

A Rare Case Of Pulmonary Embolism Following Upper Limb Fracture

¹Farhan H; Ashraf R; Kamarul Al-Haq AG

¹Orthopedic Department, Hospital Tengku Ampuan Rahimah Klang

INTRODUCTION:

Pulmonary embolism is usually associated with lower limb fracture, due to the fracture itself and long period of immobilisation and operation. PTE in upper limb fracture is rarely reported perhaps because of the perception of low incidence relative to lower limb fractures or a lack of available data.

REPORT:

We report a 30-year-old gentleman who sustained closed fracture greater tuberosity of right humerus with anterior shoulder dislocation following alleged motor vehicle accident. No PTE/DVT prophylaxis was started as patient ambulating well in the ward. On the 5th day after trauma, noted patient started to have persistent tachycardia and pleuritic chest pain. ECG showed sinus tachycardia and normal chest radiograph finding. Blood parameters were normal except raised D-dimer. Modified Well's criteria were 4.5 which showed intermediate risk for PTE. CTPA showed right lower lobe subsegmental pulmonary artery thromboembolism. Patient was treated with anti-coagulant and the fracture was treated conservatively due to high risk for surgery.



Figure 1: Pre and post CMR

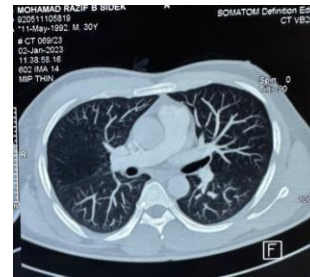


Figure 2. CTPA showing filling defect over right lower lobe.

CONCLUSION:

PTE after upper extremity fracture is rare, more commonly associated with lower limb arthroplasty and in fractures of the femur, pelvis, and acetabulum¹. PTE/VTE occurrence in upper extremity fracture is 1.3% with most frequently in patients with proximal humerus fractures (3%) and rarely in radius and ulna fractures (0.14%)². There are no common guidelines for PTE after upper extremity fractures according to latest Malaysian CPG. Endothelium injury of the axillary vein cause by the anterior shoulder dislocation and application of traction-countertraction technique during closed manipulation reduction may have contributed to the development of PE³. This intimal injury combined with venous stasis due to temporary occlusion of the axillary vein by the dislocated humeral head theoretically could cause an isolated venous thrombosis.

REFERENCES:

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