Common medical issues in the pregnant patient

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| intensive care,o&g,onthepods

James chats to Nhi Nguyen about common medical issues in pregnant patients.

Pregnant patients can be daunting for junior doctors for a number of reasons, the risk of missing something serious is a high burden of responsibility when there are two patients to consider, and the presentation may be caused by a medical problem unrelated to pregnancy or may be a specific pathology related to pregnancy.

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Common me patient

With Dr Nhi Nguyen, al, New South Wales, Australia

Introduction

Pregnant patients can be daunting for junior doctors for a number of reasons; the risk of missing something serious is a high burden of responsibility when there are two patients to consider, and the presentation may be caused by a medical problem unrelated to pregnancy or may be a specific pathology related to pregnancy.

Case 1

A 30-year-old female presents to the Emergency Department with a 3-day history of shortness of breath with a pleuritic component and right upper quadrant pain. She is 32 weeks pregnant. This is her first pregnancy and she is well from an antenatal point of view with no significant medical problems.

1. General considerations in a pregnant patient with shortness of breath

- Shortness of breath is a common experience for a woman 32 weeks gestation
- Avoid missing concerning details by adopting a structured approach to the assessment of a pregnant patient
- Differential diagnoses should include both those not specific to pregnancy (e.g. pneumonia, pulmonary embolus) and those specific to pregnancy (e.g. pre-eclampsia, peripartum cardiomyopathy)

2. Outline your assessment approach by the bedside

- **History**
  - Charact… …ions about pain – S…
  - Reducti…
  - Sympto…
  - Risk fac… …ecurrent miscarri… …ies
  - Risk fac… …tient's family, r…
    - …its
    - …e in the
    - …t travel,
  - NB: Don… …y – pregnant patients…
    - …s a reason
- **Examination**
  - Physiological changes of pregnancy must be considered in interpreting examination findings
    - Pregnant women may have a resting tachycardia, tend to feel warm and vasodilated, and are relatively hypotensive – these signs may mask underlying pathology, e.g. sepsis
    - NB: Although pre-eclampsia is classically defined as blood pressure of ³140/90 on ³2 occasions or a 20% increase from baseline, occurring ³20 weeks' gestation, the absence of hypertension does not preclude a diagnosis of pre-eclampsia
    - Blood pressure profiles may be more useful than a single BP reading

- Pregnant patients are hyperreflexic in general however sustained clonus should alert you to pre-eclampsia, as well as neurological signs e.g. altered mental state
- Cardiotocography (CTG) can be used to check fetal movements and fetal heart rate
- A bedside ultrasound should not distract from examination
    - Mothers lose weight and become sicker before fetal growth is impaired

3. Investigations for shortness of breath in pregnant patients

- Bloods – WCC t , points to pre-eclampsia), LFT n obstructive enzymes)
    - In additi nt with a diagnos enzymes, Low Pla
    - Be mind ant and non-pregnan
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        - 2 and may

- Urine dipstick – check for proteinuria (pre-eclampsia)
- ECG – likely to demonstrate sinus tachycardia but may show right heart strain
- CXR – pneumonic process or pulmonary oedema (peripartum cardiomyopathy)
    - Use appropriate shielding of the fetus
    - Counsel the patient – the minimal amount of radiation in a CXR may avoid the need for further investigation and radiation

If all investigations above are normal and you are considering a PE, what investigation is next?

- Risk stratification methods (e.g. Wells score) have not been validated in pregnant patients
- D-dimers can be elevated in the absence of clots so only a negative d-dimer is helpful
- The decision between a V/Q scan and a CTPA depends mainly on what is available at that time at your institution

- Advantages of V/Q: lower dose of radiation and gives you a sense of mismatch in the lungs
- Advantages of CTPA: more readily available in most centres, gives good idea of the clot load and diagnosis, but administering radiation directly to area around rapidly dividing tissue (breast tissue)
- An echo should be done at some point in the next day, to exclude peripartum cardiomyopathy
- A doppler scan can be done if the skill set to perform one is available
    - A negative Doppler does not exclude a PE
    - Even if the patient has a DVT and needs anticoagulation, further investigations are needed to gain an idea of the clot burden in the lungs

4. A ismatch in a large stent with a pulm nonary emb

- Therapeutic dos e mainstay of treatment
    - Pregnan
- Patients can be g of enoxaparin at home and cea in therapeutic range during de
- If there is a very a heparin infusion in hospi

Take

- Australia's maternal mortality rate is <10 per 100 000 deliveries
- Pulmonary embolism is still a significant diagnosis which is missed so a high index of suspicion is vital
- Be careful in history taking and risk stratification – tend towards investigating rather than not
- The hypercoagulable state associated with pregnancy exists beyond delivery for about 6 weeks postpartum
    - Be mindful about VTE prophylaxis postpartum and follow up for subsequent pregnancies

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