

## Self Intra-Arterial Drug Injection = Self-Inflicted Hand Amputation? A Case Report

<sup>1</sup>Chanddrasuriya K, <sup>1</sup>Sem SH, <sup>1</sup>Jeremy P, <sup>1</sup>Chuah CK, <sup>1</sup>Rashdeen Fazwi MN, <sup>1</sup>Fauziana AJ  
<sup>1</sup>Orthopaedic Surgery & Traumatology, Hospital Kuala Lumpur, Jalan Pahang, 50586 Kuala Lumpur

### INTRODUCTION:

In contrast to intra-venous injection of medications, intra-arterial drug injection is a rare and dangerous act as it has serious complications to life and the affected limb.<sup>1</sup> Intravenous drugs are usually prepared by the pharmaceutical company under strict sterile conditions. Any other preparations are potentially hazardous to the patient.

### CASE REPORT:

A 39 year-old man was presented with acute onset of severe pain, swelling, numbness, and bluish discoloration of his right hand. Further history revealed that he is a drug addict and he injected a self-made intravenous solution using crushed benzodiazepine tablets into his right radial artery. He was diagnosed with acute right hand ischemia secondary to inadvertent intra-arterial injection of benzodiazepine. His right hand became gangrenous till the wrist level despite aggressive treatment of intravenous heparin infusion and hyperhydration. He underwent trans-radial amputation of his right hand inevitably. He was discharged home well after the surgery.

### DISCUSSIONS:

Intra-arterial drug injection mostly occurs accidentally but it can happen deliberately especially in drug addicts with poor venous access. The early presentations post intra-arterial drug injection can be non-specific and mimics other conditions such as skin and soft tissue infections or compartment syndrome. Therefore high index of suspicion and accurate clinical assessment is vital in making a correct diagnosis. The pathogenesis of gangrene following intra-arterial injection of drugs is unclear but some authors suggested blockage of end arteries and digital arteries by the microthrombi formed by drugs particles.<sup>2</sup> There is no one effective treatment in preventing

gangrene of the affected limb; general measures including use of arterial vasodilator, anticoagulant, selective thrombolytic agent, steroid therapy, use of anti-inflammatory agents and antibiotics.



FIGURE 1  
Gangrenous right hand prior to surgery

### CONCLUSION:

Clinically, it is not easy to prevent inadvertent intra-arterial drug injection. Early detection is needed to prevent/ reduce the risk of amputation of distal extremities.<sup>3</sup> Accidental intra-arterial can lead to limb ischaemia and even limb loss so while injecting intravenous drugs, care should be taken to use venous sites away from arteries.

### REFERENCES:

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