NEONATAL NEUROCRITICAL CARE
ON - DEMAND E-CONFERENCE

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December 15, 2021 to January 26, 2022

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AGENDA

MAPLE HALL (Section 1)
NEONATAL BRAIN PHYSIOLOGY & DEVELOPMENT
Moderator - Dr. Jehier Afifi

SPEAKERS	TOPICS	OBJECTIVES
Dr. Ipsita Goswami	Brain physiology & development	Learners will be able to: 1) Identify the stages of brain development 2) Review the Pathophysiology of brain injury in preterm infants 3) Define the impact of brain injury on brain growth and maturation
Dr. Pia Wintermark	Pathophysiology of brain injury in term infants	Learners will be able to: 1) Define the types of brain injury in term infants. 2) Summarize the pathophysiology of neonatal stroke and HIE. 3) Recognize the relation of the underlying pathophysiology to the innovative interventions for brain injury in term infants
Prof. Barry Schifrin	Monitoring fetal heart rate patterns	Learners will be able to: 1) Recognise fetal heart rate patterns and understand controversies surrounding EFM, fetal behavior, hypoxia, ischemia & hemorrhage. 2) Determine the Intrapartum fetal asphyxia and mechanical factors in the timing and mechanism of traumatic or hypoxic-ischemic injury and neonatal death. 3) Analyse the implications of fetal and neonatal heart rate patterns on perinatal outcome 4) Summarise the relationship of peripartum care to subsequent stroke, SDH, AHT, autism and other behavioural stigmata
Dr. Jennifer Lee	Cerebral auto regulation in Neonates	Learners will be able to: 1. Identify the cerebrovascular blood pressure autoregulation curve 2. Recognize factors that affect cerebral blood pressure vasoreactivity 3. Select methods to monitor neonatal cerebral blood pressure autoregulation

SPRUCE HALL (Section 2)
NEONATAL CEREBRAL FUNCTION MONITORING
Moderator - Dr. Amr El Shahed

SPEAKERS	TOPICS	OBJECTIVES
Dr. Elana Pinchefsky	Basics of EEG	Learners will be able to: 1) Describe the principles of EEG montage 2) List indications of neonatal EEG monitoring 3) Identify changes of EEG waves with gestational age maturation.
Ms. Kathy Randall	aEEG (basics of monitoring and clinical applications)	Learners will be able to, at the end of the presentation will be able to: 1) List two benefits of using aEEG in the NICU 2) Describe at least one characteristic of a seizure pattern and an artifact on aEEG 3) Identify one normal aEEG pattern for a term and/or preterm infant
Dr. Poorva Deshpande	aEEG in preterm infants	The learner at the end of the presentation will be able to: 1) Apply aEEG technique in preterm infants with suspected brain injury. 2) Interpret aEEG in common causes of brain injury in preterm infants.
Dr. Juan Pablo Appendino	Advanced aEEG	Learners will be able to : 1) Determine the advances in aEEG applications in NICU. 2) Review the prognostic implications of neonatal aEEG.

BIRCH HALL (Section 3)
NEUROCRITICAL CARE IN PRETERM INFANTS
Moderator - Dr. Mansoor Farooqui

SPEAKERS	TOPICS	OBJECTIVES
Dr. Jehier Afifi	Preterm Brain Injury	Learners will be able to: 1) To review the pathophysiology of brain injury related to prematurity 2) To discuss cerebellar injury in preterm infants. 3) To list the impact of preterm brain injury on the neuro-developmental outcomes 4) To identify the pathophysiology
Dr. Poorva Deshpande	Neuromonitoring of preterm infants: the window of neuroprotection	Learners will be able to: 1) define neuroprotective strategies for preterm brain health. 2) review application of brain monitoring modalities in preterm infants
Dr. Ipsita Goswami	Neuroprotection & FiCare (Healing Environment)	Learners will be able to: 1) Review the key elements of healing environment in NICU. 2) Identify the impact of family integration in promoting the developmental outcomes of preterm infants
Dr. Jehier Afifi	Approach for PHVD	Learners will be able to: 1) define PHVD and identify the diagnostic criteria and threshold for intervention for PHVD. 2) Review evidence-based recommendations for management of PHVD.

CEDAR HALL (Section 4)
NEUROCRITICAL CARE IN TERM INFANTS WITH HIE
Moderator - Dr. Ipsita Goswami

SPEAKERS	TOPICS	OBJECTIVES
Dr. Pia Wintermark	Bundle for term and near term infants with HIE	Learners will be able to: 1) Review the basic approach for term and near-term infants with HIE 2) Define the evidence-based bundle of interventions for neonatal HIE 3) Describe the predictors of adverse developmental outcomes in infants with HIE
Ms. Diane Wilson	Clinical assessment of encephalopathy	Learner will be able to: 1) Conduct a comprehensive neurological assessment of term infants 2) Distinguish the different encephalopathy staging criteria (Sarnat Staging criteria,Thompson staging criteria)
Dr. Aravanan Chakkarapani	Hemodynamic management of HIE	At the end of the presentation the learner will: 1) Demonstrate the pathophysiologic changes in blood flow due to HIE and the effect of cooling. 2) Demonstrate the logical interventions in hemodynamic instability due HIE.
Prof. Sudhin Thayyil	Therapeutic hypothermia in limited resource setting	Learners will be able to: 1) Present the HELIX trial results and interpretation. 2) Critically appraise the meta analysis of TH in resource limited settings and limitations of available evidence 3) Propose evidence-based recommendations of TH in resource limited setting

TAMARACK HALL (Section 5)
NEUROCRITICAL CARE IN NEW BORN BRAIN INJURY
Moderator - Dr. Adel Mohamed

SPEAKERS	TOPICS	OBJECTIVES
Dr. Emily Tam	Hypoglycemia & Brain injury	Learners will be able to: 1) describe the pathophysiology of hypoglycemic brain injury. 2) distinguish neuroimaging patterns of hypoglycemic brain injury. 3) identify predictors of long term neurodevelopmental outcome after hypoglycemic brain injury.
Dr. Juan Pablo Appendino	Neonatal Seizures	Learners will be able to: 1) Identify the types of neonatal seizures 2) Describe the diagnostic approach for neonatal seizures including the rRole of CFM in seizure detection. 3) Review the evidence-based therapeutic interventions related to anticonvulsant therapy in neonates
Dr. Janette Mailo	Neonatal Stroke	Learners will be able to: 1) Review the classification of perinatal stroke 2) Describe the diagnostic and therapeutic approach for stroke in term and near-term infants 3) Identify predictors of long term outcomes of neonatal stroke
Prof. Linda S. de Vries	Basic Approach for non-hypoxic encephalopathy	Learners will be able to: 1) Describe the types of neonatal encephalopathy (excluding HIE) 2) Review the basic approach for diagnosis and management of neonatal encephalopathy

OAK HALL (Section 6)
NEONATAL NEUROIMAGING
Moderator - Dr. Ayman Sheta

SPEAKERS	TOPICS	OBJECTIVES
Dr. Nadya Ben Fadel	Basics of Cranial Ultrasound	Learners will be able to: 1) Define the indications of cranial ultrasound for screening or diagnosis of brain injury in high risk infants 2) Describe the planes and views of cranial ultrasonography in neonates and doppler studies 3) Describe the limitations of cranial ultrasound
Dr. Mansoor Farooqui & Dr. Jehier Afifi	Protocol for ultrasound screening for preterm infants	Learners will be able to: 1) Assess cranial ultrasound in preterm infants: who, when, how 2) review the consensus classification of brain injury related to prematurity based on cranial ultrasound. 3) interpret the algorithm for screening and diagnosis of preterm brain injury focusing on PIVH, PVL and cerebellar haemorrhage.
Dr. Amr El Shahed	Brain MRI in term infants	Learners will be able to: 1) Recognise the utility of different MRI sequences 2) Review the MRI pattern of brain injury of common neonatal neurological disorders.
Dr. Christopher Smyser	Brain MRI in preterm infants	Learners will be able to: 1) Read normal brain MRI in preterm infants 2) Assess severity and pattern of preterm brain injury 3) Interpret Prognostic value of MRI in injuries of preterm brain 4) Define quantitative MRI in preterm brain injury

FIR HALL (Section 7)
NEONATAL NEUROMONITORING
Moderator - Dr. Reem Amer

SPEAKERS	TOPICS	OBJECTIVES
Dr. Yasser Elsayed	Monitoring CBF during transition of preterm infants	At the end of the presentation the learner will be able to: 1) Assess cerebral blood flow by integrating BP, Doppler, echo, and NIRS. 2) Interpret the results of the Doppler indices, echo, NIRS in different scenarios of preterm with compromised CBF.
Prof. Marsha Campbell-Yeo	Neonatal pain and family engagement	At the end of the presentation the learner will: 1) Assess pain severity in different neonatal issues. 2) Advocate for the best intervention and advice for family engagement with neonatal pain in NICU.
Dr. Amr El Shahed	Basics of NIRS monitoring	At the end of the presentation the learner will: 1) To describe the basics principles of NIRS. 2) To recognize the added value and limitations of NIRS in neonatal clinical settings.
Dr. Amr El Shahed	Clinical applications of NIRS	At the end of the presentation the learner will: 1) To select proper indications of NIRS in neonatal ICU. 2) To discuss the evidence supporting the utility of NIRS in neonates.

PINE HALL (Section 8)
DEVELOPMENT FOLLOW UP PROGRAM FOR HIGH RISK NEONATES
Moderator - Dr. Nadya Benfadel

SPEAKERS	TOPICS	OBJECTIVES
Dr. Anne Synnes	Development follow-up program for high risk neonates	Learners will be able to: 1) Define the criteria for enrolment in neonatal follow up program 2) Describe the multidisciplinary structure of neonatal follow up programs and the related community resources 3) Review the multiple definitions of NDI and the impact of these definitions on reported outcomes 4) Identify the developmental assessment tools used in neonatal follow up programs (Bayley, AIMS, CAT/CLAMS, HINE)
Dr. Thuy Mai Luu	Long term follow-up of preterm infants	Learners will be able to: 1) Identify the impact of prematurity on neurodevelopment. 2) Discuss the role of neonatal follow-up programs. 3) Describe parent-important outcomes following preterm birth
Dr. Linh Ly	Long term follow-up of term infants	Learners will be able to: 1) List the indications for long term follow up in term neonates. 2) Summarize outcome of common neurological disorders in full term infants (HIE, stroke, SSS thrombosis)
Ms. Rebecca Pearce	Parents Voice and outcomes of preterm birth	Learners will be able to: 1) Judge the NICU parents' perception and impact of family integration on outcomes of infants and their families 2) Review the results of parental survey on meaningful developmental outcomes in high risk neonates and parent reported outcomes 3) Recognise the Premature baby foundation & other family resources

CHERRY HALL (Section 9)
NEONATAL SLEEP DISORDERS
Moderator - Dr. Aimann Surak

SPEAKERS	TOPICS	OBJECTIVES
Dr. Ruben Alvaro	Apnea of prematurity (pathophysiology and management)	At the end of presentation the learner will: 1) Identify the risk factor and pathophysiology of apnea of prematurity. 2) Apply the evidence based management of apnea of prematurity.
Dr. Ruben Alvaro	Sleep study in neonates	At the end of presentation. the learner will: 1) Demonstrate the indications of sleep study in neonates. 2) Demonstrate the steps of sleep study. 3) Interpret the results of the sleep study.
Dr. Tareq Alabdoulsalam	Sleep study in children born premature infants	At the end of presentation the learner will: 1) Identify the pathophysiology of sleep disorders in prematurely born children 2) Discuss the impact of sleep disorders on children 3) Recognize the indications for sleep studies in children 4) Summarize the parameters measured/calculated during sleep studies 5) Explain the reported results of sleep studies
Dr. Ruben Alvaro	Case scenario with sleep study	At the end of presentation the learner will: 1) Assess the stages of sleep in neonates 2) Monitor and assess the level of sleep or adequate sedation when indicated

ASPEN HALL (Section 10)
CASE SCENARIOS IN NEONATAL NEUROCRITICAL CARE
Moderator - Dr. Muzafar Gani Abdul Wahab

SPEAKER	TOPICS	OBJECTIVES
Dr. Yasser Elsayed	Recorded Case Scenario 1: Post Hemorrhagic hydrocephalus	At the end of scenario the learner will: 1) Demonstrate integrated neurocritical assessment of post hemorrhagic hydrocephalus. 2) Make a decision regarding the need for intervention.
Dr. Yasser Elsayed	Recorded Case Scenario 2: A case of HIE	At the end of scenario the learner will: 1) Demonstrate integrated neurocritical assessment of HIE. 2) Apply aEEG on infant with HIE. 3) Apply NIRS on infant with HIE.
Dr. Yasser Elsayed	Recorded Case Scenario 3: HIE with hemodynamic instability	At the end of scenario the learner will: 1) Demonstrate integrated hemodynamics assessment of infant with HIE. 2) Manage hemodynamic instability secondary to HIE.
Dr. Yasser Elsayed	Recorded Case Scenario 4: HIE and withdrawal of care	At the end of scenario the learner will: 1) Disclose withdrawal of care as an option to the family of infant with severe HIE.

January 22, 2022 | **8.30 am - 3.30 pm EST**

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