O&G and Community Health

AP Dr Ehab Helmy

FPSK - UMS

Some Areas Of Community Health In Obstetrics

Safe Motherhood + Childhood   =

Safe **pregnancy**

Safe **delivery**

Safe **puerperium**

Mortality:

Maternal Mortality

Perinatal mortality

Mortality/Morbidity Statistics.

General obstetrics practice (through Good Clinical Practice GCP, Antenatal, Intrapartum & Postnatal) is the aim to reduce the maternal mortality/morbidity and perinatal mortality/morbidity   & near miss cases

Definitions:
MATERNAL MORTALITY

WHO:

Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

FIGO:

Maternal death occurring in association with pregnancy, childbirth or during the 6 weeks of the termination of pregnancy.

MATERNAL MORTALITY RATE

Number of maternal deaths during a given time period per 100,000 women of reproductive age (15-49 by UN) during the same time period.

MATERNAL MORTALITY RATIO

Number of maternal deaths during a given time period per 100,000 livebirths during the same time period.

In Malaysia 40/100,000 (2016)

Classification of maternal deaths

❑ Direct deaths (e.g. death from major PPH in previously well woman)

❑ Indirect deaths (e.g. death from underlying cardiac lesion such as Ebstein's anomaly "displacement of tricuspid valve → enlarged right atrium and small right ventricle")

❑ Late deaths occurring 42 days to one year after delivery or miscarriage due to direct or indirect cause. (e.g. Thromboembolism , Sepsis, TB)

❑ Coincidental deaths (e.g. road traffic accidents)

CAUSES OF MATERNAL DEATHS (Get Ready)
Aim to reduce death due to that cause

HYPERTENSIVE DISEASE OF PREGNANCY: efficient ANC, prevent ECLAMPSIA by Early recognition, and treatment of PE

PULMONARY EMBOLISM: be aware of VTE prophylaxis

SEPTIC ABORTION: avoid unplanned pregnancy and enforce TOP guidelines

HAEMORRHAGE (APH, PPH) : Anticipate the risk factors

A) PLACENTA PREVIA : early diagnosis by USG and appropriate and timely management

B) PLACENTAL ABRUPTION: predict risk factors, early clinical diagnosis and proper management: CVP – for monitoring, Blood – for hypovolemia, Fresh Frozen Plasma (FFP) , cryoprecipitate and platelets (DIVC regime) for coagulopathy and surgical intervention

PPH: prophylactic use of (Oxytocin & Ergometrine if not contraindicated- cardiac ,PIH), availability of blood transfusion (encourage blood donation)

ECTOPIC PREGNANCY: High index of suspicion (PID, previous ectopic...etc), Optimal clinical diagnostic (TVS, BHCG), Timely intervention

INFECTION: puerperal sepsis (major cause of maternal mortality before 1936), Aseptic measure,

AMNIOTIC FLUID EMBOLISM: Associated with coagulative disorders (50%), Soon after ruptured of membranes, Esp: when uterine contraction is strong. Early recognition and prompt treatment

UTERINE RUPTURE; recognition and prompt intervention

Causes of Maternal Mortality

1. Haemorrhage
2. Infection
3. Unsafe abortion
4. Hypertension
5. Obstructed labour
6. Other direct causes including: (ectopic pregnancy, embolism, anaesthesia-related causes)
7. Other indirect causes including: (anemia, malaria, heart disease)

Aim to reduce death due to that cause (How to Manage)

HAEMORRHAGE *(APH, PPH) :*
Anticipate the risk factors

• <u>Placenta Previa</u> : Early diagnosis by USG and appropriate and timely management

•<u>Placental abruption</u>: Predict risk factors (PE, Uncontrolled ARM in poly, previous abruption, amnio reduction, trauma ,cocaine….etc), early clinical diagnosis and proper management:

CVP – (for monitoring), Blood products– blood transfusion for hypovolemia, Fresh Frozen Plasma (FFP) , cryoprecipitate and platelets (DIVC regime) for coagulopathy and surgical intervention

•<u>PPH</u>: Predict risk factors (Grand multipara, Multiple pregnancy, Polyhydramnios, Fibroid….etc)

Prophylactic use of (Oxytocin & Ergometrine if not contraindicated- cardiac ,PIH), availability of blood transfusion

(active Mx of 3rd stage of labour)

Proper management as in APH

AMNIOTIC FLUID EMBOLISM:

Associated with coagulation disorders (DIVC) (50%)

Soon after ruptured of membranes, Esp: when uterine contraction is strong.

Early recognition and prompt treatment

Infection

Puerperal sepsis (major cause of maternal mortality before 1936)

Prevention:
Aseptic measure,
Antibiotics

Unsafe abortion

Avoid unplanned pregnancy
Enforce TOP guidelines

Hypertension Disorders in pregnancy

- Efficient ANC,
- Early recognition and proper treatment of PE → prevent ECLAMPSIA
- Proper management of Eclampsia

Obstructed labour
(UTERINE RUPTURE)
early recognition and prompt intervention

Other Direct Causes Including:

Ectopic pregnancy
High index of suspicion (PID, previous ectopic...etc)
Optimal clinical diagnostic (TVS, BhCG)
Timely intervention

Embolism
PULMONARY EMBOLISM:
be aware of VTE prophylaxis

ANAESTHESIA-RELATED CAUSES:
Multi Desciplinary Team (MDT)

Other Indirect Causes Including:

(Anemia, Malaria, Heart disease)

Efficient ANC

- **Anemia**: Diagnosis of anemia and anemia work up
- **Malaria**: Screening in endemic areas
- **Cardiac**: ECG - Cardiac ECHO

Early diagnosis

Proper management

Some Areas Of Community Health In Gynaecology

STIs screening (Antenatal, Multi-partners, Sex workers)

PID (Proper Diagnosis & proper management)

Screening for gynaecological cancer

As
Cervical Cancer Screening (early detection)
1- Pap Smear Screening Program
Through:
- Gynaecology Clinics
- Hospital Women Well-being Campaign
- Interior Medical Campaign

2- Colposcopy Clinics
&
HPV Vaccination National Proram (13 years old)
(Cervarix 16-18 , Gardasil 6-11-16-18, Gardasil 9 Nanovalent vaccine 6, 11, 16, 18, 31, 33, 45, 52 & 58)
1st dose: now
2nd dose: 1-2 months from 1st dose
3rd dose: 6 months from 1st dose

Endometrial Cancer (Early diagnosis)
Ultrasound of ET (Risk Cases)
Endometrial sampling : postmenopausal bleeding

Perinatal Mortality:

Definition:

The number of **perinatal deaths** per 1000 total births. A **perinatal death** is a fetal death (stillbirth) or an early neonatal death.

Early Perinatal Deaths: Within first 7 days of life

Late Perinatal Deaths: Day7-Day28 of life

The **perinatal mortality rate** is calculated as: (**perinatal deaths** / total of births [still births + live births]) x 1000.

CAUSES OF FETAL DEATH (STILLBIRTH)

Maternal Causes

Antenatal:

Smoking, Substances abuse,

Medical diseases –(PE, DM, anaemia, heart disease, renal disease...etc)

Intrapartum:

1. Acute and chronic placental insufficiency
2. Fetal distress due to:

Prolonged labour, obstructed labour, ruptured uterus...etc

CLASSIFICATION OF CAUSES OF INTRAPARTUM FETAL DEATH

Foetal

Abnormal lies → prolonged labour.

FGR, prematurity, postmaturity, congenital abnormalities

Umbilical cord

Cord Knot (true knot), Cord Prolapse, Cord Accident

Placenta

Placenta previa, abruption, Vasa previa

CAUSES OF EARLY NEONATAL DEATH

- Prematurity and Low birth weight
- FGR
- Birth aphyxia (HIE)
- Birth trauma (Cranial Hge)
- Lethal congenital abnormalities
- RDS
- Pulmonary haemorrhage (meconium aspiration syndrome)
- Infection (prolonged ruptured of membranes)
- Pneumonia
- NEC

To Reduce Maternal Mortality/Morbidity

Risk management

(Identify the risk – Analyse, evaluate and assess the risk - Risk treatment – Register the risk by documentation)

- Antenatal screening: **In Malaysia** (infection screening, Thalassaemia screening, Malaria screening in endemic areas)

Other screening in UK: Rubella, Tay-Sachs disease (autosomal recessive genetic disorder progressive nerve destruction)

PREVENTION OF PERINATAL DEATH

For SB / IUFD:

Antenatally: – IDENTIFY

1. Risk factors (PIH, DM, Thalassaemia)
2. Previous eventful pregnancy (*bad obstetric history*): Anomaly, IUD, or neonatal death..etc),
3. Hospitalization + fetal surveillance
4. Timely delivery, Optimum mode of delivery

Fetal Surveillance

Antepartum: to assess the risk of **fetal death** in pregnancies complicated by pre-existing maternal conditions (eg, **DM, PIH..etc**) and fetal complications have developed (eg, **FGR, Fetal anomaly...etc**).

FETAL SCREENING

- Antenatal screening: **In Malaysia** Down's synd. Fetal anomalies, cell-free fetal DNA

- Postnatal screening: **In Malaysia** (congenital hypothyroidism, G6PD deficiency & HepB)

Other screening in UK:

1. Cystic fibrosis (genetic disorder affects lungs, liver, kidney, intestine)

2. Hearing

3. Phenyl ketonuria (metabolic disorder of amino acid {Phenylalanine} → mental disorder, seizure, behaviour problems)

4. Medium Chain Acyl Co-A Dehydrogenase

(Fatty Acid metabolic disorder → hypoglycemia)

Prevention of *Intrapartum* Death:

- Maternal + foetal monitoring by Partogram, CTG, FHS,
- Prompt delivery if Fetal Distress (instrumental/CS),
- Avoid traumatic delivery,
- Hospital delivery for risk cases

Prevention of early neonatal death:

- Neonatal resuscitation (NRP Neonatal Resuscitation Program),
- Avoid birth asphyxia,
- Avoid fetal trauma (vacuum head trauma)
- Joint care with paediatrician, orthopedician and physiotherapy (Brachial Plexus Injury)

To Reduce Maternal & Neonatal Mortality/Morbidity
Good Clinical Practice (GCP)

- Multi Disciplinary Team (MDT) Plan for highly complicated cases
- Patient and relatives counselling
- Continuous Medical Education CME
- Formulation of hospital policies and protocol
- Following international guidelines (RCOG, NICE..etc)
- Following national guidelines (Malaysian CPG)
- Red alert and blue alert system and conducting red and blue alert drill (during office hours)
- Conducting educational courses (OLSSC, Partogram, CTG) for obstetric emergencies
- Auditing (CS, FSB)
{assessment, data collection, data analysis, identify standards, implement a change, re-audit)
- MMR (district level, state level, national level)
- PNMR (district level, state level, national level)

Thank You