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

1Chandrasuriya K, 1Sem SH, 1Jeremy P, 1Chuah CK, 1Rashdeen Fazwi MN, 1Fauziana AJ  
1Orthopaedic 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. 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 happens 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 fromed by drugs particles. 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. 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: