# Aortic dissection

Aortic dissection

This occurs when a defect or flap occurs in the intima of the aorta, resulting in blood tracking into the aortic tissues, splitting the medial layer and creating a false lumen. It most commonly occurs in the ascending aorta or, less often, just distal to the left subclavian artery . It is also more common in men, typically those aged 50–70 years, and in Afro-Caribbean patients. Aetiology It usually occurs as a spontaneous or sporadic event, often in a patient with a history of hypertension. Other important associations include Marfan syndrome and pregnancy . Michael Ellis DeBakey , 1908–2008, American cardiac surgeon, Baylor College of Medicine, Houston, TX, USA. Predisposing factors for aortic dissection /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Clinical features The presentation is often with tearing interscapular pain not unlike the pain of myocardial ischaemia, and it may be di ffi cult to distinguish between the two. The extent of arterial dissection may produce widespread symptoms and signs. The dissection can extend distally down the aorta and spi - ral to involve: /uni25CF the renal arteries (renal pain and renal failure); /uni25CF the mesenteric arteries (abdominal pain and bowel isch - aemia); /uni25CF the spinal arteries (paraplegia); - /uni25CF the iliac arteries (leg pain, pallor, loss of or reduced pulses and acute limb ischaemia). - The dissection may track proximally to involve: /uni25CF the head and neck vessels (symptoms and signs of a stroke or transient ischaemic attack); /uni25CF the coronary vessels (MI); /uni25CF the aortic root (aortic regurgitation). The dissection may also result in aortic wall rupture into the pericardium (cardiac tamponade) or mediastinum (left haemothorax). Classification - There are two classifications, both of which are limited in their application but widely used. The DeBakey classification is based on the pattern of dissection, whereas the Stanford clas - sification is based on whether the ascending aorta is involved ( Figure 59.28 ). Investigations The diagnosis is suspected based on the clinical presentation and careful history taking. Diagnosis is confirmed by CT , which is the standard method for diagnosis. Other imaging modalities such as TOE or MRI can be utilised in cases where the CT is equivocal ( Figure 59.29 ). Management Initial management of all types of aortic dissection includes blood pressure control (which is usually high at presentation)

Age Hypertension Marfan syndrome Pregnancy Other connective tissue disorders, e.g. Ehlers–Danlos syndrome, giant cell arteritis, systemic lupus erythematosus Coarctation of the aorta Turner or Noonan syndromes Aortic cannulation site following previous cardiac surgery (iatrogenic)

and strict pain management, followed by prompt referral for specialist management. The advent of specialist regional centres and regional referral pathways has been shown to improve outcomes in these patients.

I II III (DeBakey) Type B (Stanford) Type A Figure 59.28 Stanford classi /f_i cation of aortic dissections according to whether the ascending aorta is involved (type A) or not (type B). This is simpler than the DeBakey classi /f_i cation (types I, II and III). Figure 59.29 Computed tomography scan showing acute dissection of the descending thoracic aorta. F , false lumen; T, true lumen.

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