Hypertension in Pregnancy In Low-Resource Settings

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Disclosures

- Maybe someday!

Dedication



Objectives

1) Discuss **management** of eclampsia, HELLP syndrome, and other hypertensive emergencies
2) Identify **alternatives** to expensive monitoring and treatment plans in a low-resource setting
3) Discuss **primary prevention** in low-resource settings

Hypertension in Low-Resource Settings

What is Hypertension in Pregnancy?

- Chronic (pre-existing) Hypertension
- Gestational Hypertension
- Pre-Eclampsia without Severe Features
- Pre-Eclampsia with Severe Features
- Eclampsia
- HELLP
- PRES
- Acute Fatty Liver of Pregnancy

Hypertension in Pregnancy, New Guidelines (?)

Blood Pressure Categories

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Hypertension in Low-Resource Settings



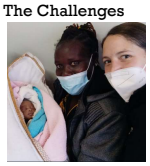
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Maternal Risks	Fetal Risks
CVA	Growth Restriction
Pulmonary Edema	Preterm Birth
Renal Failure	Congenital Anomalies
Pre-Eclampsia/Eclampsia	Stillbirth
Placental Abruption	Perinatal death
C-section	Neonatal death*
PPH	
Death*	

*Increased in low-resource settings compared to high-income countries

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The Challenges



- Late to Prenatal Care
- Missing or misplaced information
- Inaccurate data

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Case Studies

Case 1: New onset seizures, severe range blood pressures

a) Magnesium Sulfate protocol
b) Assess the baby:
   a) Alive or dead?
   b) Term or preterm?
c) Check BPs, add medication if needed
d) Make a delivery plan

Magnesium in LMICs

- Make a protocol and follow it!
  - Magnesium 10g IM and 4g IV loading dose
  - Magnesium 5g IM q4 hrs for 24 hrs
- Decrease maintenance dose, increase your interval, or both
  - Magnesium toxicity
- Maintain adequate hydration

Managing complications in pregnancy and childbirth: a guide for midwives and doctors – 2nd ed. Geneva: World Health Organization; 2017.

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Case Studies

Case 2: New onset mild range blood pressures, 37 weeks or greater

a) Labs?
b) Assess fetal size and condition
c) Consider admission for observation and to confirm diagnosis
d) Induction

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Case Studies

Case 3: Mild range blood pressures, 35 weeks

a) Carefully review patient history
b) Labs?
c) Assess fetal size and condition
d) Consider admission for observation and to confirm diagnosis
e) Start medications **with caution**

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Case Studies

The Zebras

a) PRES: Posterior Reversible Encephalopathy Syndrome
b) Acute Fatty Liver of Pregnancy
c) HUS
d) CVA
e) Dural Sinus Thrombosis

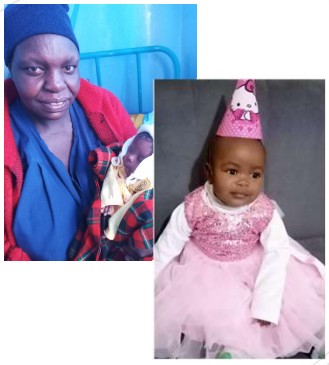
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Primary Prevention

The best stories are the ones we never have to tell.



Evaluation and Treatment Helps!



References

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Questions?

