- peripheral arterial disease generally refers to the various manifestations of atherosclerosis in the major vessels of the lower limb including thromboembolic complications associated with acute limb ischaemia general - peripheral arterial disease is common & shows a steep increase in incidence with age - risk factors for atherosclerosis are associated with more severe general: & progressive disease (particularly in the lower limbs); diabetes - the presence of acute lower limb ischaemia is strongly influenced by two factors: tends to be associated with diffuse disease (i) the presence of absence of a preexisting collateral circulation (ii) the aetiology of the occlusion I. viable - presence of absence of prior symptoms is important because - not immediately threatened it may allow differentiation between primary thrombotic occlusion - no sensory loss or weakness clinical with pre-existing disease & embolic occlusion without - audible arterial doppler signals features - patients without pre-existing disease will not have collaterals and will therefore have II. Marginally threatened more severe symptoms - salvagable if promptly treated physical examination: - minimal sensory loss (toes or none), no weakness - may reveal a classic acutely ischaemic limb which is pale, - often inaudible arterial doppler peripheral painful, cold, pulseless, paralysed and insensate clinical III. Immediately threatened arteriopathies - the presence of paralysis or paraesthesia indicates a poor prognosis classification - salvagable with immediate revascularisation because it is associated with infarction of nerve and muscle tissue & embolism - sensory loss affecting more than the toes with rest pain - mild to moderate weakness [created by - usually inaudible arterial doppler - patients with a suspected embolic occlusion need radiological Paul Young investigation to confirm the level of the occlusion. Options include: IV Irreversible investigation **13/**10/071 (i) angiography - major tissue loss and permanent nerve damage inevitable (ii) duplex ultrasound - profound sensory loss (anaesthetic) - paralysis - inaudible arterial doppler - endovascular treatments include suction embolectomy & local administration of thrombolytics treatment - in the case of an acute, severely ischaemic limb, surgery is indicated - causes of acute limb ischaemia with pre-existing atherosclerotic disease: to perform embolectomy or amputation (i) thrombosis of a native atherosclerotic artery (ii) thrombosis of arterial bypass graft (iii) embolism from heart, aneurysm or atherosclerotic plaque - outcome of peripheral artery embolism is often poor with mortality aetiology (iv) thrombosed aneurysm (especially popliteal) prognosis at 30 days of 15% and amputation in 15-30% of patients of acute - causes of acute limb ischaemia without pre-existing atherosclerosis: limb (i) arterial trauma (including iatrogenic) (ii) arterial dissection ischaemia / (iii) arteritis with thrombosis (eg giant cell arteritis) (iv) spontaneous thrombosis in a hypercoagulable state (v) popliteal cyst with thrombosis (vi) vasospasm with thrombosis