

Bilateral Stress Fracture of Femur Neck, Fatigue type of Non-Athletic Young Adult: A Case Study

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Introduction

Stress fractures of femur neck have been reported primarily in the older adult population and in military personnel. Bilateral femur neck stress fractures of non-athletic young adult population are even more rare. We now report rare case, bilateral femoral neck fractures of non-athletic young adult.

Case report

A 35 year-old man, previously healthy visited emergency department for the right inguinal pain. Recently, about 3 weeks ago he started personal training and had been working out hardly, including daily Buffy test, squatting, treadmill, hip abduction strengthening exercise, for every day, for two weeks. A week ago, while he was running, he felt sudden right inguinal pain. Pain lasted for 5~10 minute and gone. The next day, the pain was on his right posterolateral hip. Pain was aggravated as weight bearing was on his hip, and relieved at rest. The pain was most severe while he was running. Two days ago, he visited orthopedic clinic, and was diagnosed as sub-gluteal bursitis. Triamcinolone injection was done for right hip sub-gluteal bursa but there was no improvement. So he visited emergency department. On physical examination, tenderness was on right posterior aspect of hip, on gluteus maximus, medius level. Patrick sign was positive on right hip joint. There was no physical abnormalities on left lower extremity. He ambulated with an antalgic gait on the right side. Standard AP radiographs of the pelvis shows right basilar femoral neck stress fracture. The MRI showed linear fracture in the both femoral neck with marrow edema, and small amount of effusion in the right hip joint. The result of blood test including hormone studies was normal, except bone ALP, C-telopeptide, 25(OH)-Vitamin D.

Result

This patient was diagnosed as bilateral femoral fatigue fracture. He had closed reduction and internal fixation for both femur neck fracture. After surgery, he was discharged. He ambulated with wheel chair at discharge. 4 weeks later he visited outpatient clinic for follow up, he used crutches and gait as partial weight bearing.

Conclusion

Bilateral femoral neck stress fractures in a young non-athletic, non-military adult with no particular medical history has not been reported before. Excessive exercise can cause

fatigue fracture of femur on healthy young adult and further investigation should be done for which exercise causes fatigue fracture of femur neck.