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Patient Safety
Maternity

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Hypokalemia in pregnancy

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Objectives

1. Case presentation

2. Learning points

3. Review of literature

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Case history

- Mrs X , G3P2 pregnant 33 weeks
- Presented with tingling of fingers and weakness
- Blood tests showed significant hypokalemia
- Admitted to the high dependency unit
- Renin and aldosterone levels were normal.
- Aldosterone to renin ratio was normal .
- Normal fetal ultrasound scan

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Continued

- One week later, atypical HELLP syndrome
- Multidisciplinary team approach
- Corticosteroids was given for fetal lung maturity
- Magnesium sulfate infusion for neuroprotection

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Continued

- Cesarean section baby boy weighing 2.9kg
- Platelet levels and liver functions gradually improved.
- Complete recovery
- Discharge arrangements
- Gietlman syndrome was suspected

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What went well?

- Early recognition and treatment of hypokalemia and atypical HELLP syndrome
- Multidisciplinary team approach
- Corticosteroids and magnesium sulphate infusion
- Proper preoperative preparation
- Proper communication
- Good maternal and fetal outcome

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What didn't go so well?

Some points although they didn't affect the management but needed to be highlighted

1. Hypokalemia is rare during pregnancy so senior input is always needed in case of doubt

2. Continuity of care in such rare conditions is needed

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Reflections and learning points

- High index of suspicion is required
- Preoperative assessment
    a. ECG
    b. Electrolyte level optimization
    c. Awareness of potential complications
- Balancing the risks and benefits of continuation of pregnancy versus iatrogenic prematurity
- Multidisciplinary team approach

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Discussion

- Hypokalemia during pregnancy is rare
- Clinical presentation
- Hypokalemia has serious consequences
- A thorough cardiac evaluation is essential.

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Causes of Hypokalemia in pregnancy

- Common causes of hypokalemia during pregnancy:
    1. Dilutional effect
    2. Diarrhea
    3. Hyperemesis gravidarum.
- Other causes are relatively rare:
    1. Familial hereditary disorders
    2. Gietlman syndrome

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Investigations

1. Serum potassium measurements
2. T3, T4, TSH levels
3. Serum renin and aldosterone
4. ECG may be helpful to reach a diagnosis

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Intra partum care

- Mode of delivery
- During labor and delivery;
    1. Intravenous fluids should be closely monitored
    2. Electrolyte levels measured every 4– 6 hours

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Post partum care

- Postpartum period represents a critical period

  Natriuresis

- Women should be followed up weekly
  1. Electrolyte measurements.
  2. Genetic testing.

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QUESTIONS???


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