of neural crest cells from the hindbrain. The diagnosis is made upon delivery based on the clinical features or can be suspected during the antenatal anomaly scan.

Case Presentation

Here, we report a case of a grossly anomalous baby who was born at 34 weeks of gestation, with a birth weight of 1.8kg, via elective cesarean section due to severe polyhydramnios. This was the second born of non-consanguineous parents with one healthy child and three previous miscarriages. At birth, she was floppy, had bradycardia with no spontaneous breathing. Facial anomalies detected at birth were microstomia, mandibular hypoplasia and ventero-medially malpositioned ears. There were no associated neural tube defects. Autopsy findings of the internal organs were normal and there was no situs inversus. A diagnosis of Agnathia-otocephaly syndrome was made based on these anomalies.

Conclusion

Antenatal diagnosis and parental counseling once the diagnosis is suspected is important as Agnathia-otocephaly syndrome is a fatal syndrome.

Keywords

Agnathia-otocephaly syndrome, fatal syndrome, mandibular hypoplasia

PP 10 : HARLEQUIN ICHTHYOSIS FETUS IN DCDA TWIN: AN EXTREMELY RARE PRESENTATION

Kalaivathanan, Y[1], Prasanga, DPGGM[1]

[1]District General Hospital, Ampara, Sri Lanka

Introduction
Harlequin ichthyosis is a rare fatal type of congenital ichthyosis with autosomal recessive inheritance pattern. The skin forms large diamond-shaped plates that are separated by deep cracks. These skin abnormalities affect the shape of the eyelids, nose, mouth, and ears, and limit the movement of the arms and leg. Restricted movement of the chest can lead to breathing difficulties and respiratory failure.

Case Report
20-year-old mother with DCDA twin on her second pregnancy with past one normal vaginal delivery, admitted with abdominal pain at POA of 32 weeks and 2 days. She was in preterm labour and proceeded with vaginal delivery. first twin was delivered vaginally but second twin was breech and not feasible to deliver vaginally and was delivered by LSCS. First twin was completely normal in appearance but the second one didn't cry at birth and found to be floppy and cyanosed. though admitted to NICU baby died. Second twin had typical features of Harlequin ichthyosis such thick porcelain white skin with intervening deep creases covering the whole body, abnormal nose, ears, hands and feet.

Discussion
Harlequin Ichthyosis is the least common and most severe type of Autosomal recessive congenital ichthyosis with high lethality. Clinically suspected cases during antenatal examinations can further be confirmed by chorionic villus sampling or amniocentesis and through fetal skin biopsy. This case is distinctive and unique of its kind one fetus out of twins presented as fatal case of harlequin ichthyosis and other as normal healthy newborn.

PP 11 : SRI LANKAN PERSPECTIVE ON LESS INVASIVE SURFACTANT ADMINISTRATION

Nawarathne, MVD [1], Fonseka. J R[1] , Punchihewa, D S G [1]

[1] Teaching Hospital, Anuradhapura

Abstract
Respiratory Distress Syndrome is a common problem in preterm neonates and is a contributory factor to high morbidity and mortality. The treatment of choice is Surfactant administration, traditionally done after Endotracheal Intubation. However, doing so will result in prolonged mechanical ventilation followed by a series of complications such as frequent tube blocks, air leakage, barotrauma, and volume trauma ultimately leading to Bronchopulmonary Dysplasia. Therefore, the NICU at Teaching Hospital Anuradapura is evaluating the novel upcoming method of administering surfactant called Less Invasive Surfactant Administration also known as LISA. This allows surfactant to be administered via a thin catheter or NG Tube while the neonate is connected to Non-invasive respiratory support and while maintaining spontaneous breathing.

To date, we have performed LISA on 6 neonates of Period of Gestation varying from 29 weeks to 34 weeks. Out of the 6 index cases, there were 2 sets of twins. One of the neonates was 970 grams while the other 5 were above 1Kg. All 6 neonates were on High Flow Nasal Prong, and 5 of them had an oxygen requirement

of more than 35%. All 6 of them had mild respiratory distress and chest radiographic features suggestive of RDS. However, they did not require Invasive Positive Pressure Ventilation at the time. LISA was performed within the first 6 hours to 18 hours of age for five neonates and at 36 hours for one neonate. All 6 were given 1 dose of 4ml/kg Survanta surfactant and continued on High Flow Nasal Prongs. Following LISA, the oxygen requirement of 4 neonates was reduced to 21%. But, 2 continued to have an oxygen requirement of more than 35%. One of the neonates who continued to have a high oxygen requirement and worsening respiratory distress needed intubation within 1 hour after LISA whereas 3 others were intubated after 18 hours to 72 hours. 2 of the neonates did not require IPPV and were able to wean off High Flow Nasal Prongs within 12 hours to 48 hours. The Consultant administered LISA for 4 neonates and 2 well-experienced and trained Medical Officers for 2 neonates.

The 2 neonates who were also identical twins developed identical Left sided pneumothoraxes, one developed after 12 hours of administration and one developed after 5 hours of administration. However, it is doubtful if this could be attributed as a complication of LISA as 2 of them received surfactant from two different well-experienced and trained personnel. The clinical presentation of the pneumothoraxes and the timing were more suggestive of infection as there were maternal risk factors for sepsis such as chorioamnionitis. One of these twins later passed away from Severe Acinetobacter Septicemia and one survived but developed Bronchopulmonary Dysplasia. Out of the 4 other neonates, 1 of them developed significant surfactant reflux. But the other 3 of the neonates did not develop any complications. However, all 4 of them were discharged from the NICU without any long-term respiratory complications such as Bronchopulmonary dysplasia.

Less Invasive Surfactant Administration is a novel method that needs to be evaluated further as the procedure may reduce the short-term and long-term complications of traditional surfactant administration and reduce the morbidity and mortality of Respiratory Distress Syndrome.

PP 12 : A CASE STUDY ON UNCOMMON EARLY ONSET NEONATAL HYPOCALCEMIA DUE TO MATERNAL VITAMIN D DEFICIENCY

Ranasundara, TM[1], Wickramaratne, SS[1], Ranganthan , A[1], Perera, RS[1].

[1]Castle Street Hospital, Colombo

Introduction

Hypocalcemia is a common metabolic problem in newborn population. Neonatal hypocalcemia can be divided in to early onset (1-4 days) and late onset (5-10 days). One of the leading causes of late onset hypocalcemia in newborn is maternal Vitamin D deficiency. This case report discusses, on a neonate presenting with convulsions as a result of early onset hypocalcemia due to maternal Vitamin D deficiency which usually presents late.

Case History

A term, growth restricted baby girl who was delivered after seventeen hours of dribbling. On day three, the baby was admitted to Special care baby unit due to the poor sucking and fever needing antibiotics. Same day, the baby developed 2 generalized seizures. Investigations revealed severe hypocalcemia. As mother had poor supplementation during pregnancy Vitamin D levels done in both. Vitamin D levels of both were low and the baby's parathyroid levels were very high with low phosphate levels, pointing to maternal vitamin D deficiency.

Discussion

Deficiency of 1,25-dihydroxyvitamin D does not impair fetal skeletal formation, calcification and the ability of the fetus to maintain a normal blood calcium. Neonatal Vitamin D deficiency will be manifested in neonates about later part of first week or second week later. Once the calcium supply from placenta cutoff after birth, neonatal calcium supply is maintained by gut absorption, renal reabsorption and bone resorption. Intestinal absorption of calcium is by both vit D dependent active form and passive form. Initially it is mostly passive transport until the time of weaning. neonatal Vit D stores are derived from maternal Vitamin D levels in utero. neonatal hypocalcemia due to maternal vitamin D deficiency present when the gut calcium absorption predominantly happens with active vit D dependent method. Our patient's mother had low Vitamin D levels and baby had hypocalcemia, hypophosphatemia with high PTH confirmed maternal vitamin D deficiency leading to neonatal hypocalcemia. But instead of late onset hypocalcemia baby had an early presentation. Sepsis may have exaggerated the hypocalcemia and led to the early presentation. Sepsis leading to hypocalcemia is multifactorial. It results from acquired insufficient parathyroid gland response, renal 1 alpha hydrolase insufficiency and acquired resistance to activated vitamin D3.

Conclusion

This case report highlights the fact that neonatal hypocalcemia due to maternal Vitamin D deficiency can be presented early due to co existent sepsis.

PP 13 : A SPONTANEOUS ENCYSTED PNEUMOTHORAX IN A NEWBORN - AN EXTREMELY RARE UNREPORTED OCCURRENCE

Wickramaratne, S[1], Ranasundara, R[1] , Ranganthan , A[1], Perera, RS[1].

[1]Castle Street Hospital, Colombo

Introduction

Spontaneous pneumothorax is rare with a reported incidence of 0.07-1% in term babies. Theycan occur spontaneously secondary to severe respiratory distress syndrome or meconium aspiration. Spontaneous encysted pneumothorax is an extremely rare condition which was not reported in literature up to now. We report probably the world's first case of spontaneous encysted pneumothorax in a term baby born via thick meconium.

Case Report

A term baby with an uneventful antenatal follow up was delivered by vacuum delivery following detection of fetal bradycardia during labor. Although he was born through thick meconium, he didn't require resuscitation. As the baby had persistent grunting and tachypnea, he was further evaluated. Septic screening was negative. Chest x-ray showed a left sided expanded air-filled cavity raising the suspicion of pneumatocele or congenital cystic adenomatoid malformation (C-CAM).

Ultrasound scan also suggested the possibility of C-CAM or the pneumatocele while excluding diaphragmatic hernia. Contrast enhanced CT scan of thorax revealed an encysted pneumothorax in the left upper zone with patchy peri-broncho-vascular ground glass densities in both lung parenchyma probably due to meconium aspiration.

Cardiothoracic surgical opinion was for conservative management with oxygen supplementation and close monitoring for respiratory deterioration. Moderate respiratory distress resolved gradually without any positive pressure ventilatory support, and the initial respiratory acidosis was also settled. The follow up chest x-ray revealed a fully recovered lung fields after 08 days.

Conclusion
Persistent respiratory distress of a neonate born through meconium warrants chest imaging to exclude air leaks. Although rare, encysted pneumothorax should be considered when a focal air collection is noted in imaging. Oxygen higher concentrations as therapy (Nitrogen washout therapy) will accelerate the resolution of pneumothorax. Management varies from conservative modes to intercostal drainage, yet newborns with mild to moderate respiratory distress can be successfully managed conservatively.

PP 14 : SPONTANEOUS ISOLATED INTESTINAL PERFORATION IN ONE OF THE VERY PRETERM TWINS

Jayatunge, MTR[1], Mohammed, MYN[1], Subunca, R[2], Ranjithatharsini, V[3]

[1]Consultant Neonatologist, Teaching Hospital Jaffna
[2] Medical Officer, Teaching Hospital Jaffna
[3]Consultant Paediatric Surgeon, Teaching Hospital Jaffna

Introduction
Spontaneous isolated intestinal perforation (SIIP) is a similar but more common entity than necrotizing enterocolitis (NEC) affecting preterm neonates. Here a SIIP in one of the preterm twins is presented.

Case Report
A 34-year-old mother vaginally delivered twin males at 29+1 weeks of gestation through spontaneous labour following completion of antenatal corticosteroids. Twins were admitted to Neonatal Intensive care unit for prematurity and respiratory care with non-invasive positive pressure ventilation. The second twin who had a birth weight of 1190 grams and an APGAR of 6, 9, and 9 at 1, 5, and 10 minutes respectively, developed SIIP. Initially, the baby was hemodynamically stable with the respiratory support.

Prophylactic antibiotics, expressed breast milk with probiotics and parenteral nutrition were commenced. Meconium passed on the first day of life. On the fourth day, a mild distension of the abdomen with sluggish bowel sound was noted without any clinical (feeding intolerance or tender abdomen) or biochemical (white cell count, C-reactive protein were within normal ranges, no thrombocytopenia) evidence supporting NEC. Otherwise, the baby remained hemodynamically stable. The baby was kept nil by mouth with nasogastric free drainage, commenced on triple antibiotics and X-ray of abdomen was obtained.

X-ray revealed pneumoperitoneum without other evidence of NEC raising suspicion of SIIP. Blood gas revealed metabolic acidosis needing a fluid bolus. The baby was electively intubated and remained hemodynamically stable without inotropic support, hence underwent emergency laparotomy which revealed a perforation at the distal ileal anti-mesenteric border. The perforated segment of ileum (27x10x4mm) was resected followed by ileostomy creation. Histopathology revealed benign acute focal ileal perforation without evidence of NEC. The postoperative course was uneventful; extubated to non-invasive ventilation, commenced enteral feeding, ceased antibiotics, and achieved full feeds at postoperative days 2, 5, 8 and 15 respectively. The bay was discharged on the 30th day of life. Successful reversal of the stoma was performed at 3 months of age.

Conclusion
SIIP in very preterm and very low birth neonates is associated with high mortality and morbidity. Early detection, vigilant suspiciousness, early intervention, and optimal neonatal care carries good prognosis in SIIP.

PP 15 : A CASE OF NON-IMMUNE HYDROPS FETALIS

Sandeepani, KKI[1], Withanaarachchi, K[2]

[1.] Registrar, Neonatal Intensive Care Unit, Teaching Hospital Karapitiya

[2.] Consultant Pediatrician, Neonatal Intensive Care Unit, Teaching Hospital, Karapitiya.

Introduction

hydrops fetalis is characterized by fluid accumulation in serous cavities and soft tissues. Non immune hydrops fetalis is multifactorial. Mostly it is hard to ascertain the underlying etiology and has a poor prognosis.

Case Report

23-year-old Mother at 27 weeks of amenorrhea admitted with PPROM and antenatal scan revealed hydrops fetalis.

She delivered a baby girl with 1.86kg birthweight at 31 weeks of amenorrhea. The APGAR was 4,4, 5 at 1, 5, and10 minutes respectively, needing intubation and ventilated. Detected bilateral plural effusions, massive pericardial effusion and large PDA. Pleural effusions and Pericardial effusion were drained. On day 1, baby had liver derangement and coagulopathy. Baby had jaundice on day 2 and given single phototherapy and there was no Rh or ABO incompatibility. Baby had hypoalbuminemia thrombocytopenia and anemia and managed accordingly. Oral Paracetamol was started for closure. of PDA.

Following extubating on day 10, baby had worsening respiratory distress.
No obvious dysmorphic features suggestive of Turners syndrome. ECG was not pathological. In ECHO there was no ventricular out flow tract obstruction or cardiomyopathies. In USS chest, there was no hemangiomas or cystic hygromas. TORCH screen was negative and we couldn't exclude Parvo B 19 due to the unavailability of PCR. The Bar bodies were positive in the buccal smear but Karyotyping could not be sent due to financial constraints.

USS excluded intraabdominal tumors and sacrococcygeal teratomas. The possibility of congenital nephrotic syndrome was excluded. It was planned to send metabolic screen to LRH but unfortunately baby died of a severe sepsis before that.

Discussion

The mechanisms of causing NIHF are the conditions resulting blocked lymphatic drainage, obstructed venous return, system defects causing anemia, cardiac failure, infections including Parvo B19, decreased fetal oncotic pressure and genetic and inborn errors of metabolism. The disease might recur in patients with known etiology. Upon diagnosis, the essential investigations must include fetal karyotype to exclude turner's syndrome, hemoglobin concentration, TORCH screen, PCR for Parvo B-19, thorough sonographic scan for cardiac or other anomalies, ECG, metabolic screen and general biochemistry, family screening for metabolic abnormalities. But it is impossible to screen for all of these genetic disorders in affected babies. NIHF has 50-98% mortality rate. It is important to evaluate both baby and parents for genetic etiologies and predict the chance of recur in subsequent pregnancies.

PP 16 : AUDIT ON ASSESSING NURSES KNOWLEDGE TOWARD NEONATAL RESUSCITATION IN NEONATOLOGY UNIT, DE SOYZA MATERNITY HOSPITAL (DMH), SRI LANKA

Rukshani, DGT[1], Gamaathige, NI[1], Gunasekara, S[1], Marasinghe SS[1]

[1]De Soysa Hospital for Women, Colombo, Sri Lanka

Introduction
Neonatal resuscitation is a series of interventions provided to a neonate at the time of birth in order to establish breathing and circulation. Basic skills in resuscitation are a crucial factor in morbidity and mortality of newborn care. It is recommended that personnel competent in newborn life support should be available for every delivery and neonatal care.

Objective
To Assess the Knowledge regarding neonatal resuscitation among nursing officers in the Neonatal intensive care unit (NICU) and special care baby unit (SCBU) at DMH

Method
A descriptive cross-sectional study was done. The data were collected by a developed structured questionnaire with arranged individual face-to-face interviews at SCBU and NICU.

Results
Thirty nursing officers from the above-mentioned units participated in the study. Of the nurses, 43.3% were from NICU and 56.7% from SCBU. Among the thirty nursing officers, 50% had below-average overall knowledge on neonatal resuscitation, whereas 40% had average and 10% had above average knowledge. However, considering the subcomponents, 83.33% had average knowledge of Monitoring the newborn 30% had average knowledge on resuscitation and 50% had average knowledge on competent in performing interventions. Of the nurses, 16.7% participated in Neonatal Advance Life Support (NALS) program, whereas 83.3% did not attend even though they were working in the Neonatal Unit. Almost all the nurses who attended the NALS program had average knowledge and among them, 50% had above-average knowledge.

Conclusions
There is a significant association between the knowledge and competency in neonatal resuscitation and attending the NALS program. Therefore, it should be mandatory for the nurses who work in the neonatal unit to participate in the NALS program to improve the quality of neonatal care.
As a result of this audit, we conducted a NALS program in DMH Hospital which resulted in high enthusiastic participation.

PP 17 : KLEBSIELLA PNEUMONIAE SEPSIS CAUSING MENINGITIS FOLLOWED BY SEPTIC ARTHRITIS IN A NEONATE.

Sandakelum U[1], Munasinghe R[1], Balasubramaniam R[1], de Abrew G[1], Jayasekera K[1], Jayawardhana N[1], Basnayake S[2], Gamaathige N[1]

[1]Special Care Baby Unit, De Soysa Hospital for Women

[2]Special Care Baby Unit, Lady Ridgeway Hospital for Children

Introduction
Klebsiella pneumoniae is a common cause of nosocomial infection among neonates causing multiple com-

plications. It has a higher incidence in developing countries and is the commonest gram-negative organism of septic arthritis. However, multiple complications occurring in the same case following Klebsiella septicemia is less common.

Case Report

A neonate born to a mother at term via a lower segment cesarean section developed fever with high CRP - 324 mg/L, leucopenia - 5.45× 103 / μL (13 - 38× 103 / μL), and thrombocytopenia - platelet count – 23 × 103 / μL on day-05 of life. Blood culture yielded a pure growth of extended-spectrum beta-lactamase-producing Klebsiella pneumoniae with positive CSF analysis. The baby was treated with intravenous meropenem for 21 days, however, the fever recurred after 48 hours of finishing meropenem with a CRP - 153 mg/L. Systemic examination, cultures, and imaging of the brain/abdomen were normal. The baby was commenced on intravenous vancomycin, amikacin, and fluconazole, however, the decline of CRP – 94.1 mg/L on day-05 was suboptimal. Procalcitonin level was 0.07 ng/ml suggestive of local infection. Examination of the baby revealed a painful left hip with an ultrasound scan revealing septic arthritis. Urgent arthrotomy of the left hip joint was performed and the pus culture yielded a pure growth of extended-spectrum beta-lactamase-producing Klebsiella pneumoniae. A Pavlik harness was placed as the hip was dislocated. Intravenous ciprofloxacin was added to amikacin after omitting vancomycin and fluconazole, where that combination was given for two weeks. His CRP was normalized and was discharged on oral ciprofloxacin for four more weeks.

Discussion

Secondary hematogenous inoculation is the common mode of organism entry into a joint. A pre-arthrotomy period of ≥ seven days and restricted joint mobility at discharge are independent factors of poor prognosis in neonatal septic arthritis. The procalcitonin level in neonatal sepsis is useful as it was suggestive of local infection; septic arthritis in this case.

PP 18 : ADRENAL HEMORRHAGE PRESENTING AS SEVERE INDIRECT HYPERBILIRUBINEMIA IN A NEONATE

Sandakelum U[1], Munasinghe R[1], Jayawardhana N[1], Suranjan M[2], Gamaathige N[1]

[1]Special Care Baby Unit, De Soysa Hospital for Women, Colombo

[2]Radiology Unit, Lady Ridgeway Hospital for Children, Colombo

Introduction

Adrenal hemorrhage is an uncommon cause of jaundice. The clinical presentation is non-specific. Severe indirect hyperbilirubinemia is when the level of bilirubin is > 425 μmol/L[3]. We present a neonate who had a right-side adrenal hemorrhage when evaluated for jaundice

Case Report

A baby boy, the second born to healthy non-consanguineous parents at term presented to the hospital with concerns of jaundice on the sixth day of life. The mother had a prolonged second stage of labor. Features of bilirubin encephalopathy were not present despite the baby being jaundiced up to the feet. The baby was started on phototherapy, antibiotics, and immunoglobulin. The mother's blood group was A positive, however, the hemolytic and septic screening were normal with severe indirect hyperbilirubinemia (516 μmol/L). The decline in bilirubin with phototherapy was very rapid and at 12 hours of phototherapy, the bilirubin level (185 μmol/L) was below the exchange transfusion level. Phototherapy was discontinued after 48 hours. An abdominal ultrasound scan revealed a mass in the right-side supra-renal area suspicious of an adrenal hemorrhage with the differential diagnosis being neuroblastoma. Hence, a CECT – chest,

and abdomen were performed which ruled out neuroblastoma. The 24-hour urinary Vanillyl Mandelic Acid (VMA) levels were normal [0.2 mg/24 hours – normal range (1 – 11)]. The review ultrasound scan at three months of age showed a resolving adrenal hemorrhage.

Discussion
Neonatal adrenal hemorrhage occurs more commonly on the right side. The clinical severity of the adrenal hemorrhage will depend on its extent and the compression of the gland; a large hemorrhage will compromise the gland easily and cause severe jaundice. An abdominal ultrasound scan is the first-line imaging modality in an adrenal hemorrhage. However, differentiation of cystic neuroblastoma from an adrenal hemorrhage is challenging. A CECT-abdomen/chest and urinary VMA levels should be performed if neuroblastoma is suspected. In conclusion, an adrenal hemorrhage has to be considered in severe jaundice, especially for difficult deliveries and it resolves in about 4-16 weeks of life.

PP 19 : ACUTE AIRWAY MANAGEMENT OF PIERRE ROBIN SYNDROME

Ranasundara, TM[1] Wickramaratne, SS[2] Saman Kumara, LPC[3]

[1] Acting Consultant Neonatologist, DGH Nuwara Eliya

[2] Acting Consultant Neonatologist, Colombo North teaching hospital

[3]Consultant Neonatologist, Castle Street Hospital for Women

Introduction
Pierre Robin sequence (PRS) is a congenital anomaly with a triad of mandibular hypoplasia, glossoptosis, and upper airway obstruction with or without cleft palate. These neonates can present with varying degrees of respiratory distress. In this case, we report a neonate with Pierre Robin sequence needing tracheostomy after failing several other non-surgical methods of airway management.

Case History
A term baby was born and found to have micrognathia, glossoptosis, and small posterior cleft palate showing mild respiratory distress. A clinical diagnosis of Pierre Robin sequence was made. He was managed with prone positioning, endotracheal tube insertion as a Nasopharyngeal (NP) airway, and noninvasive ventilation via 2 NP airways inserted bilateral nostrils, respectively. Failing that, obstruction below the pharyngeal level was suspected, and planned for a tracheostomy. Before the transfer for the tracheostomy, intubation was done with the help of fiber-optic bronchoscopy and video laryngoscopy to secure the airway. After tracheostomy insertion baby succumbed due to poor pulmonary condition.

Discussion
Management of the airway in PRS must be decided according to the type and level of obstruction. Management options can be non-surgical or surgical. To prevent pharyngeal level obstructions, prone positioning, nasopharyngeal airways, and noninvasive ventilation (splint airway) are used. Continuous desaturation while on a supraglottic airway was suggestive of glottic or subglottic level obstruction. This necessitated intubation or surgical airway. As this is difficult intubation, advanced technologies are used. The emergency tracheostomy is the definitive airway option.

Conclusion
Pierre Robin sequence leads to upper airway obstruction needing non-surgical, surgical, or combined strategies. Management varies according to the level and the degree of obstruction. A baby with Pierre Robin syndrome requires intubation demands more advanced technology to make it successful.

PP 20 : DUPLICATION CYST IN THE PYLORIC REGION IN A NEONATE

Ranasundara, TM[1] Nathawitharanalage, KS[2]

[1] Acting Consultant Neonatologist, DGH Nuwara Eliya
[2] Consultant Radiologist, DGH Nuwara Eliya

Introduction
Gastrointestinal duplications are rare and occur in approximately 1 out of 4500 births. Pylorus duplications are extremely rare. We present a neonate presenting with non-bilious vomiting who was found to have a duplication cyst at the gastric pylorus.

Case History
A baby girl was born at term with a birth weight of 2.35kg. She had persistent nonbilious vomiting from day one. The abdomen was soft and nondistended. There were no features of sepsis. Abdominal ultrasonography showed a thin-walled cystic structure in the pyloric region (10mm*8mm*12mm) filled with turbid fluid. It was located outside of the lumen and within the pyloric wall compressing the gastric outlet. The Upper GI contrast study revealed a small rounded lesion with the anterior superior aspect of the pylorus. CECT showed a pyloric cyst which was causing outlet obstruction. As a duplication cyst of the pylorus was suspected, an exploratory laparotomy was performed to excise the cyst. The baby recovered completely. Histology revealed nonspecialized gastric tissue in cyst wall biopsy.

Discussion
Duplications can occur in any part of the digestive tract. The most common place is the ileum. Pyloric duplications make up 2.2% of all gastrointestinal duplication cysts. Bremer's theory, explains that an error in recanalization of the gut occurs during the fifth week of gestation leads to this. Pyloric duplications present with projectile non-bilious vomiting during the early neonatal period due to obstruction to gastric outflow by compression. Other presentations are weight loss, gastrointestinal bleeding, and abdominal lump. Hypertrophic pyloric stenosis should be distinguished from a cyst near the pylorus. Diagnosis can be suspected with an Ultrasound scan, Upper GI contrast studies, and contrast CT. The duplication cysts revealed a wide variety of sonographic findings varying from cystic to solid appearing masses with the "muscular rim sign" and internal debris or hemorrhage. But the disease is most commonly diagnosed at surgery. Treatment is typically simple excision but might need pyloro- antrectomy (1)

Conclusion
Even though pyloric duplications are extremely rare, they should be considered in a neonate presenting with nonbilious projectile persistent vomiting.

PP 21 : NEONATE WITH BILATERAL ADRENAL HAEMATOMA PRESENTING WITH HYPOVOLEMIA AND HYPERBILIRUBINEMIA.

Ranasundara, TM[1], Nathawitharanalage, KS[2]

[1] Acting Consultant Neonatologist, DGH Nuwara Eliya

[2] Consultant Radiologist, DGH Nuwara Eliya

Introduction
Adrenal hemorrhage is common in the neonatal period due to its relatively large size and high vascularity. The incidence is 1.7 to 2.1 per 1000 births, but the actual occurrence is higher as most bleeding remains

asymptomatic. 90% of the cases are unilateral (right 75%). Clinical manifestations are variable. We present a newborn present with bilateral adrenal hematoma manifesting with poor circulation initially and later with hyperbilirubinemia.

Case History
A baby boy of 2.8kg was born at term via Forceps delivery due to prolong second stages of labor and fetal bradycardia. The baby didn't have birth asphyxia. The baby needed a normal saline bolus due to poor peripheral circulation. He was found to have a blood culture-negative probable sepsis (CRP 18, platelets 91000). He had early onset thrombocytopenia. Later baby developed an unexplainable indirect hyperbilirubinemia due to hemolysis. We ordered USS brain and Abdomen to exclude concealed bleeding on day seven, revealing a significant bilateral adrenal hematoma. The baby was hemodynamically stable at that point. A contrast CT scan excluded neuroblastoma. Serial follow-up USS abdomen showed interval improvement. Despite having a significant bilateral hemorrhage, the baby didn't experience an adrenal crisis.

Discussion
Only 10% of adrenal hemorrhages are present bilaterally. This case is among the few cases of bilateral hemorrhage. There are several risk factors, including perinatal asphyxia, sepsis, prolonged labor, instrumental delivery, and bleeding disorders. In our case, possible risk factors are prolonged labor, forceps delivery, and thrombocytopenia with sepsis. The Clinical findings also vary considerably from asymptomatic to abdominal mass, hypovolemia, anemia, unexplained jaundice, hematuria, scrotal hematoma, or adrenal insufficiency. In our situation, there was initial hypovolemia followed by unexplained hyperbilirubinemia. Even though USS is enough for diagnosis CT is necessary to exclude the differential diagnosis. Treatments depend on the clinical manifestations. In our case, initial fluid resuscitation and phototherapy were adequate. Typical ultrasonographical resolution times vary from 3- 9 months. If not, neuroblastoma should be suspected.

Conclusion
Adrenal hemorrhage should be suspected in neonates with instrumental deliveries and unexplained hyperbilirubinemia.

PP 22 : ACUTE ADRENAL CRISIS IN A NEONATE WITH POSSIBLE SMITH LEMLI OPITZ SYNDROME

Ranasundara, TM[1] Hashim ,FR[2] Nathawitharanalage, KS[3] Gunasekara RASR[4]

[1]Acting Consultant Neonatologist, DGH Nuwara Eliya
[2]Consultant paediatric Endocrinologist, Sirimavo Bandaranayake Specialized Children's Hospital
[3]Consultant Radiologist, DGH Nuwara Eliya
[4]Acting Consultant Chemical Pathologist, DGH Nuwara Eliya

Introduction
Smith Lemli Opitz Syndrome (SLOS), a rare genetic disorder, can lead to adrenal insufficiency due to faulty cholesterol synthesis. We present a probable case of SLOS in a neonate with dysmorphism and adrenal crisis.

Case History
A baby girl born to non-consanguineous parents by an emergency C-section had symmetrical intra-uterine

growth restriction. She developed hypoglycemia and an episode of convulsion soon after delivery which quickly resolved. She had subtle dysmorphism (microcephaly, partial ptosis, anteverted nares, and a high arch palate), poor sucking and swallowing reflexes that needed gavage feeding, and normal external genitalia with no palpable gonads in the inguinal region.

On day 13, she developed hyponatremia with hyperkalemia associated with normoglycemia and normotension and was commenced on sodium supplements. An abdominal sepsis precipitated an adrenal crisis which was managed with intravenous (IV) fluids, IV hydrocortisone, inotropes, ventilatory support, and broad-spectrum antibiotics, following which there was a clinical and biochemical improvement. Serum cortisol during the crisis was low (126 nmol/L).

Worsening sepsis resulted in septic shock refractory to resuscitation and led to the death of the neonate. Ultrasonography revealed absent corpus callosum, bilateral adrenal hypoplasia, and normal kidneys. The uterus and gonads were not visualized due to gaseous abdominal distension. Echocardiography revealed an atrial septal defect.

Discussion
Smith Lemli Opitz syndrome is a rare autosomal recessive disorder due to 7-dehydrocholesterol reductase deficiency resulting in defective cholesterol biosynthesis. Congenital anomalies such as partial ptosis, hypertelorism, anteverted nares, and cleft palate are noted in patients with SLOS. SLOS is associated with CNS (microcephaly and absent corpus callosum), skeletal (polydactyly and syndactyly), cardiac, renal, and gastrointestinal abnormalities (poor sucking and swallowing). Defective cholesterol synthesis leads to varying degrees of adrenal insufficiency and, rarely, adrenal crisis. The adrenals are generally average in size, but both hypoplasia and hyperplasia have been described. Elevated 7-dehydrocholesterol levels are diagnostic, and the detection of DHCR7 gene mutation confirms the diagnosis. Cholesterol supplements may improve some of the symptoms of SLOS.

Conclusion
Smith Lemli Opitz syndrome should be suspected in any neonate with dysmorphism and adrenal insufficiency.

PP 23 : CONGENITAL ADRENAL HYPOPLASIA MASQUERADING AS BILIARY ATRESIA

Hashim, FR[1], Senanayaka, A[1], Kiriwaththuduwa, KSU[1], Vass, A[1]

Sirimavo Bandaranayake Specialized Children's Hospital, Sri Lanka

Background
Congenital adrenal hypoplasia (AHC), a rare cause of congenital adrenal insufficiency can present with neonatal cholestasis which is reversible with prompt glucocorticoid administration. An X-linked AHC form is caused by mutation of DAX1 or NROB1 gene on the X chromosome and is characterised by adrenal insufficiency and hypogonadotropic hypogonadism.

Case Presentation
A 2-month old baby boy was referred to the paediatric endocrine department for evaluation of intermittent hypoglycaemia associated with metabolic acidosis, hyponatraemia and hyperkalaemia.

The infant was second-born to second-degree consanguineous parents whose first-born had died in the neonatal period with a history of hypoglycaemia and septic shock.

The baby was born at term with a birth weight of 2.19 kg and was transferred to a tertiary care centre for further management of projectile vomiting associated with acid-base imbalance and hypoglycaemia. The infant was under evaluation for prolonged cholestatic jaundice and was hesitantly planned for Kasai procedure considering the reduced benefit of delayed surgical correction. Other medical problems included congenital cytomegalovirus (CMV) infection, dilated left ventricle and myocarditis for which he was on ganciclovir and anti-heart failure medications. Hence, fludrocortisone was not administered. On examination, the infant was pigmented, mildly jaundiced without associated pallor or hepatomegaly and had normal external genitalia.

Results
Direct hyperbilirubinaemia with mildly raised liver enzymes and normal coagulation profile was noted. Ultrasonography did not demonstrate a gall bladder and a 99-Technetium HIDA scintigraphy suggested biliary atresia. A standard-dose synacthen test produced cortisol levels of 9.5 nmol/l, 4.5 nmol/l and 3.3 nmol/l at 0-minutes, 30-minutes and 60-minutes respectively, and a normal 60-minute 17-hydroxyprogesterone level (3.87 nmol/l). Plasma renin concentration was elevated (> 1000 mU/L). Thyroid-stimulating hormone was mildly deranged (TSH 10mIU/L) but thyroid ultrasound was normal. Following the commencement of hydrocortisone, direct hyperbilirubinaemia normalized. Repeat ultrasonography and 99-Technetium HIDA scintigraphy 6 weeks later revealed a normal gall bladder and a normal hepatobiliary study respectively.

Conclusion
AHC diagnosed based on characteristic clinical and biochemical features, can present with severe neonatal hepatitis and mimic biliary atresia.

Delayed puberty and hypogonadotrophic hypogonadism, a known complication should be expected and treated appropriately.

PP 24 : EVALUATION OF INCIDENCE OF HYPOTHERMIA STRATEGIES IN NEWBORN BABIES WITH THE HELP OF CLINICAL AUDIT

Igalagamage, L R1, Hapuarachchi, G K[2]

[1.] *Senior Registrar in Paediatric Intensive care, Lady Ridgeway Hospital, Colombo, Sri Lanka*
[2.] *Consultant Paediatrician, Teaching Hospital Mahamodara, Galle, Sri Lanka*

Introduction
Prevention of hypothermia is one of the fundamental principles of newborn care. Neonatal hypothermia is associated with increased mortality and morbidity.

Objectives
This audit aimed to ascertain the incidence of hypothermia among neonates admitted to Special care baby unit (SCBU), Teaching Hospital Mahamodara and to identify the measures to be implemented/ improved to reduce the incidence of hypothermia.

Method
This descriptive study was performed on 100 newborns to ascertain the incidence of hypothermia among neonates admitted to Special care baby unit, Teaching Hospital Mahamodara from January 2019 to April 2019. Patients with cold stress (temperature 36.1- 36.4 0C/ 96.9 – 97.50F), moderate (32.0 - 36.00C/ 89.6 – 96.800 F), severe hypothermia (<32.0°C/<89.6°F) were considered “hypothermic”. The Data were obtained via Data collection sheet. All the babies delivered at T.H. Mahamodara during January 2019 to April

2019 were included in the study. Infants who were transferred from other hospitals and all infants who were admitted from OPD were excluded from the audit.

Results

Out of 92 babies, 58 (63%) babies were hypothermic on admission to SCBU. 34% babies were moderately hypothermic while no babies were severely hypothermic. According to the Period of Gestation, 100% of babies less than 28 weeks, 79.5% of between 28-34 weeks, 47.6% of between 34-38 weeks, 39.1% of more than 38 weeks were Hypothermic. None of the babies had severe hypothermia and 34% were moderately hypothermic while 28% were in cold stress. P value of relationship between birth weight and hypothermia is 0.00217. 68.7% babies admitting from theatre, 51.8% from labor rooms and 33.3% from wards were hypothermic. P value of transferring mode and hypothermia is 0.0032. 52.9% babies delivered by normal vaginal delivery, 33.3% from instrumental delivery and 61.2% by seccarian section were hypothermic.35 babies with hypothermia had complications at delivery. P value of care after delivery and hypothermia was 0.209. p value of number of days ventilated in relation to hypothermia was 0.13.

Conclusions

Very high rates of neonatal hypothermia was observed in this study. Transferring mode to SCBU has a significant impact on hypothermia. More babies delivered on seccarian section were hypothermic than other modes of delivery. Also, babieshad complications at delivery were more prone to be hypothermic. But, there was no significant difference in different modes of care after delivery, number of days ventilated and hypothermia.

Implementing simple, low cost measures along with health education will be beneficial to maintain warm chain to reduce the incidence of hypothermia.

PP 25 : A CASE OF MULTISYSTEM INFLAMMATORY SYNDROME IN A NEONATE PRESENTED WITH ANTENATAL NON-IMMUNE HYDROPS FOETALIS AND RECURRENT CARDIAC ARRYTHMIA FOLLOWING BIRTH-FROM COLOMBO-SRI LANKA

Wickramaratne, SS[1], Ranasundara, TM[1], Saman Kumara, LPC[2]

[1]Senior Registrar in Neonatology-Castle Street Hospital for Women-Colombo, 2Consultant Neonatologist-Castle Street Hospital for Women- Colombo.

Introduction

Multisystem inflammatory syndrome in neonates (MIS-N) is a new entity where the exact pathophysiology, presentation or laboratory demographics are not clearly understood. We present a case of MIS-N manifested with recurrent cardiac arrythmia probably since in-utero life leading to non-immune hydrops foetalis.

Case Report

A 27-year-old mother was diagnosed with a foetus having hydrops foetalis at 32 weeks of gestation. Mother was AB positive. She was completely vaccinated against COVID-19. Baby was delivered at 32 weeks of gestation, via emergency caesarean section.

Baby needed resuscitation up to ventilatory breaths (Apgar - 31,55,810). Birth weight was 2.7kg. Persistent respiratory distress warranted invasive ventilation. USS Thorax showed bilateral pleural effusions (left-moderate-11mm, right-mild-03mm), left lung collapse with moderate ascites (maximum depth-2.5cm) on day 01.

Baby had recurrent episodes of Supraventricular tachycardia (SVT) needing intravenous (IV) Adenosine

followed by maintenance therapy (oral propranolol and Verapamil). There were episodes Ventricular flutter and pulseless ventricular tachycardia needing cardiopulmonary resuscitation with DC cardioversion. The arrhythmias resolved with IV Amiodarone followed by oral maintenance therapy provided with paediatric cardiology and Electrophysiology opinions.

2D-echocardiography revealed a structurally normal heart. Investigations excluded early neonatal sepsis, anaemia or haemolysis. Coagulation profile was altered (INR-4.7/ APTT-128s) and renal functions were impaired (Creatinine-238 µmol/dl).

Two episodes of brief neonatal convulsions were managed with intravenous Phenobarbitone. Plasma glucose, electrolytes and USS brain were normal.

Multi system involvement without any pathological explanation or evidence of perinatal hypoxia, lead towards MIS-N. Negative maternal and neonatal SARS CoV-2 PCR and IgM excluded active infection. Neonatal SARS CoV-2 IgG was positive with a titre above 10. Elevated inflammatory markers- D-dimer(4969ng/dl-normal-0-335), Lactate Dehydrogenase(1770U/L), Creatinine Kinase (525 U/L) and hypoalbuminemia were noted. Troponin-I was normal(<0.1ng/ml).

MIS-N was successfully managed with IV Immunoglobulin IV Methylprednisolone, as the inclusion criteria suggested by Ravindra Pawar et.al was fulfilled. A neurologically sound baby was discharged on day 41 of life.

Conclusion

QT prolongation with bradyarrhythmia is the commonest reported cardiac presentation in neonates. There is only one case of SVT reported. Early electrocardiographic and echocardiographic detection of cardiac complications is mandatory to improve the survival in affected neonates.

PP 26 : AN AUDIT TO ASSESS THE KNOWLEDGE OF NURSING OFFICERS ON CLINICAL FEATURES OF NEONATAL SEPSIS; A ROAD MAP FOR THE FUTURE.

Ambawatta, S.D[1]., Perera, T.M. R[2,3], Sathanantharajah, S[2], Gunaratna, G. P.S[2,4]

[1.] La Sapienza University of Rome, Italy
[2.] Colombo South Teaching Hospital, Kalubowila, Sri Lanka
[3.] Department of Paediatrics, Faculty of Medical Sciences, University of Sri Jayewardenapura
[4.] Department of Parasitology, Faculty of Medicine, University of Kelaniya

Introduction

Early detection of neonatal sepsis remains a challenge due to nonspecific, highly variable clinical manifestations. Strategies to optimize early detection of neonatal sepsis are likely to improve survival and neurocognitive outcomes. This audit was aimed at identifying the gaps in knowledge of nursing officers (NO), most likely to care for the newborns during the highest risk period, with regards to the clinical features of neonatal sepsis.

Method

The audit was performed at the Colombo South Teaching Hospital, which offers tertiary level medical care for newborns. The knowledge was audited using a pretested self-administered questionnaire as the first step of the audit cycle.

Results

A total of 58 (female 100%) NO attached to the units caring for newborns were audited. The awareness on normal haemodynamic parameters were 100% for respiratory rate, oxygen saturation, perfusion, and heart rate. However, hypothermia was not identified as a sign by 56.9% and only 55.2% mentioned refusal of feeds as a concern.

A total of 6 (10.3%) disagreed with the statements that poor suckling and less activity are concerns. Moreover, 34.5% had disagreed with excessive sleeping being a concern. All have agreed focal or generalised jerky movements are a concern, but 10.3% and 15.5% respectively failed to indicate staring and repetitive lip movements need medical attention. The yellowish discolouration of eyes was not mentioned as an immediate indication for medical intervention by 8.8% of NO. Only 31.6% (18) of the NO had stated crying while changing nappies need medical attention.

Conclusions
An education session will be done based on the roadmap given by the findings in this first step of the audit cycle. A post intervention analysis will be done using an improved version of the present audit tool.

PP 27 : HEMITRUNCUS ARTERIOSUS: A RARE CONGENITAL CARDIAC ANOMALY DIAGNOSED AND CORRECTED DURING THE NEONATAL PERIOD

Pathiraja,H[1], De Livera,R[1],Wickramaratne,SS[1], [2], Perera,S[3], Mugunthan,MS[3], Mettananda,S[1,2]

[1] *Colombo North Teaching Hospital, Ragama, Sri Lanka*
[2] *Department of pediatrics, University of Kelaniya, Sri Lanka*
[3] *Lady Ridgeway Hospital, Colombo, Sri Lanka*

Introduction
Hemitruncus arteriosus is a rare congenital heart defect. It is a subtype of truncus arteriosus where one main pulmonary artery branch originates aberrantly from the ascending aorta. Here we report a Sri Lankan neonate with hemitruncus arteriosus presented with respiratory distress and was successfully treated by corrective surgery.

Case Presentation
A baby girl was born to a 34-year-old primigravida at term (birth weight of 2.36kg). There was no parental consanguinity, family history of congenital heart defects, or maternal medical complications. Antenatal imaging was normal.

Apgar scores were six, nine and nine at one, five and ten minutes, and required resuscitation for one minute up to one cycle of ventilatory breaths. Her heart rate was more than 100/minute throughout. After recovery and an initial observation period, she was handed over to the mother for breastfeeding.

Around 24 hours of age, she developed moderate respiratory distress with tachypnoea. Auscultations revealed a grade 3 pansystolic murmur, best heard at left upper sternal edge. Both femoral pulses were palpable. Liver span was normal. Pre-and post-ductal oxygen saturation was 95% and 90% consecutively on air, and the chest x-ray was normal.

An urgent echocardiogram revealed dilated right atrium and right ventricle, and patent foramen ovale with bidirectional shunt. The main pulmonary trunk continued as the left pulmonary artery, while the right pulmonary artery originated from the aorta 5.8mm distal to the aortic annulus. There was a left-sided small patent ductus arteriosus (PDA) and persistent pulmonary hypertension with tricuspid regurgitation (peak pressure gradient of 97 mmHg). The echocardiography confirmed hemitruncus arteriosus.

The corrective surgery with translocation of the right pulmonary artery to the main pulmonary artery and ligation of the PDA was done at 28 days of life. The baby had an uneventful recovery. At three-month review, the baby was symptom-free and thriving well on exclusive breast feeding.

Conclusion
This rare form of congenital heart disease if left untreated, pulmonary hypertension is inevitable with high mortality. Accurate clinical suspicion with early diagnosis and timely surgical management are vital for better prognosis.

Disclosure
The authors have no conflicts of interest in this work.

PP 28 : AUDIT OF NON-PHARMACOLOGICAL METHODS OF PAIN RELIEF USED DURING INVASIVE PROCEDURES IN NEONATES

Sandakelum U[1],Munasinghe R[1],Balasubramaniam R[1],Hettiarachchi K,Kumuduni K,Gamaathige N[1]

[1]Special Care Baby Unit, De Soysa Maternity Hospital, Colombo

Introduction
Modes of pain expression in neonates are not well understood. However, there is evidence that the neonate can feel, can avoid, and can even form memories about the painful experiences. Those painful experiences are associated with poor cognitive and motor development outcomes. Hence, neonatal pain management is an important aspect. Non-pharmacological methods are evidence-based, easily applicable methods of pain relief.

Objectives
To assess how often the non-pharmacological methods of pain relief are practiced during invasive procedures in a Tertiary Care Neonatology Unit

Methods
A prospective audit was carried out over a one-month period at the Special Care Baby Unit of De Soysa Hospital where the investigators observed the use of non-pharmacological methods of pain relief (facilitated tucking, non-nutritive sucking, breastfeeding or expressed breast milk in a gauze swab, skin-to-skin contact with the mother, and dextrose in a gauze swab) during invasive procedures. The health care workers involved in the procedures were unaware of the observation. The procedures observed were heel prick, venipuncture, umbilical line placement, lumbar puncture, subcutaneous/intramuscular infections, insertion of intercostal tubes, placement of oro/nasogastric tubes, retinopathy of prematurity screening, and endotracheal tube suction. Fifty such observations (n=50) were made and analyzed in Microsoft Excel.

Results
Non-pharmacological methods were used only in 14% (n=7) of the invasive procedures; dextrose in a gauze swab – 12% (n=6), non-nutritive sucking – 2% (n=1). Facilitated tucking, breastfeeding or expressed breast milk in a gauze swab, and skin-to-skin contact with the mother was not observed. Out of the invasive procedures, a non-pharmacological method of pain relief was used only in venipunctures (41%), lumbar punctures (50%), and heel pricks (9%) while none of the methods were used in the rest of the procedures.

Conclusions

The majority (86%) of the invasive procedures being performed without any non-pharmacological methods of pain relief signifies a lack of knowledge and/or understanding about the importance of neonatal pain management. Teaching sessions, poster presentations, and a Sri Lankan guideline on neonatal pain management will be helpful to address this pressing need for neonatal pain management.

PP 29 : HIGH-RISK INFANT FOLLOW-UP, ARE WE OVERLOOKING THE DEVELOPMENTAL CO-MORBIDITIES? EXPERIENCE FROM COMMUNITY PAEDIATRIC SERVICE AT GAMPAHA DISTRICT

Madhushani H A H[1], Bandara R B J P[1], Gunarathne W P H C[1], Vipulaguna D V[2]

[1] Base Hospital, Wathupitiwala

[2] RDHS Gampaha

Introduction
High-risk infant follow-up (HRIF) programs aim to identify preterm infants or those who have experienced early prenatal insults that could lead to adverse neurodevelopmental outcomes and to refer them for evidence-based multi-disciplinary early interventions.

Objectives
To describe the clinical and developmental characteristics of the infants in the HRIF program in a Base Hospital under the recently established Community Paediatric service of Gampaha District.

Method
This is a retrospective descriptive cross-sectional study conducted in the Community Paediatric clinic at the Base hospital level. Data of all the infants in the HRIF program were extracted from the clinic records. No client identification data was used to protect privacy and confidentiality. Statistical analysis was carried out using SPSS version 26.

Results
Thirty infants were referred to the HRIF program within the first 7 months of service establishment. The mean age at referral was 22.5 (SD +/-17) weeks. Only 40% (n=12) were referred from neonatal units due to perinatal risk factors and 50% were referred later after detecting a developmental delay. Maternal PIH (26.7%) and antepartum haemorrhage (13.3%) were the common antenatal risk factors. Four mothers had mental health issues during pregnancy. Forty per cent of the sample had low birth weight (<2500g) and prematurity.

The commonest perinatal risk factors were neonatal sepsis (40%), respiratory distress syndrome (30%), neonatal jaundice (20%), hypoxic ischaemic encephalopathy (16.7%) and neonatal meningitis (16.7%).
Among the infants, the standardised assessments were carried out all (n=14) had abnormal General Movement Assessment, and all (n=20) had suboptimal Hammersmith Infant Neurological Examination (HINE) global scores. Sevan infants (23.3%) were diagnosed with cerebral palsy. Half of the sample (n=15) had cerebral visual impairment. All the infants are receiving appropriate family-centred active motor, communication, visual and other developmental interventions.

Conclusion
Even at the base hospital level, higher numbers of infants are referred to HRIF. A significant number of developmental adversities were detected within HRIF. Early identification and interventions from the neonatal period and primary prevention should be the key strategies to improve outcomes.

PP 30 : PERINATAL CYTOMEGALOVIRUS PNEUMONITIS AND CHRONIC LUNG DISEASE

Abewardana L.S. [1], Safa M. [1], Sinthujan V. [2], Dineshsanth S. [2], Gamhewage N. [3]

[1.] Professorial Paediatric unit, Colombo South Teaching Hospital
[2.] Special Care Baby Unit, Colombo South Teaching Hospital.
[3.] Department of Paediatrics, Faculty of Medical Sciences, University of Sri Jayewardenepura

Introduction

Cytomegalovirus (CMV) is the commonest congenital and perinatal viral infection across the world. Symptomatic disease occurs in approximately 10% of infected newborns, being more prevalent and severe in preterm infants. Common manifestations of congenital CMV infection include microcephaly, low birth weight, hepatosplenomegaly, sensorineural hearing loss (SNHL) and chorioretinitis. Pneumonitis, a rare manifestation of congenital CMV infection, can lead to chronic lung disease (CLD).

Case History

The patient is a 100 days old baby girl, T3 of a triplet pregnancy, born to non-consanguineous parents. During the 1st trimester there was an episode of antepartum hemorrhage. There was no history of blood transfusions, maternal fever or rashes. Baby was delivered at POA 24+4 weeks, via emergency caesarian section following preterm labour. Birth weight was 785g. She was treated with surfactant, and ventilated (SIMV for 38 days, NIPPV for 40 days). Our primary concern was CLD due to prematurity. We could not administer steroids due to persistently elevated CRP level. Repeated blood and respiratory secretion cultures remained sterile. Full blood counts showed high WBC count with lymphocytic predominance and mild thrombocytopenia.

She was treated with multiple courses of antibiotics, which failed to produce an improvement clinically, biochemically or radiologically. At this stage, CMV was suspected due to the unusual nature of the CLD and baby was investigated. Baby's urine and blood CMV PCR were positive. Maternal serum IgG and IgM were negative and oral Valganciclovir was started which produced a significant clinical and biochemical improvement. USS Brain scan was normal and there were no evidence of chorioretinitis.

Discussion

This patient had perinatal CMV infection possibly acquired via blood products or environment. Congenital CMV infection is diagnosed within three weeks after birth. Perinatal CMV infection occurs more frequently than congenital CMV infection and can be acquired by exposure to infected cervical secretions, breast milk, or blood products.

Pulmonary involvement in congenital and perinatal CMV is rare. Interstitial pneumonitis is the commonest respiratory complication, which can lead to lung fibrosis and CLD, mainly affecting premature and immunocompromised babies.

Intravenous (IV) Ganciclovir and oral Valganciclovir are the first-line antiviral drugs for treatment of CMV disease. Clinical trials in neonates with symptomatic CMV infection have demonstrated a benefit when anti-viral treatment is initiated as earliest as possible. Measurement of CMV viral load can be used for diagnosis and to assess response to therapy.

Approximately 50% of neonates with symptomatic CMV infection will develop SNHL, mental retardation, and microcephaly and approximately 10% will die in neonatal period. Controlled studies on long term outcomes of pulmonary involvement of CMV are lacking.

PP 31 : BENIGN VALLECULAR CYST: AN UNCOMMON CAUSE OF NEONATAL STRIDOR

Kulugammana, MBCN , Krishnapradeep, S, Dematawa, HMPU

Teaching Hospital Peradeniya, Peradeniya, Sri Lanka

Introduction
The vallecular cyst is an uncommon cause of inspiratory stridor and respiratory difficulty in neonates. Although the vallecular cyst is considered to be asymptomatic, we report a case of vallecular cyst which presented with significant neonatal stridor.

Objectives
Emphasize on rare presentations of neonatal stridor

Case Report
A term baby boy weighing 3kg, the first child of non-consanguineous parents was delivered via lower segment caesarian section due to lack of progress. Baby was resuscitated with two cycles of inflation breaths and intubated at 10 minutes of birth due to significant inspiratory stridor and respiratory distress. Direct laryngoscopy revealed swollen larynx. Baby underwent diagnostic bronchoscopy on day 1 which showed a right-side supraglottic cyst arising from laryngeal sinus between the false vocal cord and true vocal cord. Complete cyst excision was performed. Baby was ventilated for 3 days and extubated successfully. Histology showed fragments of a thin fibrous connective tissue layer lined by squamous epithelium. No inflammation or an atypia suggestive of a Benign cystic lesion consistent with a vallecular cyst.

Breastfeeding was established successfully and the baby was discharged on day 10. During the follow-up, the infant was asymptomatic, thriving well, and had a normal voice.

Results
The vallecular cyst is a rare laryngeal condition leading to neonatal stridor. It represents around 10% of all laryngeal cysts. Neonates present early with respiratory issues if a large cyst is present in a small airway. Two pathological hypotheses are proposed for the development of vallecular cyst: ductal blockage of mucus glands and embryological defect in its lymphatic drainage. Computer tomography and MRI will show the extent of the lesion, vascularity and help in differentiating it from other laryngeal lesions. But flexible nasolarryngoscpy remains the most important investigation in neonatal stridor as it helps in visualizing the lesion. Treatment options are marsupialization, excision and aspiration of the cyst which has a high risk of recurrence.

Conclusion
Vallecular cyst in neonates is an uncommon cause of neonatal inspiratory stridor. Neonatal stridor should be promptly evaluated with flexible nasolaryngoscopy when clinically indicated. If not, it can be detrimental, especially in early neonatal stridor.

PP 32 : AN AUDIT ON KNOWLEDGE OF NEONATAL RESUSCITATION AMONG LABOR ROOM NURSES PRE AND POST-RESUSCITATION TRAINING IN DGH NUWARA ELIYA

Ranasundara, TM[1]

[1] *Acting consultant Neonatologist, DGH Nuwara Eliya*

Introduction
Perinatal asphyxia is a common cause of morbidity and mortality in developing countries. According to the review of perinatal death surveillance in Sri Lanka from 2014-2017 by the Family Health Bureau, in 2016, 10% of infant deaths were due to birth asphyxia. As this is a preventable cause of death, hospital staff must be skilled in handling asphyxiated babies. Therefore, studies assessing the understanding of newborn resuscitation in the labor room are necessary. Regularly updating their knowledge is just as important.

Objectives
Assess the knowledge on neonatal resuscitation of labor room nursing staff.
Assess the correlation between their demographical factors and knowledge
Assess the post-intervention improvement

Methods
Design of the study-Descriptive cross-sectional study pre-and post-intervention.
Sample of the study-All nursing officers working in the labor room in DGH Nuwara Eliya
Intervention-A lecture on newborn resuscitation with demonstrations. (Without hands-on skills teaching)
Data collection-Participants answer a paper-based questionnaire by themselves both pre- and post-resuscitation program.

Method-Data analysis was done by SSPS 21 software.

Results
A total number of 16 nursing officers participated in the audit. They scored an average of 59% before the lecture. While nurses with <2 years of experience in the Unit showed 44%, those who worked more than five years scored 60%. Nurses with 2-5 years of experience scored the highest at 72%. Only four (25%) nurses have received midwifery training; these nurses are the only staff above 30 years of age and grade 2 in position. While the seniors scored 60 %, the younger team achieved 58%. The majority are using guidelines as the source of knowledge, and the Unit has displayed protocols. Knowledge of preterm resuscitation was the lowest (48%) and the second lowest was term resuscitation. Knowledge of physiology, meconium delivery, and ethics were 56% 69%and 59%, respectively. The average score improved to 75% after the lecture. A suboptimal improvement showed in term resuscitation.

Conclusion
Work experience without frequent updating knowledge and skills will not give a good outcome. Regular teaching programs, including hands-on skills teaching, are essential to improve the understanding of the nursing staff of newborn resuscitation.

PP 33 : PRETERM INFANT PRESENTING WITH ACUTE FLACCID PARALYSIS TREATED AS EXTENSIVE LONGITUDINAL VIRAL MYELITIS-RARE OCCURRENCE FROM COLOMBO-SRI LANKA

Ranasundara,T M[1] Wickramaratne, S S[2] Karunasena, H W N I[3] Saman Kumara, L P C[4] Rathnayake, P D [5]

[1] Acting consultant Neonatologist, DGH Nuwara Eliya
[2] Acting consultant Neonatologist, Colombo North Teaching Hospital
[3]Acting consultant Paediatric Neurologist, TH Anuradhapura
[4] Consultant Neonatologist, Castle Street Hospital for Women

[5]*Consultant Paediatric neurologist, Lady Ridgeway Hospital for Children*

Introduction
Acute flaccid paralysis during infancy is an infrequent phenomenon. Paediatric flaccid paralysis could be due to Guillain-Barré syndrome, spinal cord stroke, demyelinating myelitis, poliomyelitis, or other infective myelitis. We present an infant with acute asymmetrical flaccid paralysis treated as viral encephalomyelitis.

Case History
A second twin, born at 30 weeks of gestation, was readmitted on day 49 of life with acute onset right upper and lower limb weakness. Examination revealed unilateral reduced power (3/5), absent reflexes, and sensory impairment with retained bladder. Cranial nerve function was normal. Weakness progressed to the left lower limb over the next 48 hours.

Lymphocytic leukocytosis with normal inflammatory markers was found. MRI brain and spine showed extensive longitudinal myelitis extending from thoracic 2nd vertebral level to conus-medullaris with dural and cerebral cortical enhancement. Cerebrospinal fluid (CSF) had high protein (194mg/dl) with lymphocytosis(54/HPF) excluding demyelination myelitis. CT abdomen showed an ill-defined hypo-enhancing area within the right kidney, raising the suspicion of spinal deposit of primary renal malignancy or para neoplastic process. Biopsy of the renal lesion excluded renal malignancy and revealed inflamed renal tissue. Investigations for COVID-19 PCR, COVID antibodies, available viral studies including TORCH, hepatitis B, C, and HIV, bacterial studies, fungal studies, Tuberculosis, and Melioidosis tests were negative.

The baby was treated with antibiotics and antivirals for six weeks. Single dose intravenous (IV) immunoglobulin followed by IV dexamethasone for seven days was administered to reduce inflammation. Follow-up MRI brain and spine showed resolving myelitis, interval development of long segment syrinx, and improvement in the renal lesion.

Conclusion
Acute flaccid paralysis is rare among< 2 years of age. Infective myelitis is one etiology of flaccid paralysis commonly caused by bacteria (Mycoplasma, Mycobacteria), viruses (enterovirus, West Nile virus, HTLV, Zika virus, COVID, HIV, Arbo, CMV, EBV, echovirus, HHV-6, HHV-7, HSV, VZV, influenza, Hepatitis A, B, C) or parasites (toxoplasma). CSF isolation of a pathogen/positive PCR/demonstration of acute-convalescent rising antibody titers provides confirmation. Even though the viral pathogen was not isolated in this case, due to the limitation of investigations, lymphocytosis in CSF pointed towards infective etiology.

PP 34 : Successfully Managed Case of Pulmonary Interstitial Emphysema complicated with Bronchopulmonary Dysplasia of an Extremely Preterm, Extremely Low Birth Weight Infant.

Jayatunge, MTR[1], Mohammed, MYN[1], Subunca, R[2], Ranjithatharsini, V[3]

[1]*Consultant Neonatologist, Teaching Hospital Jaffna*
[2] *Medical Officer, Teaching Hospital Jaffna*
[3]*Consultant Paediatric Surgeon, Teaching Hospital Jaffna*

Introduction
Pulmonary Interstitial Emphysema (PIE) is a rare pathology that is seen in preterm low birth weight infants, who receive mechanical ventilatory support. The neonatal care is always challenging in PIE and culminating Bronchopulmonary dysplasia(BPD) adds to the fatality. Herein, we present a successfully managed case of PIE complicated with BPD.

Case Presentation

An extreme preterm female born to 31-year-old primi at 24+6 weeks via normal vaginal delivery, was admitted to NICU for preterm and respiratory care. At birth, the baby was 790g and had an APGARs of 3, 5+T and 8+T at 1, 5 and 10 minutes. Following self-extubation, non-invasive positive pressure ventilation was sufficient to support respiration. However, at 24 hours of age, the baby needed reintubation upon respiratory deterioration followed by conventional ventilation. The baby received two doses of Surfactant 12 hours apart with minimal response. Respiratory support escalated to high frequency oscillating ventilation (HFOV). The initial CXR was compatible with severe surfactant deficient lung disease and PIE subsequently. The course was complicated with episodes of late onset sepsis requiring antibiotics and difficulty in weaning respiratory support.

CXR had evidence of evolving BPD at the age of day 22 which was initially treated with diuretics followed by two courses of dexamethasone (Low & high dose DART protocol). This aided in weaning respiratory support gradually from HFOV to conventional, non-invasive, high flow to low flow nasal oxygen. By the end of three months, the baby was off ventilatory support and complete wean of oxygen was achieved by 3½ months. Steady weight gain achieved through exclusive breast milk. Retinopathy of prematurity(ROP) was identified on regular screening and with anti-VEGF therapy, it regressed. The baby was discharged home successfully at the age of four months with a follow-up plan.

Discussion

Unilateral or bilateral PIE, a fatal condition affecting premature babies is associated with high mortality and morbidity. However few cases have been successfully managed with HFOV, gentle ventilation, surfactant administration, positioning and steroid therapy. Identifying the disease early, optimizing treatment and treating anticipated complications (BPD) timely may leads to positive outcome in such babies.

PP 35 : ASPHYXIATING THORACIC DYSTROPHY IN A NEW BORN BABY WITH RESPIRATORY DISTRESS

Jayasanka, KTR[1], Dehigama, N.A.W.M.R.D.M.K [1]

[1.]Neonatal Intensive Care Unit, Teaching Hospital, Mahamodara, Sri Lanka

Introduction

Asphyxiating Thoracic dystrophy (ATD) also named as Jeune syndrome, was first diagnosed by Jeune et al in 1955. It is a potentially lethal congenital disorder with estimated incidence of 1 per 100 000 -130 000 live births. Jeune syndrome is known to be genetically heterogenous. However, rare autosomal recessive pattern of inheritance has also been identified. It is a rare condition that primarily affects the bone growth, characterized by a narrow bell shape thorax, short iliac bones and short limbs. Although ATD mainly involves the skeletal system, it can cause renal, hepatic, pancreatic and ocular complications later. The severity and the radiological features can vary due to genetic heterogenicity.

Case Report

A term male neonate was born to primigravida with no consanguinity by emergency caesarean section due pathological CTG. Baby was born in good condition however noted to have significant respiratory distress in few minutes. Birth weight of the baby was 2300g and head circumference was 33 centimeters. He had narrowed and elongated thoracic cage with relatively short limbs. There was no polydactyly of hands or feet. Baby required heated humidified high flow treatment due to respiratory distress. Radiological exam-

ination revealed typical appearance of narrow, bell shape thorax, short horizontally oriented ribs and high riding clavicles with diminished lung volumes. Iliac bones were short with a trident appearance of the acetabula. Ultrasound scan of abdomen, cardiac assessment, liver and renal functions were with in normal limits. He had poor wight gain due to possible high metabolic rate poor feeding. Baby is under follow up care for possible surgical management.

Discussion

Clinical presentation of asphyxiating thoracic dystrophy varies with the genetic heterogenicity. The classical presentation in infancy includes dwarfism, narrow thoracic cage, respiratory distress and postaxial polydactyly of hands or feet. Short iliac bone with trident appearance of acetabula could be identified in Xray of the pelvis.

Small thorax often results in respiratory distress and recurrent chest infection in the neonatal period and infancy. Progressive respiratory failure may lead to most of the deaths in neonatal period.

Renal failure due to nephron ciliary defect may develop during infancy or early adolescence period. Ocular complications like retinal dystrophy, optic nerve hypoplasia and retinal pigmentation can occur in later life. Multi-disciplinary care is essential to ensure the quality of life of effected infants.

PP 36 : CONGENITAL HERPES SIMPLEX VIRUS TYPE 2 INFECTION IN A PRETERM NEONATE; A CASE REPORT

Fonseka, JR[1], Nawarathne, MVD[1], Sumanasekera, KHTI[1], Punchihewa, DSG[1], Ranasinghe, DG[1], Ruwanpathirana, U[1], Dayarathna, A[1]

[1]Teaching Hospital Anuradhapura

Herpes Simplex Virus (HSV) is a double stranded DNA virus. Both HSV type 1 & 2 have a similar genetic composition. Type 2 causes more cases than HSV type 1.Congenital HSV infection is an uncommon but may be potentially fatal in the newborn. The incidence is approximately 1/3000-5000 live births.

Neonatal HSV manifests as localized disease confined to only encephalitis or skin ,eye ,mucosa (SEM) or Disseminated Neonatal HSV includes visceral organ involvement-hepatitis, pneumonitis, disseminated intravascular coagulation The clinical manifestations include rash, irritability ,respiratory symptoms such as grunting, cyanosis, tachypnoea or apnoea. It could manifest as jaundice or bleeding Congenital HSV typically manifest with triad of clinical features consisting of cutaneous manifestations (scarring, active lesions, hypo- and hyperpigmentation, aplasia cutis, and/or an erythematous macular exanthem), ophthalmologic findings (microphthalmia, retinal dysplasia, optic atrophy, and/or chorioretinitis), and neurologic involvement (microcephaly, encephalomalacia, hydranencephaly, and/or intracranial calcification)

The neonate on question was born at 28+4 weeks of gestation with a birth weight of 1.2kg to a 32 year old mother in her second pregnancy delivered via Emergency Lower Segment Caesarian Section as she presented with per vaginal bleeding. Routine care provided as per extreme preterm, additionally inflation & ventilation breaths were needed at delivery suite. Baby's moderate respiratory distress managed with noninvasive positive pressure ventilation on minimal settings.

The Neonate developed hyperthermia 104 centigrade with severe metabolic acidosis and erythematous papular rash evolved to vesicular rash approximately 6 hours after birth over the left clavicle and shoulder, upper back, left side inner thigh and left cheek. The rash progressed over next 3 days . Mother was treated

for genital lesions during pregnancy Herpes Simplex viral infection suspected and vesicle swabs, blood samples and CSF samples where sent for virological studies. The virological studies were positive for HSV 2 in the blood and vesicle samples and negative in the CSF sample. . However, CSF Full report revealed a viral picture with moderately high CRP and thrombocytopenia and leukopenia in full blood count. IV Acyclovir 20mg/kg 8 hourly was started and continued for 21 days. Mother's STD Screening came as Negative. Baby had ultrasound brain scan and eye referral before discharge. he was discharged on day 26 of life on breast feeding and expressed breast milk . He had healed hypopigmented skin rash and neurodevelopmental follow-up arranged as per preterm and Disseminated HSV infection.

PP 37 : A CASE REPORT OF MALIGNANT PHEOCHROMOCYTOMA; A RARE CAUSE FOR UNCONTROLLED HYPERTENTION IN PREGNANCY.

Fernando SER[1], Wijenayake UN[2], Weerawardhana CD[3], Ruwanpathirana SA[4], Banagala ASK[5], Sumanatillake M[6], Arudchelvam J[7], Razick MSA, Gamaathige N.

[1.]Registrar in Obstetrics and Gynaecology, De Soysa Maternity Hospital Colombo Sri Lanka.
[2.]Senior Registrar in Endocrinology, National Hospital Colombo Sri Lanka.
[3.]Registrar in Obstetrics and Gynaecology, De Soysa Maternity Hospital Colombo Sri Lanka.
[4.]Consultant Obstetrician and Gynaecologist, De Soysa Maternity Hospital Colombo Sri Lanka.
[5.]Consultant General Surgeon, National Hospital Colombo Sri Lanka.
[6.]Consultant Endocrinologist, National Hospital Colombo Sri Lanka.
[7].Consultant Vascular Surgeon, National Hospital Colombo Sri Lanka.
[8.]Senior Registrar in Neonatology, De Soysa Maternity Hospital Colombo Sri Lanka.
[9.]Consultant Neonatologist, De Soysa Maternity Hospital Colombo Sri Lanka.

Introduction
Pheochromocytoma in pregnancy is rare, only reported in 0.007% of pregnancies. It is associated with high maternal and fetal morbidity and mortality.Malignant pheochromocytoma (MP) in pregnancy even rarer with higher mortality and morbidity. We report a case of MP invading into the inferior vena cava (IVC) detected during the late 2nd trimester of pregnancy during investigation for hypertension, successfully treated with surgical resection.

Case Description
A 31-year-old previously healthy pregnant mother with 26+ 4 weeks of Period of Gestation pregnant mother was investigated for persistently high blood pressure which was poorly responding to 3 antihypertensives which was detected during the late second trimester of pregnancy. She denied symptoms of hyperadrenergic spells. An ultrasound scan of the abdomen demonstrated a right adrenal gland mass with an extension of the tumour into IVC and a single live fetus with adequate growth and normal umbilical artery doppler values. A computerized tomography (CT) scan confirmed an 8.9cm x 7.2cm adrenal mass with features of malignancy and tumour extension into the supra-hepatic IVC up to right atrium.

24-hour urinary metanephrine excretion was persistently elevated (7.68 mg/24 hours). Due to the concern of an impending pheochromocytoma crisis, she underwent an emergency lower segment cesarean section at 28 weeks of POA. One-week later adrenalectomy with IVC tumour excision was done.

Her post-operative period was uneventful. At day 9 of adrenalectomy, she developed dizziness and hypotensive attack and was only on oral labetalol. Then antihypertensives were withhold and the 24-hour urinary metanephrine excretion is within normal limits - (0.12mg/24hr) Histology was suggestive of pheo-

chromocytoma with a PASS* score of 8/20 indicating a malignant tumour.

Conclusion
This case report describes a rare occurrence of MP as a cause of hypertension during pregnancy. It also highlights the importance of having a high degree of suspicion, timely diagnosis, and urgent intervention to improve maternal and fetal outcomes.

*PASS – Pheochromocytoma of Adrenal Gland Scaled Score

PP 38 : NEURODEVELOPMENTAL OUTCOMES OF INFANTS REFERRED TO HIGH-RISK INFANT FOLLOW-UP (HRIF) PROGRAM AT A TERTIARY CARE CENTRE

Safinaz ZMFZ[1], Fernando WPN[1], Karunathilake KGLRAD[1], Wansha KLJ[1], Vipulaguna, DV[1], [2], Sumanasena SP[1]

[1]Ayati National Center for children with Disabilities, Ragama
[2]RDHS Gampaha

Introduction
The High-risk Infant Follow-up (HRIF) program aims for early detection and interventions for infants at risk of adverse neuro-developmental (ND) outcomes.

Objectives
This study aimed to examine the clinical and neuro-motor characteristics of the infants in HRIF and their ND outcomes at 9 months to 2 years of corrected age (CGA), referred to Ayati Centre.

Method
A retrospective descriptive cohort study of the infants recruited to HRIF program. Data of infants who had undergone standardized neuro-motor and developmental assessments such as General movement assessments (GMA), Hammersmith Infant Neurological Examination (HINE) at CGA 3 and 6 months, and Bayley Scales of Infant and Toddler Development-III (BSID-III) at CGA 9 to 24 months were selected from the clinic records. According to BSID-III, an index composite score of less than 85 was considered as having developmental concerns. No client identification data was used to protect privacy and confidentiality. Statistical analysis was carried out using SPSS version 22.0

Results
A total of 163 infants (90 males, and 73 females) fulfilled the inclusion criteria. Gestational age varied from 25 to 41 weeks (mean±SD of 35.33±4.382). Eighty-two infants (50.3%) were born preterm. The mean birth weight was 2.25(±0.921) kg. The mean CGA at presentation to the study setting was 20.71(±17.136) weeks. The most common risk factors were neonatal sepsis (57.4%), prematurity (50.3%), and low birth weight (48.8%).

In GMA during the writhing period, 19 infants (48.7%) had poor repertoire and 15 (38.5%) had cramp-synchronized movements. Forty-eight of 64 infants (75.0%) had absent fidgets. Of the assessed infants, 67.6% and 87.5% had abnormal scores on the HINE at CGA 3 and 6 months follow up respectively. At 3 months, 22 of the 27 infants with absent fidgets had HINE scores <57.

In infants who underwent BSID-III assessment at 9-24 months, 86 had typical development while 34 had developmental concerns in only one domain. Thirty-five infants were diagnosed with cerebral palsy and 32

had cortico-visual impairment. Social communication deficits were noted in 13 infants.

Conclusion
High-risk infants have many adverse neuro-developmental outcomes. With early intervention programs and protocols, these outcomes could be optimized.

Keywords
HINE; BSITD-III;GMs;Neurodevelopmental outcome;Infants

PP 39 : PERSISTENT TACHYCARDIA IN A NEWBORN DUE TO ATRIAL FLUTTER, A RARE PRESENTATION

Dr. MSA Razick , Dr. MN Lucas

(Key words: Atrial flutter, SVT, neonatal arrhythmias, persistent tachycardia)

Introduction
Neonatal atrial flutter is a rare cardiac rhythm abnormality and may manifest as asymptomatic tachycardia not responding to typical vagal manoeuvres or as heart failure1-6. Due to the high resting heart rate in the neonate, the typical saw tooth pattern of atrial flutter (AF) may not be seen in the ECG of a neonatal atrial flutter[7]. The aetiology of neonatal AF is not clearly known but it may be due to immaturity of the myocardium or high pressures in the atrium during the perinatal period[8].

Case Report
A 2.89kg baby, delivered by emergency lower segment caesarean section at 37 weeks and 2 days of gestation due to fetal distress, was admitted to the special care baby unit (SCBU) due to persistent tachycardia. Heart rate was more than 220/min. Baby was tachypnoeic with a respiratory rate of 70/min and maintained oxygen saturation at 95% with 2 litres/min of oxygen delivered by nasal prongs. Blood sugar and serum calcium were normal. Serum magnesium was low and was corrected. Mother was regularly followed up at the antenatal clinic and had no antenatal complications. Electrocardiogram (ECG) showed evidence of a supraventricular tachycardia (SVT) (Figure 1). Echocardiography showed a small ostium secundum atrial septal defect with a small patent ductus arteriosus. An attempt to reverse the rhythm and or diagnose was attempted with intravenous adenosine which showed slowing of the rhythm and flutter waves (Figure 2). Synchronised DC cardioversion was done, and the heart rate and rhythm returned to normal. The baby was started on oral propranolol and was sent to the ward after observing for 24 hours at the SCBU. The baby was asymptomatic and discharged the day after.

Discussion
The resting heart rate in a neonate is 125/min (70 – 190)[9]. AF is a rare neonatal diagnosis[1-4]. It frequently occurs in the first 48 hours of birth and is not associated with structural heart disease[1-4]. The important features of the ECG that help in the diagnosis are the sustained increased rate, the presence or absence of P waves and the presence and regularity or irregularity of QRS complexes[1,2]. With an increased heart rate the P waves may be absent as they may get buried in the preceding T wave[1-4]. The ECG of the neonate showed narrow complex tachycardia, normal QRS complex, and P waves. SVT and AF are the two most common re-entry tachycardias. SVT occurs through pathways in AV node whilst AF occurs through a circular pathway in atrial wall. SVT and AF may appear similar[1-3]. AF is classically described as having a "saw tooth pattern" on the ECG due to multiple P waves demonstrating atrial depolarization. However, in the neonate this may not be observed as AF frequently has a rate of 440–480 beats/min, with 2:1 conduction, giving a

ventricular rate of 220-240beats/min[7]. As a result, the typical saw tooth appearance may not be seen on the ECG due to the superimposition of QRS complex and T waves.

Initially the diagnosis was suspected to be SVT and different vagal manoeuvres failed to restore normal rhythm by causing AV block. The antiarrhythmic drug adenosine too failed to revert the rhythm but caused a temporary block to slow the rate demonstrating the flutter waves (Figure 2). Adenosine is ineffective as the AF re-entry circuit does not involve the AV node. DC cardioversion is effective in converting the rhythm back to sinus rhythm. In the absence of structural cardiac defects, the recurrence of AF is rare1-4. Therefore long-term management with drugs is usually not required although they are used immediately post DC cardioversion.

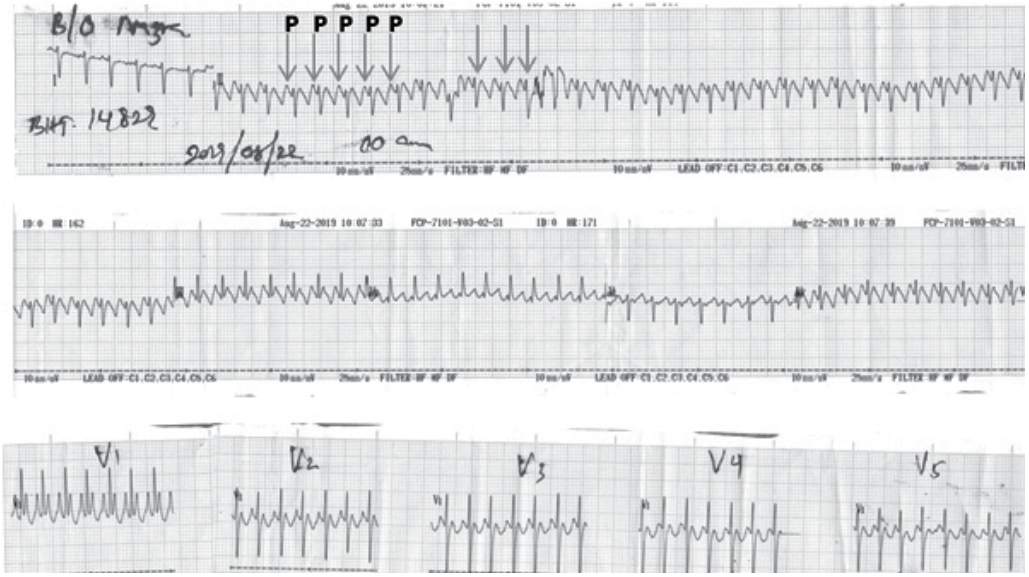


Figure 1: Electrocardiogram showing atrail flutter with a 2:1 conduction. The typical saw tooth pattern is not seen due to superimposed QRS complexes and T waves (marked in green). P waves are denoted in red.

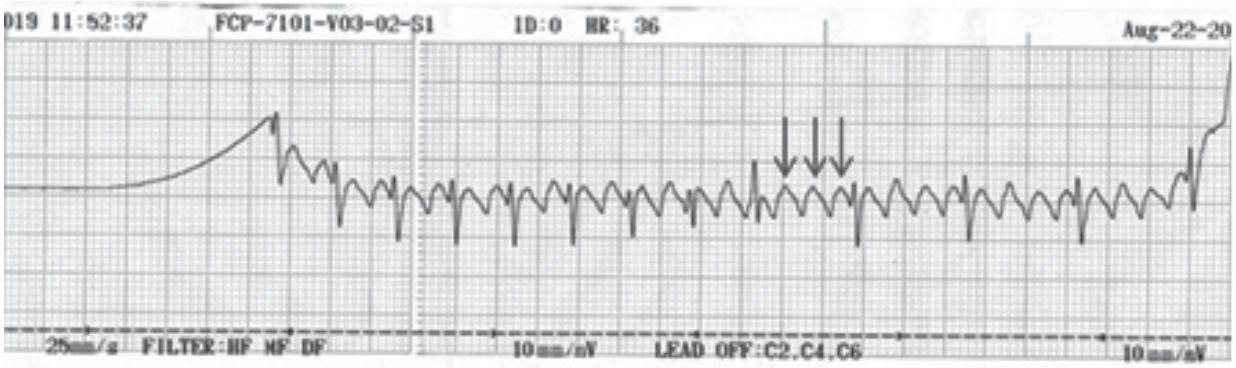


Figure 2: Electrocardiogram taken while giving adenosine demonstrating the typical saw tooth pattern of atrial flutter

Perinatal Society of Sri Lanka

FOUNDED 2001

Towards healthier mothers and newborns

Pre-congress Scientific Sessions

of the

Perinatal Society of Sri Lanka (PSSL)

for Nurses and Midwives

4th of November 2022

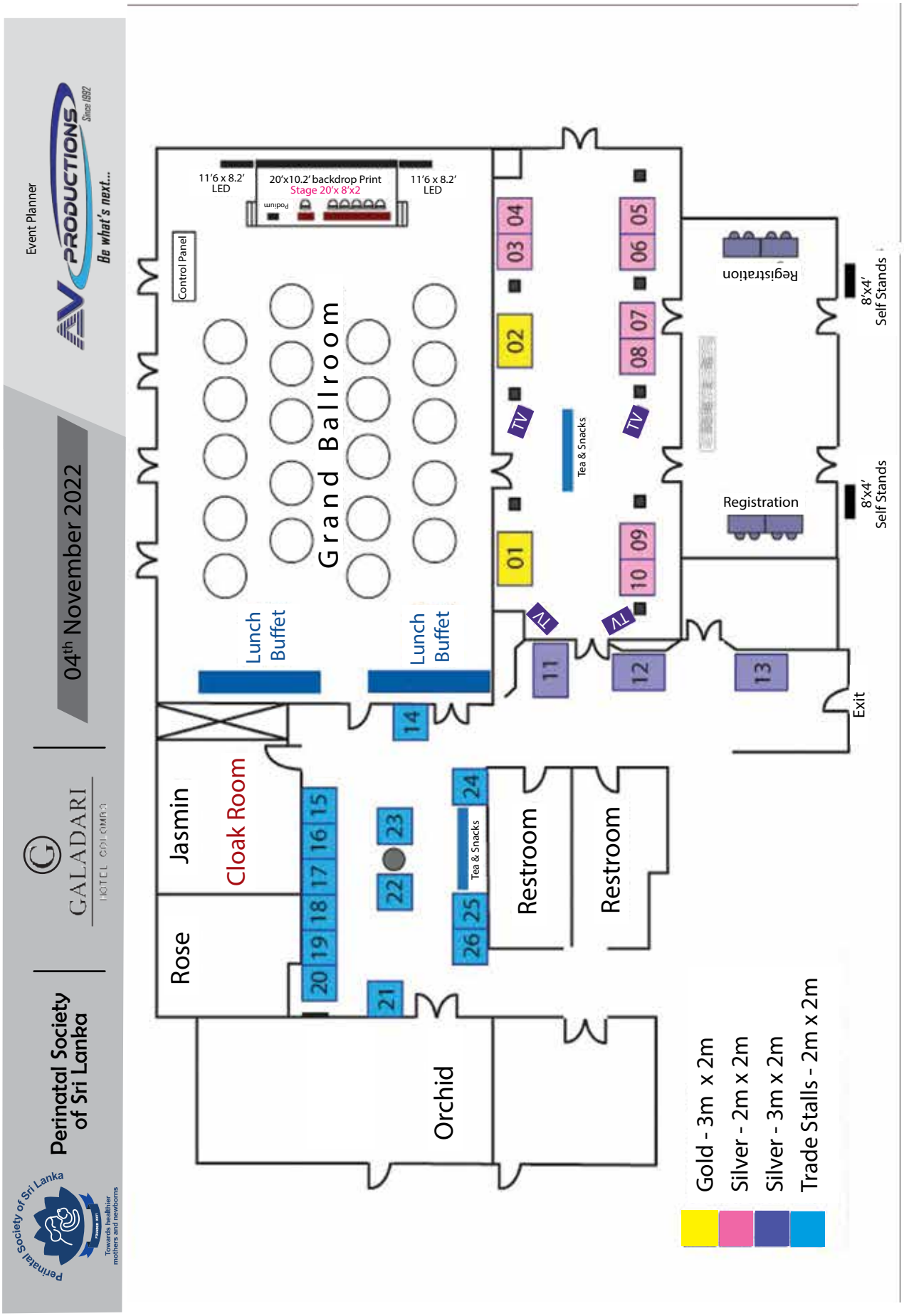
Hotel Galadari Colombo, Sri Lanka

PROGRAMME – PRE-CONGRESS SCIENTIFIC SESSIONS

Perinatal Society of Sri Lanka
FOUNDED 2001
Towards healthier mothers and newborns

7.30 – 7.45 am	**Registration**
8.30- 9.00 am	**Plenary 1 - Preserving the gains in public health in current crisis in Sri Lanka.** *Dr. Vinya Ariyaratna, Consultant Community Physician*
9.00-10.30 am	**Symposium 1 - Competency in postpartum care** *Chairpersons: Prof. Sanath Lanarolle, Dr. Gamini Perera* **a. Immediate care for medical complications in post-partum period** *Dr. Ruwan Silva, Consultant Obstetrician & Gynecologist* **b. Detection and management of Post partum haemorrhage** *Dr. Chandana Jayasundara, Consultant Obstetrician & Gynecologist* **c. Contraception for high risk women** *Dr. Mangala Dissanayaka, Consultant Obstetrician & Gynecologist*
10.45 – 11.15 pm	**Plenary 2: Overall burden of prematurity in Sri Lanka** *Dr. L.P.C. Saman Kumara, Consultant Neonatologist & President -PSSL*
11.15 – 12.45 pm	**Symposium 2 - Prematurity -** *Chairpersons: Dr. Sandya Doluweera, Dr. Sanjeewa Tennakoon* **a. Role of a nurse in caring a preterm.** *Mrs. Kerry Newton, Advanced Neonatal Nurse Practitioner, John Radcliffe Hospital, Oxford* **b. Infection control in NICU -** *Dr. Sujatha Seneviratne, University of Sri Jayawardenepura* **c. Communicating with parents of a preterm** - *Dr. Priyanga Dematawa, Consultant Neonatologist*
1.30- 2.00 pm	**Plenary 3 – Improving care for medical disorders to optimize the pregnancy outcomes** *Chairpersons: Prof. Athula Kaluarachchi, Professor of Obstetrics and Gynaecology*
2.00 – 3.30 pm	**Symposium 3 – Quality and Safety in neonatal care** *Chairpersons: Dr. Kaushalya Kasthuriarachchi, Dr. Himali Herath* **a. Medication safety and safe prescribing** *Prof. Priyadarshani Galappaththi, Professor of Pharmacology, Faculty of Medicine, Colombo* **b. Clinical governance Framework in improving patient care** *Ms. Julie Jervis, Clinical Nurse specialist, King Edward Memorial and Perth Children's Hospitals* **c. Quality and patient safety in NICU** *Dr. Kaushalya Gomez*
3.30 – 4.00 pm	Tea

FLOOR PLAN


Event Planner
V PRODUCTIONS
Be what's next...
04th November 2022
GALADARI
HOTEL COLOMBO
Perinatal Society of Sri Lanka
Perinatal Society of Sri Lanka
Towards healthier mothers and newborns
11'6 x 8.2' LED
20'x10.2' backdrop Print
Stage 20'x 8'x2
11'6 x 8.2' LED
Podium
Control Panel
Grand Ballroom
Lunch Buffet
Lunch Buffet
Tea & Snacks
Tea & Snacks
Registration
Registration
8'x4' Self Stands
8'x4' Self Stands
Exit
Jasmin
Cloak Room
Rose
Orchid
Restroom
Restroom
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
TV
Gold - 3m x 2m
Silver - 2m x 2m
Silver - 3m x 2m
Trade Stalls - 2m x 2m

FACULTY - PRE-CONGRESS SCIENTIFIC SESSIONS

Mrs. Kerry Newton
UK

Ms. Julie Jervis
Australia

Prof. Athula Kaluarachchi
Sri Lanka

Dr. Saman Kumara
Sri Lanka

Dr. Mangala Dissanayaka
Sri Lanka

Dr. Ruwan Silva
Sri Lanka

Dr. Sujatha Seneviratne
Sri Lanka

Dr. Chandana Jayasundara - Sri Lanka

Dr. A. K. S. Gomez
Sri Lanka

Dr. Priyanga Dematawa
Sri Lanka

ABSTRACTS - PRE-CONGRESS SCIENTIFIC SESSIONS

Plenary 1

Preserving the gains in public health in current crisis in Sri Lanka

Dr. Vinya Ariyaratne

Sri Lankan health system is hailed as model for achieving a higher standard of health proportionate to per capita GNP. The universally free health system with a reasonably higher level of equity in terms of access to care and quality, combined with State investments in education and food subsidies led to this success. However, the demographic and epidemiological transition combined with recent social, economic, and political developments have placed Sri Lanka's public health system under tremendous pressure. Despite government efforts to reorient the health care system, the COVID-19 pandemic and recent economic downturn have resulted in severe shortages of medicines, supplies and devices both in the State and private sectors. Fuel shortages have led to constraining public access to health facilities as well as provision of care by health staff. Rapid escalation of prices of essential food items because of very high inflation, has resulted in food insecurity leading to widespread undernutrition, particularly amongst the children, pregnant and lactating mothers, and elders. There is a real danger of standard health indicators in Sri Lanka being negatively affected and certain indicators which were lagging such as nutritional indicators, of getting much worse. Public health staff at all levels need to make a collective effort to avoid this trend. There are measures that can be taken to maintain service delivery in such a challenging and resource constrained environment. While it is the Government responsibility to work towards economic recovery, the health staff too have a moral and ethical responsibility to provide best of care to the populace, particularly to the most vulnerable and the marginalized.

Symposium 1 : Competency in postpartum car

Immediate care for medical complications in post-partum period

Dr. Ruwan Silva
Consultant Obstetrician & Gynaecologist

Postnatal period begins immediately after birth of a baby and extends up to 6 weeks (42 days) after birth. The postnatal period, is also known as the puerperium and the "fourth trimester," refers to the time after delivery when maternal physiologic changes related to pregnancy return to the nonpregnant state.

Numerous disorders and complications may occur in the immediate postpartum period or after discharge from the birth facility. Medical problems such as Hypertension, diabetes, thyroid diseases, aneamia and obesity are few of them which I am going to discuss in my lecture.

In addition to medical officers, nurses and midwives play a key role in identifying danger signs and initiation of appropriate management when complications of medical problems start during the puerperium. This lecture mainly focuses on what nurses and midwives must know to optimize the management of medical complications to reduce the maternal morbidity and mortality.

Women with insulin-treated pre-existing diabetes should reduce their insulin immediately after birth and monitor their blood glucose levels carefully to establish the appropriate dose. Women with pre-existing type 2 diabetes who are breastfeeding can resume or continue metformin immediately after birth, but should avoid other oral blood glucose-lowering agents while breastfeeding. Women who have been diagnosed with gestational diabetes should stop blood glucose-lowering therapy immediately after birth.

Women with chronic hypertension has to continue antihypertensive treatment after delivery. If already the woman is on methyldopa during pregnancy, it should be stopped within 2 days after the birth and change to an alternative.

Women with gestational hypertension needs evaluation immediately after delivery to decide for continuation antihypertensive treatment. If the blood pressure is 150/100 mmHg or higher antihypertensive treatment is indicated.

Detection and management of post-partum haemorrhage

Dr. Chandana Jayasundara
Consultant Obstetrician & Gynecologist

Primary postpartum haemorrhage is still the leading cause of maternal death throughout the world and it is still a major cause maternal morbidity and mortality in Sri Lanka as well. early recognition and timely intervention plays a major part in improving the outcome of primary postpartum haemorrhage. This can be achieved through team work and sound communication with all members involved in the management of the acute situation.

Management of acute postpartum haemorrhage involves coordinated management of four components, namely early identification, simultaneous resuscitation and assessment of cause, treat underlying cause, ongoing assessment and monitoring. Current management protocols propose first response bundles and if this fails a refractory response bundle until definitive surgical management is reached.

Finding the cause and timely treatment plays a pivotal role in the management of acute postpartum haemorrhage. Atonic uterus accounts for majority of postpartum haemorrhage but retained products, vaginal lacerations and coagulopathies also needs to be excluded when treatment is instituted for atonic uterus.

Treatment for postpartum haemorrhage include medical management and if failed proceed to surgical management. Medical management involves uterotonics like oxytocin, ergometrine, prostaglandin F2 alfa and misoprostol and procoagulents like tranexamic acid and factor VII. Surgical management involves uterine tamponade, compression sutures, segmental devascularization and finally subtotal or total abdominal hysterectomy if all other attempts failed. Timely resuscitation with intravenous fluids and blood and blood products carries immense impact on favorable outcome in management of primary postpartum haemorrhage.

Contraception for high risk women

Dr. Mangala Dissanayake
Consultant Obstetrician & Gynaecologist, Teaching Hospital Kalutara- Sri Lanka

Women with risk factors and medical disorders will find it difficult to obtain an effective and safe contraceptive method due to poor logistics and lack of knowledge among the health care workers. Unintended pregnancies with high risk factors and medical disorders often create a greater risk of morbidity and mortality to the mother and the fetus. Therefore women should be offered the most effective and safe contraceptive method without disturbing the existing medical problem or its management. According to current knowledge and research, modern contraceptive methods are safe and effective in women with medical problems. Most women with risk factors have effective and safe contraceptive options that do not worsen the disease status or affect the medical treatment. In such situation, women do require a careful and complete assessment of their current disease status, drug regime and the future fertility wishers. The Medical Eligibility Criteria for contraception provides various safe contraceptive options for women with certain health conditions. Long Acting Reversible Contraceptive methods are safe and suitable in most of the cases with high efficacy rate.

Plenary 2

Overall burden of prematurity in Sri Lanka

Dr. L. P. C. Saman Kumara

President-PSSL 2021/2022 & Consultant Neonatologist, Castle Street Hospital for Women

Did you ever know that war, famine, and poultry contributed to the birth of neonatology to this world? In France, in 1870 there was a rapid reduction of the population due to war and a massive shortage of food. They wanted more people to join the war. They started looking at the ways of expanding their population and realized that many newborn babies were dying. The Neonatal Mortality Rate (NMR) was 100 -200 per 1000 live births. They wanted to save more babies and as a result proper neonatal care was initiated by an obstetrician in 1870, Pieer Constant Buddin. He introduced 5 steps in caring for newborn babies. These 5 steps are still the top-level steps in modern neonatal care. The Modern neonatal care began only in 1950. It was initiated by Dr. Luois Gluck and he is considered the father of modern neonatal care. The global average NMR was nearly 36 per thousand live births in 1990 and now it‟s approximately 18. By 2021 the NMR in most of the developed countries varied between<1- 5.It remains still very high (18-40) in neighboring countries like India, Pakistan, and Bangladesh. We, in Sri Lanka, are fortunate to have a good health care system and as a result, our NMR is the best in the region.

With available data, it shows that our NMR has declined from 40 in 1960 to 5-6 in 2020. But we have some concerns about the current NMR. The Perinatal Society of Sri Lanka conducted an island-wide survey on gestation-specific neonatal mortality in 2021. This showed our average NMR as 8.9. The main reason for this discrepancy is due to the under-reporting of extreme premature deaths. Therefore we are enjoying unrealistic happiness for neonatal mortality rates in our country.

The prematurity takes a major portion of mortality which is more than 30%. We realized that we lose nearly 100% of our 23 weeks babies and 71.4% of 24 weeks, 52% of 25 weeks, 59% of 26 weeks, 37% of 27 weeks, 26.3% of 28 weeks and 30.3% of 29 weeks babies. It's so painful to see that we are in 2022 and we are still losing more than a quarter of our 28 weeks babies. One of the main area of concern to improve NMR in Sri Lanka is to reduce the percentage of mortality due to prematurity.

Symposium 2 : Prematurity

Role of a nurse in caring for a preterm baby

Mrs. Kerry Newton, Advanced Neonatal Nurse Practitioner,
John Radcliffe Hospital, Oxford

A brief journey of a preterm baby from birth to home focusing on some of the key elements in neonatal nursing care. Extremely preterm newborns are highly vulnerable to unique challenges and complications. An approach to care that takes their specific characteristics into account and adherence to best-evidence standards can improve both survival and neurodevelopmental outcomes.

This presentation will focus on the important role nurses play in the care of a preterm baby and how their specialised care and practices have been shown to improve outcomes of this population. This will include discussion on key clinical practice measures from optimal birth and stabilisation, the golden hour, infection and IVH prevention, pain management, promotion of a developmentally focused environment and family integrated care to promote optimal short- and long-term outcomes. Furthermore, a brief discussion on the importance of adequate nursing ratios and experience of which improve health outcomes.

Infection control in NICU

Dr. Sujatha Seneviratne, University of Sri Jayewardenepura, Sri Lanka.

Healthcare - associated infections (HAIs) are linked with significant morbidity and mortality in the neonatal intensive care units (NICU). Prevention and control of infections should be the priority in neonatal care, as new born are vulnerable to infections due to many factors including prematurity and the related immunodeficiency, frequent invasive procedures and use of broad-spectrum antimicrobials. Healthcare providers have a crucial role to play in facing the challenges of delivering safe care to vulnerable neonates. They need to understand how infections occur, how different microorganisms act and spread, and take effective infection control measures.

Standard precautions namely; hand hygiene, use of personal protective equipment, disposal of healthcare waste and sharps and cleaning, disinfection and sterilization should be used by all healthcare providers at all times to prevent the spread of infection. In addition, aseptic technique is maintained using the practices and procedures such as non-touch technique, aseptic field and sterile equipment before, during and after invasive procedures in order to minimize the presence of disease producing microorganisms. Hands are the most common transmitter of infection in healthcare settings. Therefore, hand washing is the single most important measure to follow in preventing cross infection in NICU.

Cleanliness of the unit, proper cleaning, disinfection and sterilization of equipment, utensils and linen, selection and using appropriate concentration of disinfectants are of prime importance in ensuring microbial safety of the environment of neonates. Reusing single use items is never recommended. However, proper decontamination, drying and storage of reused medical equipment or parts should be done when necessary, according to the hospital policies and guidelines.

Conducting regular infection control audits, sharing the findings and educating staff on implementation of policies and preventive activities would change attitudes, improve team efforts and help to inculcate a safety culture. Identifying innovative and cost-effective strategies of infection control for resource limited settings in collaboration with hospital infection control committees and maintaining a safety culture are the challenges in reducing risk of HAIs.

Communicating with parents of a preterm infant

Dr. Priyanga Dematawa, Consultant Neonatologist

Prematurity is one of the common causes of admission to a neonatal unit. Preterm infants would require relatively a prolonged stay in the neonatal care unit. Caring for them is challenging as preterm neonates experience complications that cause high morbidity and mortality. Parents of these infants are also under immense stress due to the infant's condition and prolonged hospital stay where they need to be updated regularly about their baby's health. Hence it is the responsibility of the healthcare staff to communicate with the parents and share the information. Communication in preterm infants does not necessarily start after the birth of the infant, but it also involves the antenatal period.

Studies reveal that parents show a preference to get updates from caring nurses than doctors due to easy accessibility. The communication between neonatal nurses and the parents mainly involves giving information or breaking bad news.
Communication with parents should be based on the basic principles of communication. Calgary Cambridge (CC) model is a recognized communication model among healthcare professionals. The model includes initiating the session, gathering information, explaining and planning, and closing a session. Provision of structure and building relationship are two steps that continue throughout the entire session.

Communication with parents of preterm babies is a time-consuming and complex process. Knowing parents' educational level, understanding and expectations are vital facts at the first encounter. It helps in building rapport and maintaining a professional relationship. It's the responsibility of the health care provider to put the parents at ease while paying attention to the content and the process. The environment should be calm and less threatening. Keeping eye contact should be considered paramount. Giving the information in chunks, checking the understanding, and setting an agenda is helpful for the continuation of effective communication. Effective communication improves satisfaction among the health care provider and the parents and enhances therapeutic adherence which in turn improves the quality of the care of the newborn.

Plenary 3

Improving care for medical disorders to optimize the pregnancy outcomes.

Prof. Athula Kaluarachchi, Professor of Obstetrics and Gynaecology

Medical disorders, including hypertensive diseases, diabetes, thyroid disorders may exist prior to pregnancy or may manifest themselves for the first-time during pregnancy. Appropriate management of these medical disorders starting from the pre pregnancy period and continuing through the pregnancy and postpartum period is important to improve the maternal and fetal outcome. Managing the complicated medical disorders of pregnancy at a center with adequate infrastructure and knowledgeable dedicated health staff plays a major role. Multidisciplinary team management with the involvement of all grades of staff including specialists, medical officers, nursing staff etc. has proven benefit. Pre pregnancy management includes adequate control of medical disease, changing the medications given to a non-teratogenic safe medications and appropriate timing of the pregnancy during disease remission. During the pregnancy multidisciplinary team management and careful monitoring of fetal growth and health are helpful to time the appropriate interventions. Some of the other strategies include ensuring a skilled birth attendant at delivery, ensuring prompt access to emergency obstetric care, and having quality neonatal care including resuscitation available. Ideally, all women with medical disorders should deliver in a facility with essential obstetric and newborn care including intrapartum monitoring with early detection and management or referral to a hospital with advanced capabilities for both maternal and neonatal complications.

Symposium 3 : Quality and Safety in neonatal care

Medication safety and safe prescribing in neonatal care

Prof. Priyadarshani Galappaththi, Professor of Pharmacology, Faculty of Medicine, Colombo

Medication errors are a leading cause of injury and avoidable harm in health care systems. Nearly half of all reported preventable patient safety incidents are estimated to be related to medication related harm. The neonatal population is particularly vulnerable to risk of harm resulting from medication errors due to their physiological vulnerability in coping with errors. Medication errors with potential to cause harm are eight times more likely to occur in the neonatal intensive care unit (NICU) compared with adult wards. Medication errors comprise 84.2% of all medical errors within the NICU. Prescribing and administration errors were the most common errors, mostly related to errors in dosing. Errors due to patient misidentification and overdosing are particularly prevalent in neonates, with 47% of administration errors involving at least tenfold overdoses. Errors that occur at each stage of medication use process needs to be addressed. Safe prescribing can prevent errors as, illegibility of handwritten prescriptions, use of inappropriate abbreviations, verbal orders of medication, including telephone orders, drug dose calculation errors can result in serious errors. Administration errors occur due to multiple administration lines, incorrect selection of look-alike or sound-alike medications and incorrect dilutions of small volumes in neonates. Incorrect patient identification resulting in the mother's dose being given to her newborn, or to the incorrect twin can lead to serious harm. Failure to monitor for signs of toxicity or adverse effects of medications results in harm due to delayed error detection. A combination of interventions at different levels needed to ensure medication safety will be discussed.

Clinical Governance Framework in Improving Patient Care

Ms. Julie Jervis,
Clinical Nurse specialist, King Edward Memorial and Perth Children's Hospitals

The introduction of clinical governance frameworks occurred in the early 1990's in the United Kingdom by the National Health Service (NHS) in response to the highly published breaches in patient safety by the Bristol Inquiry. To support the delivery of safe and high-quality care for patients and consumers, the Australian Commission on Safety and Quality in Health Care has developed the National Model Clinical Governance Framework. Clinical Governance (CG) is the set of relationships and responsibilities established by a health service organisation between its state or territory department of health, governing body, executive, clinicians, patients, consumers and other stakeholders to ensure good clinical outcomes. Good CG provides a system/structure where all roles and responsibilities are defined, and everyone knows their role and level of accountability for safe practice. It also has clear reporting lines of accountability from the hospital board and executives (corporate) to managers and clinician caring for patients in wards and clinics (clinical). Components of CG include:

- Governance, leadership and culture
- Clinical performance and effectiveness
- Partnering with consumers
- Patient safety and quality improvement systems
- Safe environment for the delivery of care

An example of CG in action in the Neonatology Service. Nurse A reports a medication "incident" (error), were a patient received the wrong dose of a medication. Incident is reported to shift coordinator and medical team. Infant condition is immediately reviewed, and any care/actions required are attended to.

- Incident is entered into a computer reporting program by nurse A.
  - All entries are deidentified (no names, no blame culture).
- Senior nurse receives incident and investigates how and why this incident occurred.
  - Open disclosure with the parents/carers occurs.
  - Confidential discussions with staff involved occur.
  - Recommendations are made to reduce the risk of incident occurring again.
- Report, investigation and recommendations are then signed off by the head of department
- All clinical incidents, types and rates are discussed at the Neonatology Safety and Quality meeting. Further recommendations may be made here.
  - A clinical focus poster or lessons learnt also forms part of dissemination of information to clinical staff.
  - A report is compiled and made available to all clinical staff.
  - This report is also submitted to health service executive committees.
- Quality improvement activities/audit can also be part of the recommendations from incidents. I.e. auditing medication administration (auditing that both nurses administering and checking medication calculate the dose independently).

National Model Clinical Governance Framework | Australian Commission on Safety and Quality in Health Care

Quality and patient safety in NICU

Dr. Kaushalya Gomez, Consultant Neonatologist

In the new era of medicine, quality improvement and patient safety has become the paramount important. Especially in NICU where the patients are critically ill and vulnerable we can't afford to have errors. There are various systems and procedures to accommodate within the framework to accomplish the quality of care and patient safety. In NICU there are several strategies to improve quality of care in various domains such as prevention of sepsis, temperature control, stress reduction and proper nutrition etc. As a team we try to achieve the goals in an efficient and effective way with a patient and family centered approach.

OP 01 :
FACTORS ASSOCIATED WITH EXCESSIVE WEIGHT LOSS OF NEWBORN BABIES: PRELIMINARY STUDY

De Silva, MHAD[1] & Chamika, RMA[2]

[1]Department of Pediatrics, Faculty of Medicine, University of Ruhuna
[2]Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya

Introduction
Physiological weight loss within the first few days of life is a common incident among almost all newborn babies. However, availability of information on factors associated with weight loss of newborn babies is limited.

Objective
The aim of the present study was to determine the factors associated with excessive weight loss of newborn babies in Sri Lanka.

Methods
A cross-sectional study conducted in a tertiary care hospital, involving 97 full term, healthy and singleton babies. The mother's demographic, obstetric, childbirth and nipple characteristics and newborn's birth weight and weight loss at discharge were collected by a questionnaire. The data was analyzed using univariate statistical analysis using the SPSS 25 software.

Results
The mean weight loss of newborn babies was 142.06 ± 57.19 grams. Newborns had lost 4.92 ± 1.96% of their birth weight. The results of univariate logistic regression showed that employed mother (OR = 1.375, CI: 0.612 – 3.088), prenatal complications (OR = 1.752, CI: 0.691 – 4.445), no previous experience in breastfeeding (OR = 1.404, CI: 0.618 – 3.192), cesarean section (OR = 6.714, CI: 2.475 – 18.218), nipple variations (OR = 2.036, CI: 0.831 – 4.991) and poor flow (OR = 1.534, CI: 0.655 – 3.588) were risk factors for excessive weight loss of newborn babies although cesarean section was only statistically significant.

Conclusion
Findings of the study revealed that cesarean section is the strongest predictor of excessive weight loss of newborn babies. Further research is needed to explore more significant predictors for weight loss of newborns.

OP 02 :

FACTORS INFLUENCING FIRST-TIME FATHERS' INVOLVEMENT IN THEIR WIVES PREGNANCY & CHILDBIRTH IN DE SOYSA MATERNITY HOSPITAL, SRI LANKA

Karagalage , DDY[1], Nuvie, GD[1], Roshini, RTD[1], Thilakaratne, UWCH[1], Dharmarathna, HHND[1], Amarasekara, AATD[2]

[1] *Faculty of Nursing, KIU, Sri Lanka*

[2] *Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka*

Introduction

Pregnancy is one of the most important, stressful, and yet glorious periods of a woman's life. The ideal involvement of fathers during pregnancy was defined as fathers being present, accessible, available, understanding, willing to learn about the pregnancy process, and keen to provide emotional, physical, and financial support" to their expectant wives.

Objectives

To determine factors associated with first-time fathers' level of involvement in their wives' pregnancy and childbirth in De Soysa Maternity Hospital (DMH), Sri Lanka.

Methods

Descriptive cross-sectional study was conducted among 200 first-time fathers who visited to seek their wives at obstetric wards in DMH. The purposive sampling method was applied to select the sample. Data were collected using a researcher-developed pretested interviewer-administered questionnaire including a validated instrument, namely Father's Involvement in Pregnancy and Childbirth. Data were analyzed using descriptive statistics and inferential statistics. Ethical approval was obtained from the Ethics Review Committee of KIU and DMH.

Results

Of the participants' the majority (76.5%, n=153) belonged to the 22 – 31 years of age group. Above half of the participants (67.5%, n=135) were Sinhalese. All the participants were employed and 57% (n=114) had reported an 8-hour working shift per day. Of the participants, 65% (n=130) were having less than 1 year of marriage life experience. Only 68% (n=136) of the participants had planned their pregnancy. The majority of the participants (84.5%, n=169) had participated in antenatal education sessions. Level of fathers' involvement in their wives' pregnancy and childbirth were poor, moderate, and good respectively 11.5% (n=23), 50% (n=100), and 38.5% (n=77) reported by the participants. Working hours per day (p=0.00) and attending antenatal educational sessions (p=0.01) were associated with fathers' involvement in their wives' pregnancy and childbirth.

Conclusion

Interventions should be implemented by considering the associated factors for fathers' involvement in their wives' pregnancy and childbirth since fewer participants had good fathers' involvement in their wives' pregnancy and childbirth.

Keywords

first-time fathers, level of involvement, wives' pregnancy and childbirth

OP 03 :
AN AUDIT ON PROBLEMS ASSOCIATED WITH BREAST-FEEDING AT BASE HOSPITAL -HORANA.

Perera W.P.R.

Nursing Officer, Base Hospital (BH) Horana, Sri Lanka.
Corresponding e-mail: roshaniperera1981@gmail.com

Introduction
Human milk is ideal nourishment for infant survival, growth and development. The single most cost effective intervention to reduce infant mortality in developing countries would be the promotion of exclusive breast feeding, means that the infant receive only breast milk.

Study Objectives
Objectives of this study were to assess the problems with breast feeding and to develop strategies for over-come problems.

Materials and Methods
A prospective study done with mothers at lactation unit at BH-Horana, for last six months.

Results
400 mothers were participated in this study. There were 15 major reasons identified as difficult attachment, feeling of not enough milk, infrequent sucking, poor weight gain, excessive crying, refusal of feeds, fever, vomiting, jaundice, reduced urine out- put, excessive weight loss, difficult breast conditions, small baby, baby with congenital defects and with other problems too. Number of first visits and subsequent visits in month of February 45(11.25%),24(6%), March 56(12.5%),19(4.75%), April 50(12.5%),24(6%), May 37(9.25%),16(4%), June53(13.25%),23(5.75%) , July 54(13.5%),18(4.5%) respectively. Referral from ward in February 27(6.75%), March 28(7%), April 25(6.25%), May 21(5.25%), June 22(5.5%), & July34 (8.5%). Referrals from Out Patient Department, clinics, field, private sector and self referrals were identified. Low birth weight babies (1.5Kg-2.5Kg) 76(19%), very low birth weight babies 23(5.75%) were participated. Babies delivered before 37 week 79(19.75%), during 37-41 week 321(80.25%). Finally medically diagnose as incorrect position and attachment 295 (73.75%),flat or inverted nipple 49(12.25%), engorged breast 49(12.25%), large or small breast 51(12.75%), cracked nipple 40(10%), post- partum mental conditions4(1%) and other minor problems related to breast feeding were noted as loss of confidence, difficult to adjust to motherhood, less family support, financial burden.

Conclusion
As identified problems were related to both mothers and babies a thorough pre and post education regarding breast feeding sessions must be arranged. A proper follow-up should be arranged how mothers apply taught facts by on practice during breast feeding. Furthermore special attention to be made for babies and mothers with various problems.

SPONSORS

1. Premium International (Pvt) Ltd
2. Nextgen healthcare Pvt Ltd.
3. DELMEGE FORSYTH & CO. LTD.
4. Sunshine healthcare lanka Ltd
5. Seven Seas Ltd
6. TECHNOMEDICS INTERNATIONAL PRIVATE LTD
7. Ninewells Hospital
8. Hemas Hospital
9. Astron Ltd
10. Hatton National Bank
11. Axero Associates Pvt Ltd
12. Vygon India (Pvt) Ltd
13. KALBE INTERNATIONAL Pte.Ltd.
14. A Baur & Company (Pvt) Ltd
15. Mankind Pharma
16. Biomed International Private Limited
17. CIC Holdings plc
18. George Steuart Health (Pvt) Ltd
19. B Braun
20. SLIM HEALTH CARE (PVT) LTD
21. P & G Health
22. Jewim pharma
23. George Steuart Health (Pvt) Ltd
24. Sussex Healthcare Private Limited
25. Grace Biogen Pty Ltd
26. Getz Pharma
27. A. Baurs (Nutrate)
28. Emerchemie NB (Ceylon) Ltd
29. HI - CARE PHARMA (PVT) LTD
30. Abbott Nutrition
31. Diligence Global Pvt Ltd.

ACKNOWLEDGEMENT

- Chief Guest Dr.Asela Gunawardene – Director General of Health Services
- Guest of Honour Professor Indrajee Amarasinghe - Founder President of Perinatal Society of Sri Lanka
- Special Guest Ven.Aludeniye Subodhi Thero - Chief Incumbent, Seruwila Mangala Rajamaha Viharaya
- Deputy Director Generals and the officials of the Ministry of Health
- Orators - Senior Professor Sujeewa Amarasena and Dr. Rohana Haththotuwa
- All local and international Guest Speakers
- Representatives of WHO, UNICEF, UNFPA and World Bank
- All Chairpersons, Judges and moderators
- All the presenters of research papers
- Members of the abstract evaluation committee
- Council Members
- All participants at the sessions
- Mr. Dushan Vas and other compeers and the coordinating teams
- Miss. Sandali Iroshana and Miss. Waruni Nawodya – Our Office Secretaries
- Premium Sponsors
- All other Sponsors
- Ms. Eroshini and the team of AV Productions
- The staff of the Galadari Hotel

Product of Sweden
BioGaia.

BioGaia®
Protectis baby drops

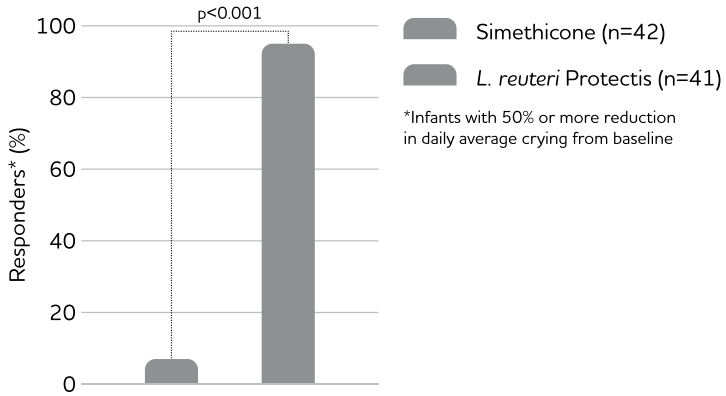
Targeting Colic
to Improve Baby's Health & Mom's Mood

95% successful treatment response

Compared to simethicone, L. reuteri Protectis:

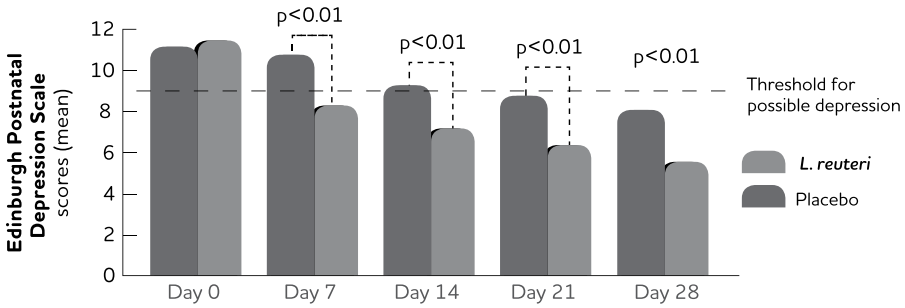
- Was superior in reducing daily crying time
- Decreased crying time more than twice as much

Rate of responders* of *L. reuteri* Protectis versus simethicone



Savino F et al. J. Pediatrics 2007;119:124-130.

L. reuteri Protectis *Improves*
Maternal Depression in Moms with Colicky Babies*



Study design: PC, O, R.

Intervention: *L. reuteri* **Protectis** once daily for 21 days with a 1-week follow-up in 42 infants (age < 4 months). **Mi, et al 2015.**

- **For infants to thrive, mothers must thrive too- physically, emotionally, and mentally.**
- **By reducing infant crying and fussing, Protectis Baby drops has been shown to improve maternal mental health.***

* Mi GL, et al. Antonie Van Leeuwenhoek2015, 107: 1547-1553.

AXERO
Founded on faith - Focused on well being

Axero Associates Pvt Ltd.
Tel : 0112790862 or 0712266650 Website : www.axero.lk

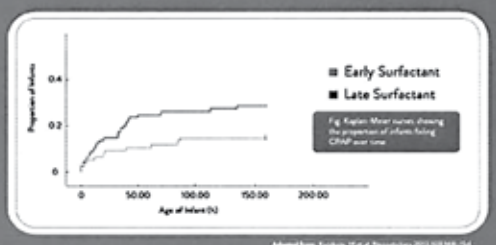
SURVANTA®

(Beractant Intratracheal Suspension 8mL)

EFFECTIVE & PROVEN

BENEFITS OF EARLY SURFACTANT THERAPY

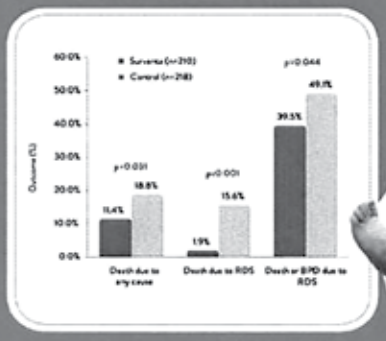
Preterm infants with RDS being **managed with early CPAP,**
EARLY ROUTINE SURFACTANT ADMINISTRATION WITHIN
2 HRS OF LIFE, REDUCED THE NEED FOR SUBSEQUENT MECHANICAL VENTILATION
(as compared to late selective administration)



EARLY ADMINISTRATION OF SURFACTANT MAY NOT ONLY PREVENT CPAP FAILURE
AND NEED FOR VENTILATION BUT ALSO **REDUCE THE DURATION OF CPAP**
(in resource-limited settings)

PROPHYLACTIC USE of SURVANTA® SIGNIFICANTLY REDUCES

❶ DEATH DUE TO RDS ❷ DEATH OR BPD DUE TO RDS



abbvie

Ref: 1. Jeon GW. Korean journal of pediatrics. 2019 May;62(5):155. | 2. Hoekstra RE et al. Pediatrics. 1991 Jul 1;88(1):10-8. | 3. Trembath A et al. The Journal of pediatrics. 2013 Oct 1;163(4):955-60. | 4.Rojas MA et al. Pediatrics. 2009 Jan 1;123(1):137-42. | 5. Paul S et al. Journal of paediatrics and child health. 2013 Oct;49(10):839-44 | 6. Kandraju, H et al Early Routine versus Late Selective Surfactant in Preterm Neonates with Respiratory Distress Syndrome on Nasal Continuous Positive Airway Pressure: A Randomized Controlled Trial, Neonatology 2018;113:148–154 | 7. Mathai et al. Med J Armed Forces India. 2014 Oct;70(4):327-31 | 8. Morley CJ et al. New England Journal of Medicine. 2008 Feb 14;358(7):700-8.

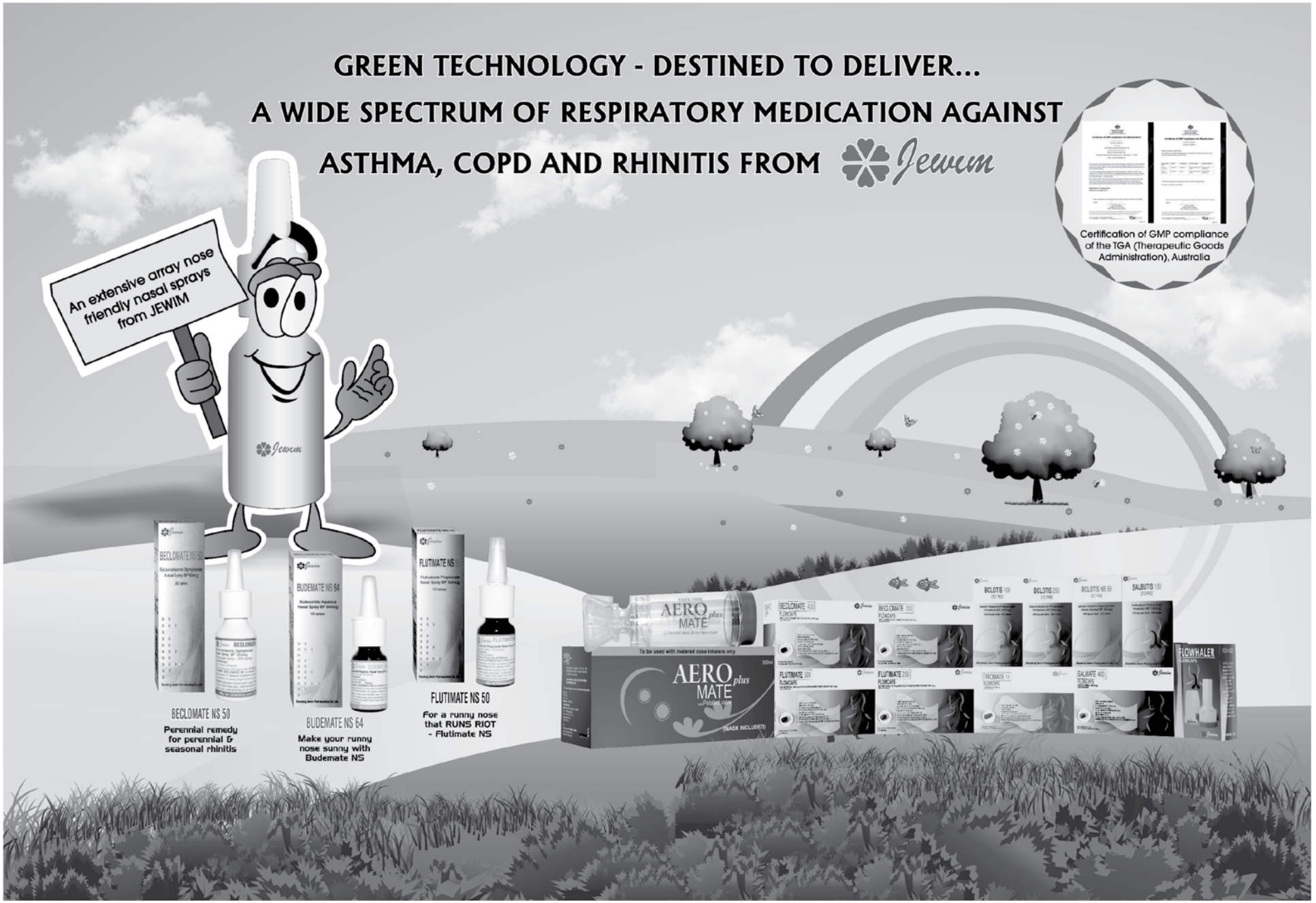
BEST WISHES
OF

Diligence

Werfen
Diagnostic Solutions for Life

Address : No 92,
Thalawathugoda Road,
Pita Kotte.
Web : www.diligence.lk

General : 0112 177757
Fax : 0112 872200
Email : diligence@sltnet.lk


GREEN TECHNOLOGY - DESTINED TO DELIVER...
A WIDE SPECTRUM OF RESPIRATORY MEDICATION AGAINST
ASTHMA, COPD AND RHINITIS FROM Jewim
An extensive array nose friendly nasal sprays from JEWIM
Certification of GMP compliance of the TGA (Therapeutic Goods Administration), Australia
BECLOMATE NS 50
Perennial remedy for perennial & seasonal rhinitis
BUDEMATE NS 64
Make your runny nose sunny with Budemate NS
FLUTIMATE NS 50
For a runny nose that RUNS RIOT - Flutimate NS
AERO plus MATE
To be used with metered dose inhalers only
(MASK INCLUDED)
FLOWHALER

GOLD SPONSOR

PREMIUM
INTERNATIONAL

MGMT. SYS. RvA C024
ISO 9001:2015
CERTIFIED COMPANY

HEALTHCARE . EDUCATION . TECHNOLOGY

Integrated solutions for tomorrow Since 2003

PREMIUM INTERNATIONAL PVT. LTD

+94 11 2685785 | contact@premium.lk | www.premium.lk

No. 161, Dr. Danister De Silva Mawatha, Colombo 9, Sri Lanka

Perinatal Society of Sri Lanka

"Perinatal excellence through a new evidence-based approach to premature labour, delivery, and baby"

SLCOG House, No.112, Model Farm Rd, Colombo, Sri Lanka.
TP : 0094 71 3227200
Email : psslsrilanka@gmail.com
Website : www.perinatalsociety.lk