

Immediate Pulmonary Embolism Following Total Knee Replacement Surgery

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INTRODUCTION:

Total knee arthroplasty (TKA), is one of the common procedures for end-stage knee arthritis. Recent studies show that 30-day mortality is 4% but may increase to 13% after 90 days (1). In the Scottish registry, the 90-day rate of fatal pulmonary embolism was 0.15% after a total of 27,000 total knee arthroplasties (2). We report a case of PE that developed immediately post total knee arthroplasty.

REPORT:

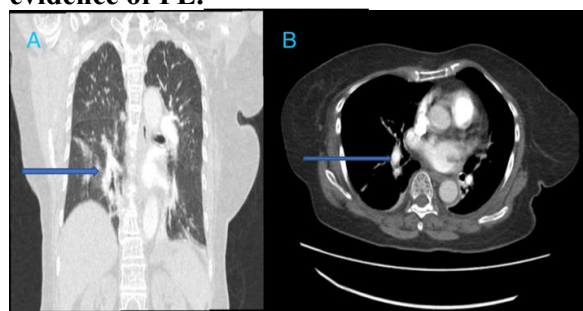
A 75-year-old lady presented with a history of bilateral knee pain for the past few years which has been progressively worsening. The pain is mechanical in nature, and this has been affecting her daily routine as a housewife. Pre-morbidly, she was ADL-independent and with a history of dyslipidemia. She is a community ambulator and wished to be able to walk again without pain. Clinical examination revealed that the patient is obese with a BMI of 37 kg/m².

Radiographic imaging showed tri-compartmental bilateral knee osteoarthritis with the mechanical axis deviated medially to the centre of the knee. Total knee arthroplasty was performed because of failed conservative management. The patient was put in a supine position under general anaesthesia. One hour before the incision, Tranexamic acid were administered. Tourniquet was used to ensure a bloodless field, and a skin incision was made over the median parapatellar of the knee. The operation took two hours to complete. The patient was well when discharged to the ward. However, six hours post-operation, the patient suddenly developed shortness of breath in which oxygen saturation shows 86-88%. She was tachycardic with a heart rate ranging from 90 to 110 beats per minute.

CT Pulmonary Angiography (CTPA) shows Pulmonary Thrombosis at the secondary branches of the right middle lobe pulmonary

artery as shown in figure 1. She has no other risk factors for DVT apart from her age, history of lower limb surgery and obesity. Ultrasound doppler showed no deep vein thrombosis.

Figure 1: CTPA at day 1 post-TKR in (A) coronal and (B) axial cut-section showing evidence of PE.



A treatment dose of 60 mg of subcutaneous Clexane was started and the patient was discharged with oral Rivoraxaban 15 mg bidaily for three weeks with subsequent 20 mg daily for three months. The patient was well upon discharge and was able to ambulate.

CONCLUSION:

Although total knee replacement is relatively a safe procedure, the risk for PE in the postoperative period should be considered. A timely diagnosis and effective treatment are important measures to prevent and cure PE after total knee replacement.

REFERENCES:

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