MISDIAGNOSIS IN SIMPLE AVULSION FRACTURE OF TIBIAL TUBEROSITY- A RARE CASE OF POLYOSTOTIC PAGET DISEASE

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Introduction: Paget's disease is a chronic bone remodelling disorder also known as 'œosteitis deformans', firstly was described by Sir James Paget in 1877. It is second most common bone disorder in elderly after osteoporosis in Caucasian but distinctly rare among Asian.

Discussion: A 57 years-old, healthy Chinese gentleman, sustained avulsion fracture of right tibial tuberosity following a fall. Open reduction and tension band wiring of right tibial tuberosity was done unsuspecting a lurking disease in the background. Follow up radiograph incidentally noticed multiple lytic lesions over medial and lateral femoral condyles, layering of lytic and sclerotic over cortex of the distal femur and proximal tibia with poor distinction between inner and outer cortex, widened and anterior bowing of the femur. Blood investigations for infection were negative. CT scan of the femur reported as subchondral radiolucency of diaphysis and distal metaphysis associated with cortical thickening with coarse trabeculation and enlargement of right femur with lateral bowing suggestive of Paget's disease. Further workup noted normal calcium and phosphate level, however ALP highly elevated, 722 IU/L, supporting the diagnosis of Paget's disease. He subsequently was started on bisphosphonate. Tibial tuberosity fracture united uneventfully.

Conclusion: Paget's disease is a chronic bone remodelling disorder of unknown aetiology, characterized by disorganised coupling activity of osteoclastic bone resorption and osteoblastic bone formation leads to weak, vascularized, enlarge and deformed bone(1). It is extremely rare among Asian population especially in Chinese. In Singapore only five cases were reported in eight years period(2). Paget's disease is diagnosed based on clinical presentation, radiological findings and elevated ALP level. Bone biopsy can be helpful but is not mandatory in diagnosing Paget's disease. Most of the patients were asymptomatic causing the condition to be underlooked and easily misdiagnosed. We present this case to create awareness regarding the existence of the illness despite being extremely rare.