QEHB SDEC Pathway for Suspected PE in Pregnancy/Puerperium*

*6 weeks post-partum

Signs
- Breathlessness
- Chest pain
- Cough
- Haemoptysis
- Collapse*
- DVT

Symptoms
- Low grade fever
- Tachycardia (>100 bpm)
- Tachypnoea
- Shock*
- Hypoxia (sats <90% on air)*
- Raised JVP*
- Loud S2, ventricular heave*
- Pleural rub/effusion

Other risk factors
- Post orthopaedic/neurosurgery
- Underlying malignancy

Investigations
Bloods – FBC, U&E, LFT, PT/INR, aPTT, Fgn
CXR – *unless a DVT is suspected*
ECG – *for features of right heart strain**
ABG – *if sats <90% on air**

***HIGH RISK FEATURES?**
- Haemodynamic instability or shock
- Hypoxia
- Syncope
- Features of right heart failure or strain

YES → **ADMIT Senior review**

NO → Is there also clinically suspected DVT?

YES → **Follow the 'DVT-only pathway'**

NO → **CXR normal or abnormal?**

NORMAL → Sunday 1600 to Friday 1600* / Friday 1600 to Sunday 1600

ABNORMAL → **CTPA**

½ dose Q scan
- **Counsel patient**
- **Submit PICS request** – the following clinical details are required to meet vetting criteria by NM technicians:
  1. ≥ 2 features in blue *and*
  2. Explicit documentation of normal CXR within last 48 hrs
- **Contact NM to vet scan & confirm appointment**:
  - NM reception: **12282/12283**
  - NM coordinator: **12322**
- **Out of hours** (i.e. Mon-Thurs after 1600)
  1. Ensure PICS request is submitted
  2. Call **NM reception (12282/12283)** the following morning
- If patient needs to return next day, discharge with enoxaparin BD cover

*Thursday 1600-Friday 1600: all patients will receive a V/Q scan due to NM closure over the weekend

CTPA
- **Counsel patient**
- **Submit PICS request** (include justification e.g. abnormal CXR or weekend)
- **Vet scan with general radiologist**
  - In hours: **14984**
  - Out of hours/on-call: **14290**
- **Liaise with A&E CT radiographers**
  - All hours: **12353**
- If patient needs to return next day, discharge with enoxaparin BD cover

PE confirmed?

NO → Low clinical suspicion PE
- Stop enoxaparin
- Consider alternative diagnosis

High clinical suspicion PE
- Continue enoxaparin
- Consider repeat or alternative testing

YES
- Continue LMWH
- See 'Anticoagulation for PE in pregnancy' box for duration and follow-up

Is the ½ dose Q scan normal?

PE highly unlikely
- Senior input
- Discuss with radiologist for advice

Is the ½ dose Q scan equivocal or abnormal?

V scan next working day
Note: NM department will be aware of the ½ dose Q scan result and the V scan will be organised automatically if required
- **Contact NM to confirm appointment**
  - NM reception: **12282/12283**
  - NM coordinator: **12322**
- Patient to return to SDEC **next working day** (at 0845, unless specified time given by NM)
- discharge with enoxaparin BD cover

Is the CTPA normal or non-diagnostic?
- Senior input
- Discuss with radiologist for advice on alternative testing e.g. V/Q scan

Anticoagulation for PE in pregnancy

- **If high clinical suspicion of PE or DVT, start anticoagulation with LMWH immediately**
- Do not wait for results of bloods to start
- Do NOT perform D-dimer testing or thrombophilia screen

Dose
- **Based on pre-pregnancy booking weight**, except if suspected significant weight change

Pre-pregnancy booking weight	Enoxaparin dose
≤ 50 kg	40mg BD
50-69kg	60mg BD
70-89kg	80mg BD
≥ 90kg	100mg BD

- Speak to on-call haematologist if ANY of the following:
  - Current weight > 126kg
  - GFR < 30ml/min or creatinine > 150
  - High risk e.g. mechanical heart valve, breakthrough thrombosis

Duration of treatment
- To be continued for remainder of pregnancy & at least 6 weeks post-partum, for a total of at least 3 months altogether
- Prescribe a 4-week course on discharge

Follow-up
1. Email bwc.referrals.westmidsmatmed@nhs.net with patient details, and a summary of diagnosis/treatment
2. PICS referral to Anticoagulation Discharge Service
3. Inform patient to let their community midwife know and provide a copy of their discharge letter

For acute obstetric concerns, contact on-call obs/gynae reg via BWH switchboard

Counselling patients

Current practice at UHB for investigating suspected PE in a pregnant patient with a normal CXR is a ½ dose Q scan. CTPA should be done if the CXR is abnormal. On weekends when V/Q scanning is not available, a CTPA is done to prevent diagnostic delay.

½ dose Q scan (V/Q scan)
- A ½ dose Q scan (perfusion only) is done to minimise radiation exposure.
- **The absolute risk to the foetus is extremely small. The radiation involved in a pregnant patient's ½ dose Q scan is equal to about 2 weeks of natural background radiation, or to a Trans-Atlantic Flight.**
- If ½ dose Q scan is abnormal or equivocal, a ventilation scan is done the following day (except Fridays when both are done together to prevent diagnostic delay over the weekend). There is very little added radiation effect with ventilation scanning.

CTPA
- This is available in and out of hours.
- **There is a 13.6% increase in breast cancer risk with CTPA in pregnancy. For example, for a 25-year-old female patient, their background risk of developing breast cancer in 10 years is about 1 in 1,000. If they were to have a CTPA in pregnancy, this would increase their 10-year risk to 1.136 in 1,000.**

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