

Digital ischaemia after intra-arterial drug injection

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DESCRIPTION

A 62-year-old man presented with recurrent episodes of left-sided digital ischaemia (figure 1). His history was significant for chronic back pain and prescription opiate use. One year previously, he had an episode of ischaemia involving the left hand, requiring amputation of the left thumb and index finger. One month prior, he developed ischaemic



Figure 1 Photograph of left hand showing digital necrosis, prior thumb and index finger partial amputations, and mottling of the palm.

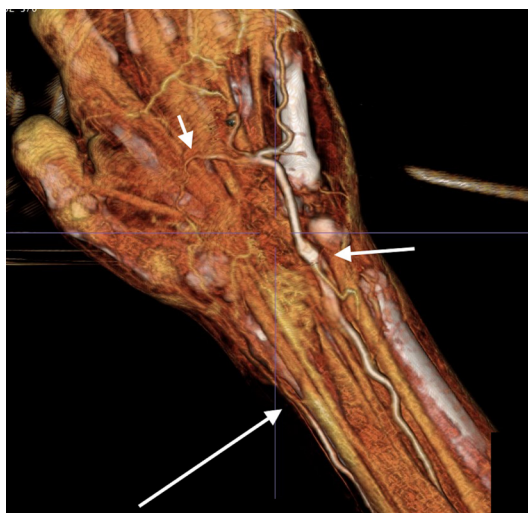


Figure 2 Three-dimensional reconstruction of left upper extremity CT angiography. The radial artery (long arrow) is obstructed and the ulnar artery (short arrow) is hypertrophied. There is poor flow through the superficial palmar arch (arrowhead).

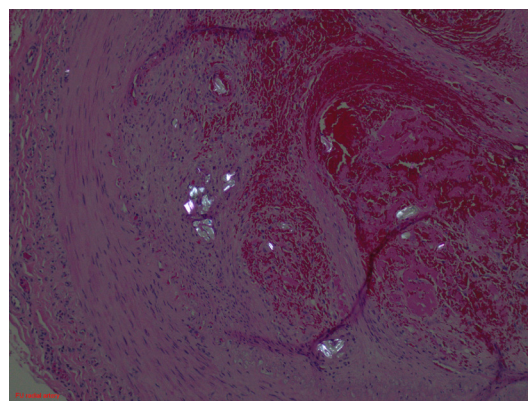


Figure 3 H&E-stained histological section from a specimen of left radial artery, showing polarisable microcrystalline cellulose pill filler material embedded in remote and subacute thrombus.

Learning points

- ▶ Given the ubiquity of prescription opiates and the approximately 2.5 million people in the USA with opioid addiction, recognition of prescription drug abuse in patients with otherwise unexplained vasculitis or hypercoagulopathy may help clinicians address potentially harmful injection of opiates.¹
- ▶ Biopsy revealed microcrystalline cellulose pill filler material, which is commonly associated with microthrombosis in the lungs of intravenous injection drug users. Digital ischaemia following accidental intra-arterial injection has also been reported. Ischaemia may not be reversible, but cessation of drug injection should prevent further injury.²
- ▶ Buprenorphine/naloxone is a first-line opioid agonist treatment in patients with a history of injection drug abuse.³

digits of the left foot. Extensive serological evaluation of causes of vasculitis and thrombosis was negative. Left upper extremity arteriography demonstrated obstruction of the radial and interosseous arteries (figure 2). The ulnar artery was hypertrophied, suggesting a chronic process. Biopsy of the radial artery revealed polarisable microcrystalline cellulose pill filler material embedded in remote and subacute thrombus (figure 3). When informed of this finding, the patient acknowledged repeated injection of crushed hydromorphone tablets into his arteries over a period of several months after losing venous



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access. He underwent surgery for necrotic digits, enrolled in a substance abuse programme and initiated treatment with buprenorphine/naloxone. He has remained abstinent from injection drug use, and continues to taper his buprenorphine/naloxone.

Contributors MJN and TLH were both involved in the diagnosis, management, review of the literature and writing of the manuscript.

Competing interests None declared.

Patient consent Obtained.

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