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## LONGITUDINAL CURVES FOR NEONATAL BEHAVIOURAL ASSESSMENT SCORING IN HEALTHY, TERM, INFANTS IN COLOMBO, SRI LANKA

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### Introduction

Neonatal Behavioural Assessment Scores (NBAS) at birth reflect the newborns adjustment to labour, delivery and new environment. There is no data regarding NBAS references for healthy Sri Lankan infants.

### Objective

To develop longitudinal percentile curves from 1<sup>st</sup> to 99<sup>th</sup> centile for NBAS from birth to 2 months, in healthy term infants born in Colombo, Sri Lanka

### Methods

Part of a longitudinal study on body composition from July 2015 to December 2019, at Professorial Unit, De Soysa Hospital for Women, Colombo. Term babies born to mothers, >18 years old, who agreed, to attend monthly follow-up for one year were enrolled. Assessment was done within 2 days of birth by a single observer certified in NBAS scoring. Ethical clearance was obtained from Faculty of Medicine, University of Colombo. NBAS includes 18 reflexes, each scored on a 4-point scale and 28 behavioural items each scored on a 9-point scale. Data reduction was done using the 7-cluster (habituation, orientation, motor, range of state, regulation of state, autonomic stability and reflexes) scoring method. Longitudinal curves were formulated using LMS Chartmaker Pro\_version\_2.54.

### Results

A total of 250 cord blood samples were analysed. Mean and SD for cord blood were  $7.3 \pm 9.9$  ng/ml for leptin,  $6.4 \pm 5.2$  mIU/ml for insulin,  $60.6 \pm 39.9$  ng/ml for IGF-1 and  $31.3 \pm 14.8$  µg /ml for adiponectin. Each ng/ml increase in adiponectin decreased FFM index (FFMI) by 0.1g/cm at 3 months of age [ $\beta = -0.022$ ,  $p = 0.008$ ,  $r^2 = 0.074$ ,  $F(1,91) = 7.251$ ,  $p = 0.008$ ] and 0.3g/cm at 9 months of age [ $\beta = -0.027$ ,  $p = 0.013$ ,  $r^2 = 0.078$ ,  $F(1,77) = 6.518$ ,  $p = 0.013$ ], each mIU/ml in insulin increased FM by 0.05g at 24 months of age [ $\beta = 0.046$ ,  $p = 0.044$ ,  $r^2 = 0.125$ ,  $F(1,31) = 4.425$ ,  $p = 0.044$ ] and each ng/ml increase in IGF-1 increased FFMI by 9g/cm at 9 months of age [ $\beta = 0.009$ ,  $p = 0.041$ ,  $r^2 = 0.053$ ,  $F(1,77) = 4.308$ ,  $p = 0.041$ ].

### Conclusion

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

# CAN NEONATAL BEHAVIOURAL ASSESSMENT SCORING PREDICT INFANT BODY COMPOSITION?

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## Introduction

Neonatal Behavioural Assessment Scores (NBAS) at birth reflect the newborns adjustment to labour, delivery and new environment. The simplest 2-compartment model of body composition describes our body content as fat mass (FM) and fat free mass (FFM).

## Objective

To assess the relationship between NBAS and infant body composition from 3-24 months of age

## Methods

Body composition was measured at 3,6,9,12,18 and 24 months via 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. Assessment was done within 2 days of birth by a single observer certified in NBAS scoring. Ethical clearance was obtained from Faculty of Medicine, University of Colombo. NBAS includes 18 reflexes, each scored on a 4-point scale and 28 behavioural items each scored on a 9-point scale. Data reduction was done using the 7-cluster (habituation, orientation, motor, range of state, regulation of state, autonomic stability and reflexes) scoring method. Data was analysed via SPSS v27 using linear

regression, to determine whether NBAS can predict body composition of infants, after ensuring that assumptions of normality, linearity, multicollinearity and homoscedasticity were met.

## Results

NBAS assessments were done in 337, 157 and 159 infants at birth, 1 and 2 months of age. Body composition at 3, 6, 12, 18 and 24 months of age was significantly related to NBAS scores at birth, 1 and 2 months of age. State regulation, social interaction, motor system, autonomic system and reflexes demonstrated a significant positive relationship ( $p < 0.05$ ) with FM from 3-6 months of age and with FFM from 12-24 months of age while demonstrating a significant negative relationship ( $p < 0.05$ ) with FFM from 3-6 months of age and with FM from 12-24 months of age. The positive relationship between FM from 3-6 months of age followed by a positive relationship with FFM from 12-24 months, suggest that NBAS increases parallel to the change in body composition that is characteristic for the breastfed baby with high adherence to infant and young child feeding guidelines.

## Conclusion

Increase in NBAS predicts healthy body composition.

# ASSESSMENT OF THE ENTERAL FEEDING OF PRETERM BABIES IN NEONATAL INTENSIVE CARE UNIT- TEACHING HOSPITAL MAHAMODARA

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## Introduction

Premature infants have greater nutritional needs in the neonatal period and enteral feeding is the preferred method of provision of nutrition. Early and adequate nutritional support is needed to achieve appropriate rates of weight gain and to minimize complications. It is important to choose feeding practices associated with improved outcomes for premature infants. Sometimes parenteral nutrition is needed especially for infants with medical conditions.

Nutritional management in neonatal units often lacks uniformity. Standardization of practice across the neonatal units will minimize the nutrition related complications and improve the neonatal outcomes.

## Objectives

To assess the adherence to the standard feeding protocols and to identify the lags of current practice.

## Method

Babies who were born preterm (n= 25) from 01.11.2022 – 31.12.2022 were included to the study. Data was collected prospectively using an audit form. Seven standards were defined and assessed in the study. This includes initiation of first feed within 1<sup>st</sup> 24 hour of life, feeding with breast milk,

adherence to the recommended feeding regimes considering risk category of baby, adherence to the appropriate feeding method, assessment of optimal weight gain, commencement of prophylactic Iron treatment and vitamin supplements and antenatal expression of breast milk.

## Results

Out of 25, there were 4 extremes preterm, 13 very preterm, 6 moderate preterm and 2 late preterm neonates. According to the birth weight, 7 were less than 1000g, 14 were 1000-1499g and 4 were 1500-2499g.

Out of seven standards, 4 recorded 100% compliance namely feeding with breast milk, adherence to recommended feeding regimes considering risk category, adherence to appropriate feeding method, commencement of prophylactic Iron treatment and vitamins. 92% of babies had optimal weight gain. 64% compliance recorded for initiating 1<sup>st</sup> feed within 24 hours of birth. Only one baby had received antenatally expressed maternal breast milk.

## Conclusion

Although most of the standards are met, there are few areas, which need improvement.

# OUTCOMES OF INFANTS BORN LESS THAN 28 WEEKS' GESTATION AND FACTORS ASSOCIATED WITH SURVIVAL AT DISCHARGE: A SINGLE CENTER EXPERIENCE IN SRI LANKA OVER A DECADE

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## Introduction

Preterm birth and complications are now the leading cause of death globally in children under five years. In Sri Lanka, studies assessing the survival rate of preterm babies and associated factors are sparse.

## Methods

This was a 10-year retrospective analysis of all live births at 22+0 to 27+6 weeks gestation in a single center in Sri Lanka. It involved a review of records of all extreme preterm babies admitted between 1st January 2010 and 31st December 2019. Live births with major congenital malformations and chromosomal abnormalities were excluded. Survival probability was calculated by using Kaplan-Meier estimates. Logistic regression was used to assess the factors associated with survival. The explanatory variables included gestational age at birth, comorbidities (sepsis), gender, mode of delivery, and birth weight.

## Objectives

To assess the survival of extreme preterm babies and to ascertain factors associated with the survival.

## Results

A total of 123 records were reviewed. The majority survived (55.3%). The overall median survival time was 58 days at discharge. Significant independent factors affecting survival were gestational age (B=3.18, 95% CI: 6.239, 92.476, p<0.001 & B=2.83, 95% CI: 4.188, 68.262, p<0.001), small for gestation (B=-1.95, 95% CI: 2.051, 0.392, p=<0.001), and having sepsis (B=-3.19, 95% CI: 0.008, 0.205, p<0.001).

## Conclusion

We found a high mortality rate in preterm babies < 28 weeks of gestation and that survival increased with higher gestational age, birth weight, and not having sepsis. Since most of the identified predictors are not modifiable, everyone must work towards improving modifiable risk factors such as prevention of sepsis.

# **A FACILITY LEVEL QUALITY IMPROVEMENT INITIATIVE CONDUCTED USING THE ASSESSMENT TOOL FOR THE QUALITY OF HOSPITAL CARE FOR MOTHERS AND NEWBORNS: A PILOT PROJECT CONDUCTED AT DSHW**

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## **Introduction**

Quality of care provided in labour rooms needs improvement in many LIMC. There is research evidence to prove that systematic use of available tools to identify the gaps and tailor-made interventions can improve the outcomes.

## **Objectives**

To improve the key quality indicators by using the manual developed by the WHO and by training the staff to improve adherence to evidence-based care

## **Methods**

A pilot quasi experimental study conducted in the labour wards of DSHW from May 2021 to Dec 2022. The quality-of-care assessment tool developed by the WHO was used to assess the quality indicators. This audit was conducted over a period of two weeks by a trained doctor. The findings were presented in the stake holders meeting. Areas that need improvement were decided and prioritised. A series of workshops regarding safe use of oxytocin, birth positions, respectful maternity care, intrapartum fetal surveillance, labour companionship and pain relief in labour were conducted and protocols for induction of labour and use of oxytocin, handbook for fetal surveillance, safety checklist for CTG interpretations were developed to improve the adherence to evidence based practices.

After one year of implementation phase, a repeat audit was conducted and compared with phase 1.

## **Results**

During the audit and re-audit process, a total of 91 criteria were assessed. Out of these criteria, 30 showed a remarkable improvement of over 50%. Another 40 criteria exhibited an improvement, albeit less than 50%. It is worth noting that 13 of the criteria remained unchanged, with their assessment results remaining static. Interestingly, 12 of these static criteria had already achieved a perfect score of 100% prior to the audit. On the other hand, 8 indicators experienced a decline in their assessment between the audit and the re-audit.

## **Conclusion**

Quality improvement strategy using the assessment tool developed by the WHO and tailor-made interventions to educate and train the staff and development of protocols, checklists and job aids is practical and can be scaled up in similar settings.

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# RELATIONSHIP BETWEEN UMBILICAL CORD ARTERIAL PH WITH CTG AND APGAR SCORE

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**Key words:** cerebral palsy, umbilical cord pH, APGAR score, intrapartum adverse events, electronic fetal monitoring

## Introduction

The International Cerebral Palsy (CP) Task Force list four essential criteria for diagnosing CP. One of them is evidence of metabolic acidosis in fetal umbilical cord arterial blood obtained at delivery (pH 1 <7 and base deficit of  $\geq 12$  mmol/L). At UHKDU ward 01 it has been the standard practice to do umbilical artery pH in suspected fetal distress and assisted vaginal deliveries. Electronic fetal monitoring (EFM) and umbilical artery pH are the only means available to confirm objectively any adverse intrapartum event causing CP.

## Objectives

To determine the relationship between umbilical cord pH to intrapartum EFM and neonatal APGAR score.

## Design

A retrospective correlational study.

## Methods

Data collected from bed head tickets (BHT) singleton, term (> 36 weeks gestation), non-anomalous, live neonates with validated paired umbilical cord arterial pH values delivered from January 1<sup>st</sup> 2023 to May 31<sup>st</sup> 2023. N=42

Inclusion criteria: Gestational age confirmed by dating ultrasound scan, singleton pregnancy, live birth, EFM of 20minutes or more attached to the BHT,

availability of the result of validated umbilical cord blood pH from paired samples.

## Results

A Kruskal-Wallis H test showed that there was no statistically significant difference in umbilical Ph between the different intrapartum CTG findings,  $\chi^2(2) = 2.301$ ,  $p = 0.316$ , with a mean rank umbilical Ph of 18.05 for normal CTG, 20.94 for suspicious CTG and 13.42 for pathological CTG.

The relationship between umbilical cord Ph and APGAR score was investigated using Spearman's rank order correlation. There was a medium, positive correlation between the two variables [ $r=42$ ,  $n=42$ ,  $p<.0005$ ], with high levels of umbilical cord Ph associated with high levels of APGAR score.

## Conclusions

Intrapartum CTG has no statistically significant correlation to umbilical artery Ph. A statistically significant positive correlation between the two variables APGAR score to umbilical artery Ph was found.

# STREPTOCOCCAL NEONATAL DISEASE: A SINGLE TERTIARY CARE CENTER EXPERIENCE BETWEEN PRE AND POST IMPLEMENTATION OF THE NATIONAL GUIDELINES TO MITIGATE GROUP B NEONATAL SEPSIS

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## Introduction

Group B Streptococcus (GBS) and other streptococcal species cause neonatal sepsis with variable severity. GBS sepsis result in mortality of 10% and 50 % of survivors develop neuro-disability in various severity. The country implemented national guideline to mitigate GBS sepsis in 2016, in keeping with the NICE guidelines.

## Objectives

The study assesses the changes that occurred in the prevalence of GBS neonatal sepsis over a decade to evaluate the impact of GBS prophylaxis. The study also aims to provide the baseline data for a national surveillance on GBS neonatal disease.

## Method

A retrospective descriptive analysis was done on all streptococcal isolates recovered from the blood cultures collected from neonates, managed at Colombo South Teaching Hospital over a period of 10 years from the 1<sup>st</sup> of January 2013. The data was collated from the data retained in the Microbiology laboratory and in the special care baby unit (SCBU).

## Results

Fifty episodes of GBS, 3 pneumococcal, and 3 *Streptococcus pyogenes* neonatal sepsis were reported. The incidences of GBS sepsis were 0.66, 0.86, 0.9, 0.93, 1.33, 0.61, 0.25, 2.27 per 1000 live births respectively from 2015 to 2022. Forty-four (96%) were early onset sepsis (EOS) and all (40/50) were delivered vaginally or by an emergency section. Forty-six (92%) newborns with GBS sepsis needed care from the SCBU and the reported mortality rate was 7% (3/42). Pneumococcus was isolated as a pathogen of early onset sepsis from 3 and 2 (67%) of them died, although the isolates were susceptible to cefotaxime.

## Conclusion

No significant downward trend noted in GBS-EOS following implementation of GBS prevention guidelines, indicating the need for reassessing the existing practises and looking for new strategies. The incidence of GBS sepsis in the present study is similar to the incidence of high-income countries with comparatively higher mortality rate. Therefore, the study shows the importance of a national surveillance on GBS sepsis to define the burden of disease. *S. pneumoniae*, a rare pathogen in EOS which carries a high mortality probably due to lack of maternal antibodies since the vaccine is not implemented in Sri Lanka.



# AUDIT ON EARLY ONSET NEONATAL SEPSIS (EOS) AT BASE HOSPITAL UDUGAMA

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**Keywords:** Early onset Neonatal Sepsis, Intrapartum care

## Introduction

Neonatal sepsis may be categorized as early (<72 hours) or late onset. In Sri Lanka 11% of Neonatal mortality is due to infection, among whom 75% deaths occur during the first week due to EOS.

Decreasing invasive interventions and promoting hygienic practises are key preventive strategies to avoid EOS.

## Objective

To audit and reduce early onset neonatal infections

## Methods

We conducted a retrospective cross-sectional study of all deliveries over two consecutive months at maternity unit of Base Hospital Udugama, Sri Lanka. Using a pretested checklist and compared against national guideline for newborn care (Ministry of Health ; 2020).

## Result

Hundred and five deliveries were studied during months of January and February, 2023. The median maternal age was 30 years while median gestational age of neonates was 37 weeks + 5 days.

Early onset neonatal infection (EOS) rate was found to be 3.8%(N=4) in this population. Preterm labour (<37 weeks) 36.1%(N=38), newborn of a mother with

diabetes 9.5%(N=10), Instrumental/Difficult delivery 4.7%(N=5), >3 Vaginal Examinations 25.7%(N=27), PROM >18 hours 0.9%(N=1), Low birth weight <10th Centile 6.6%(N=7) and low APGAR at 5 min 1.9%(N=2) were the documented risk factors for EOS.

## Conclusion and Recommendation

Sri Lankan national guideline for newborn care states maternal pyrexia, PPRM/ Prolonged rupture of membranes >18 hours, Preterm delivery, Low birth weight, Low APGAR, difficult delivery/instrumentation, ≥3 vaginal examinations or unclean delivery ect. as risk factors for EOS.

However, in this population, only newborn of a mother with diabetes was the only factor which was associated with EOS.

To mitigate the early onset neonatal infection, we have newly implemented quality improvement measures namely, limiting number of vaginal examinations, strict asepsis during vaginal examinations, limiting number of visitors by introducing a visitors pass system, regular carbolicizing, changing linen and individual allocation linen for each baby. Proper diabetic control has been achieved by home blood sugar monitoring.

At present follow-up audit is being carried out following new hygienic practises.

# ASSESS THE ADHERENCE TO THE GOLDEN HOUR CONCEPT IN MANAGEMENT OF PREMATURE BABIES AT TEACHING HOSPITAL MAHAMODARA.

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## Introduction

“Golden hour” of the neonatal life is defined as the first hour of postnatal life in both preterm and term neonates. This includes neonatal resuscitation, post resuscitation care, transportation of sick neonate to NICU, cardiovascular support, respiratory support and initial stabilization in NICU. Golden hour concept includes practicing evidence-based interventions during the first hour of stabilization of a neonate. This practice has markedly reduced the neonatal hypothermia, hypoglycemia, intraventricular hemorrhage, bronchopulmonary dysplasia and retinopathy of prematurity.

There are many standard interventions that need to be practiced during the golden hour for optimal neonatal care. This study aims to assess the adherence to these concepts.

## Objectives

To assess the adherence to standard interventions during the golden hour.

## Methodology

Observational Prospective study was conducted in the NICU- THM from 20/8/2022 to 30/11/2022. Babies who were less than 34 weeks of gestation were included to the study. Optimal cord management, prevention of hypothermia, surfactant treatment and respiratory support, cardiovascular support, laboratory investigations, commencement of intravenous fluids/ parenteral nutrition and antibiotics was assessed during the study.

## Results

Total of 43 premature babies were assessed during this period. All the babies had immediate cord clamping. All the babies who were less than 32 weeks of gestation delivered into the plastic bag and monitored for hypothermia. Out of 43 babies 24 babies were normothermic on admission to NICU. 16 (37.2%) babies were mildly hypothermic. Three babies (6.9%) had moderate hypothermia. All the babies were stabilized on PEEP at delivery room and admitted to NICU during the golden hour to receive the respiratory care. Out of 43 only 6 babies met the criteria and received the Surfactant treatment. Screening for hypoglycemia was done only in 28 babies (65%) and 8 (28.5%) babies had hypoglycemia. All the babies had initial blood investigations during the golden hour and had intravenous fluids and antibiotics when indicated.

## Conclusions

The concept of “Golden hour” is for the better outcome of neonates and this study shows that there are few areas which need improvement.

# AUDIT CYCLE ON IMPLEMENTATION OF BEST PRACTICE IN BASIC NEONATAL RESUSCITATION GUIDELINES IN MATERNITY UNITS AND MATERNITY THEATER

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## Introduction

Resuscitation council in United Kingdom have introduced guidelines for improving the quality of neonatal care. Evidence have proven that adherence to formulated guidelines is a highly effective intervention that can reduce the incidence of severe birth asphyxia and hypoxic injury of the neonates, mainly in developing countries.

## Objectives

Audit project was focused to evaluate the current practice of neonatal resuscitation in labour ward and maternity theatre at Colombo North Teaching Hospital Ragama against the European resuscitation guidelines.

## Methods

91 participants including 63 nurses and 28 midwives specialized in providing labour care were audited. Audit was carried out collecting clinical data on the proper assessment of the APGAR score according to retrospective case note reviews of 245 babies. A questionnaire and observer check list was used to collect data on practices.

Baseline audit data were analysed using simple statistical data analysis. An action plan was developed following identifying the potential barriers to adhere guidelines with interactive teaching and skills sessions being implemented over a period of 1 month with suppression of the audit leads.

A prospective re-audit was carried out among the same study subjects and assessed 240 babies in a similar manner.

## Results

Baseline audit revealed that only 12% of subjects have undergone a training course on neonatal resuscitation previously. 5 out of 31 necessary equipment were not available (Laryngoscope, face masks were not available in three different sizes). Appropriate documentation of APGAR score was 97%. Awareness of guidelines and protocols was 25% without meeting 100% adherence to the standards. Resistance to change practice, knowledge gaps and lack of motivation for training were identified as barriers for adherence and addressed successfully at action plan which included Neonatal resuscitation workshops. During re-audit, APGAR score documentation and equipment maintenance was 100%. Staff satisfaction and guideline adherence were 100% following knowledge sharing. Will to change practices and to attend training sessions showed a significant improvement (70% and 88% respectively).

## Conclusion

Audit cycle addressed the barriers to adhere guidelines and helped ensuring confidence, establishing proper skills and techniques among new-born care providers thus leading to a remarkable outcome.

# **SURVEY ON MUSCULOSKELETAL SYMPTOMS IN A GROUP OF OBSTETRIC PATIENTS AT A DISTRICT HOSPITAL IN SRI LANKA**

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## **Introduction**

Musculoskeletal symptoms are frequently reported by pregnant women and can have a significant impact on their daily functioning and quality of life. However, limited attention has been given to exploring the prevalence of musculoskeletal symptoms specifically in obstetric patients within rural healthcare settings. This survey aims to fill this crucial knowledge from a rheumatology perspective.

## **Objectives**

Provide insights from a rheumatology perspective on musculoskeletal symptom prevalence and associated factors in obstetric patients in rural healthcare settings. Contribute to the development of targeted interventions and management strategies to improve the well-being of obstetric patients.

## **Methodology**

The survey was conducted among 65 obstetric patients who were either attending clinics or warded at the obstetric wards at Matara District General Hospital using an interviewer-based questionnaire. Statistical analysis was done using SPSS.

## **Results**

Median(IQR) age of the study population was 30(26-33)years. Median(IQR) gestational age was 32(20-36) weeks. Mean(SD) parity was 2.05(4.533). Common types of musculoskeletal symptoms were back, leg and knee pain seen

in 48.5%, 19.7% and 4.5% of patients respectively.

Some reasons attributed by patients as possible causes of pain were nutritional deficiencies(83.1%), caring for newborn(80%), weight-gain(76.9%), changes in posture(76.9%) and childbirth injuries(72.3%).

The age of patient positively correlated with hours of physical activity carried out on a daily basis( $p < 0.01$ ). Patients with higher parity had onset of musculoskeletal symptoms at a later gestational age( $p < 0.01$ ). Severity of symptoms plotted in a visual analogue scale was worse if number of months since last childbirth was higher( $p < 0.05$ ), when gestational age at onset of symptoms was higher( $p < 0.01$ ) or when the hours of daily physical activity was higher( $p < 0.05$ ). Higher gestational age positively correlated with a higher gestational age of onset of symptoms( $P < 0.01$ ).

## **Conclusion**

Musculoskeletal pain was reported in various body regions, with age, parity, gestational age and physical activity playing significant roles in the onset and severity of symptoms. These findings emphasize the importance of addressing musculoskeletal symptoms in obstetric patients. Further research and interventions are warranted to better understand and manage symptoms in this population.

# PREGNANT WOMENS' ATTITUDES TOWARDS DECISION-MAKING AND IMPLEMENTING NIPT IN NATIONAL ANTENATAL CARE

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## Introduction

NIPT has become an integral part of fetal medicine. Though national program for antenatal care doesn't have a considerable place for this testing, it is available in private sector laboratories.

## Objectives

Evaluate the attitudes of pregnant women in Sri Lanka towards implementing NIPT in national antenatal care plan for high risk pregnancies.

## Methodology

Pregnant women, attending the Fetal medicine clinic, Professorial Obstetrics and Gynecology Unit, North Colombo Teaching Hospital, Ragama, and Fetal medicine unit, Ninewells Care Mother & Baby Hospital (PVT) Ltd, Kirimandala Mawatha, Narahenpita were recruited to the study. Data collection was done through interviewer based questionnaire, in three aspects (social and demographic data, attitude towards NIPT, and factors important for decision-making for NIPT testing) following educating the each pregnant mother regarding NIPT and clarifying their problems

## Results

A total of 179, 60 patients were enlisted from the NCTH, and 119 patients were from the Ninewells hospital. 82 (46%) mothers

had a high-risk pregnancies. There were 10 (5.5%) mothers who had a past history of Down syndrome/congenitally abnormal children. Only 32 (8%) mothers knew that NIPT is available in Sri Lanka while majority.

Seventy (39%) mothers strongly agreed that NIPT should be offered to all high risk pregnancies, 13(7%) mothers strongly disagreed with the decision. The majority (141; 79%) of the cohort agreed with the decision to undergo invasive prenatal testing if they got positive NIPT and 23 (13%) disagreed with that choice.

The most important factor in undertaking NIPT testing was to know more information about the fetus. 173 (97%) mothers considered doing the NIPT testing because they were more worried about the baby's safety. The least important factor for decision-making to undergo NIPT was to confirm the gender of the baby (50, 28%). The family support (71%) and social support(71%) of having a baby with a chromosomal abnormality and 148 (83%) mothers considered the fear of not being able to cope with a baby with a chromosomal abnormality to be important in decision-making.

## Conclusion

The majority (147; 82%) of the study cohort needs to be made aware about this test and the availability of NIPT.

# KNOWLEDGE OF PREGNANT MOTHERS ON PHARMACOLOGICAL & NON PHARMACOLOGICAL METHODS OF PAIN MANAGEMENT DURING VAGINAL DELIVERY IN DISTRICT GENERAL HOSPITAL, HORANA.

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## Introduction

Normal vaginal delivery is associated with negative emotions due to experience of severe pain. Labour pain is mostly ignored in low-income countries.

## Objectives

To assess the knowledge of pregnant mothers regarding the pharmacological pain management (PPM) and non-pharmacological pain management (NPPM) methods during vaginal delivery in DGH, Horana.

## Methods

A descriptive cross sectional study was conducted at antenatal clinics of DGH, Horana from 31/05/2023 to 15/06/2023. 100 pregnant mothers participated to the study. Participants verbally responded to invigilator administered pre designed questionnaire after informed consent.

## Results

Most participants had studied up to Ordinary Level 61(61%) and were not employed 78(78%). 87(87%) reported they accept any kind of labour analgesia during labour while 13(13%) said not required. Regarding pain management, 16(16%) mothers knew only PPM methods, 6(6%) only NPPM methods, 68(68%) knew both methods and 10(10%) mothers did not know any method.

Considering the knowledge of NPPM methods 41(54.6%) knew breathing exercises, 47(62.6%) walking/upright, 51(67.1%) massage, 17(22.6%) aroma therapy, 43(57.3%) pray and 31(41.3%) focus on interesting picture. Only 24(24%) had heard about NPPM methods, but they didn't know exact methods. Knowledge on available PPM methods for pain relief were 12(12%) oral, 14(14%) injections, 49(49%) both methods and 25(25%) didn't know any method. There was a correlation with the multiple gestation and the knowledge on PPM methods ( $P=0.001$ ).

## Conclusion

Knowledge of pregnant mothers on PPM methods is more compared to NPPM methods.

Improvements in practice of NPPM techniques is required while educating pharmacological methods, to undergo pain free labour.

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