Dissection of the Thoracic Aorta (Acute) - Summary Clinical Guideline

Reference no: CG-CARDIO/2023/016

When to suspect DTA

'Think aorta' whenever a patient presents with pain in the thorax that is:

- Abrupt in onset
- Severe
- Sharp, tearing, 'knife-like' and typically different from other causes of chest pain

Table 1 shows features that can be used to score the clinical probability of DTA before imaging. **The patient scores 1 for each feature that is present.**

Table 1: clinical data to assess the a priori probability of DTA:

High risk conditions	*High risk pain features*	*High risk examination features*
• Marfan's (or other connective tissue disease) • Family history of aortic disease • Known aortic valve disease • Known thoracic aortic aneurysm • Previous aortic manipulation (including cardiac surgery)	• Chest, back or abdominal pain described as any of the following: ○ Abrupt onset ○ Severe ○ Ripping or tearing	• Evidence of perfusion deficit: ○ Pulse deficit ○ Systolic blood pressure difference ○ Focal neurological deficit (in conjunction with pain) • Aortic diastolic murmur (new and with pain) • Hypotension or shock

Immediate management of DTA

All patients with confirmed DTA require immediate medical treatment for pain, heart rate and blood pressure control. Intravenous morphine is recommended to treat chest pain. Intravenous labetalol is the first line agent to reduce heart rate and lower the systolic blood pressure to 100-120 mmHg. If beta-blockers are contraindicated then alterative agents, e.g. GTN infusion, may be used. GTN cannot be used for a prolonged duration as patients rapidly develop tolerance to it, so is only suitable as a bridging treatment pending transfer to cardio-thoracic surgery.

Intravenous labetalol can be obtained in an emergency by dialling 3333 (emergency Pharmacist). It should also be available in Resus. Please read the full dissection of the thoracic aorta clinical guideline for information on how to initiate and monitor intravenous labetalol therapy.

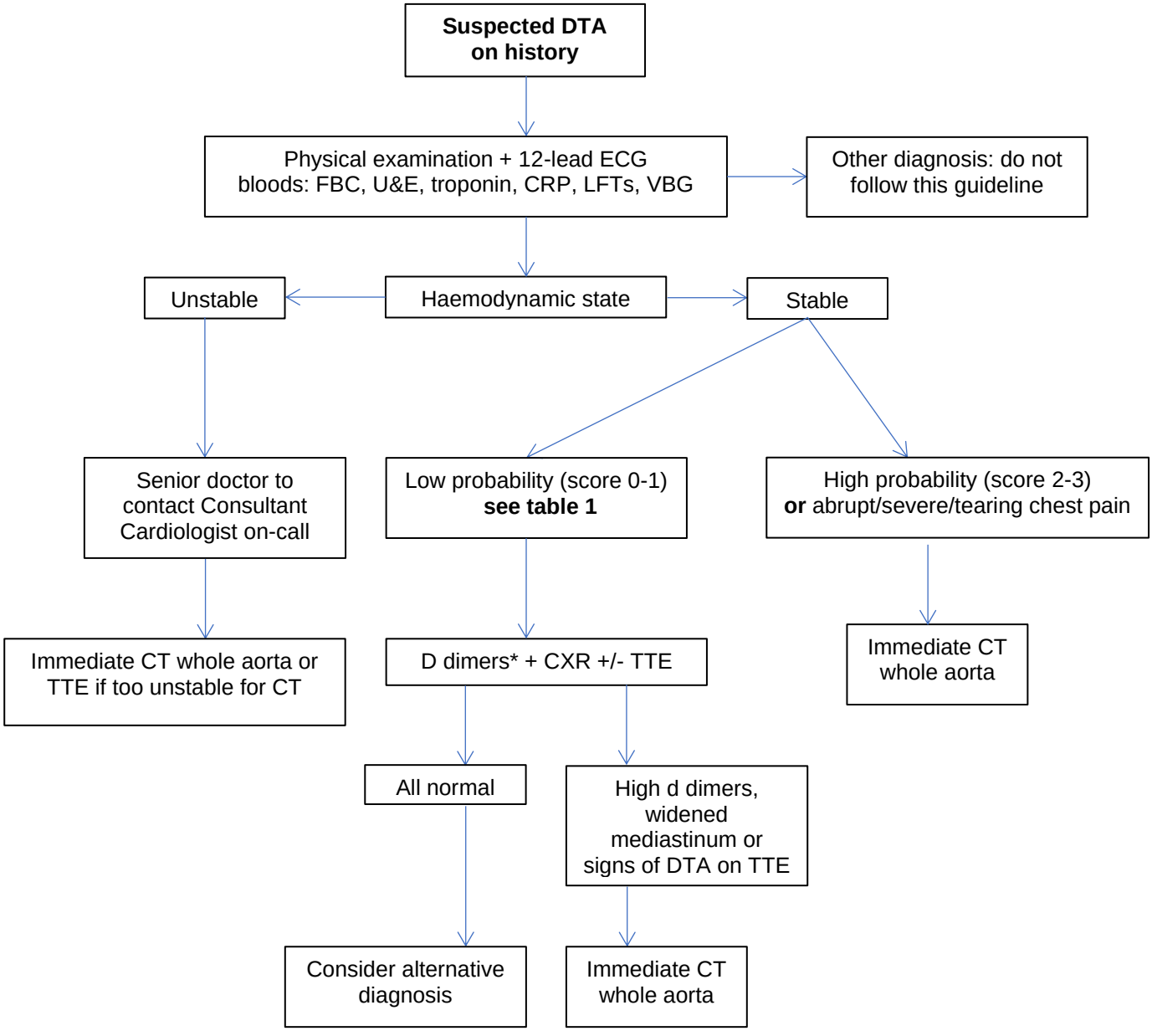
Transfer of patients

Patients with Type A dissections should be immediately transferred to cardiothoracic surgery (if accepted) by blue light ambulance **with their infusion still in situ** and a trained member of staff accompanying them in order to monitor their pain, heart rate and blood pressure and adjust the infusion if necessary (see full guideline for further details). Patients with Type B dissections will be managed on CCU.

What to do if DTA is suspected clinically

A senior doctor **must** personally assess and supervise the management of any patient with suspected DTA. If clinically indicated, this investigations flow chart should be followed and investigations should be requested immediately.

This is NOT a 'chest pain' guideline; this is what to do when you suspect a dissection of the thoracic aorta



*Do not request d dimers in high probability cases.
TTE = transthoracic echocardiogram

If DTA is confirmed, ensure the CT images are immediately transferred to Nottingham University Hospitals PACS system and contact the on-call Cardiothoracic Surgical Registrar or Consultant on-call via Nottingham City Hospital's switchboard.