Gun shot wound involving the hip joint.

Under civilian circumstances high velocity gunshot wounds are on the increase in many parts of the world, sometimes approaching epidemic levels. However, involvement of the hip with gunshot wounds is relatively uncommon, particularly in a female.

Displaced sub-capital fracture neck of femur (FNF) with gunshot wounds is still rarer. Only 5 cases of displaced FNF have been reported in the series of 53 gunshot wounds to hip by William T. Long, et al at a Los Angeles Trauma Center. We report an uncommon case of gunshot injury involving the hip, from the region of Najran, Saudi Arabia. Gunshots are quite common in Najran, particularly from adjoining areas of Yemen. In a period of 2 years, out of 140 gunshot orthopedic injuries, managed at King Khalid Hospital, only one case of hip joint involvement was seen.

A fifty year old, known diabetic, Yemeni female presented to the Emergency Department with poor general status and severe hemorrhagic shock following gunshot to right hip. Shock was managed promptly in the Emergency Department. Examination revealed a small wound of entry on the right hip laterally, with the bullet being palpable subcutaneously on the posterolateral aspect of the left upper thigh. Right lower limb was in external rotation with apparent shortening without any neurovascular deficit. Plain X-ray of pelvis AP view, revealed a displaced sub-capital FNF with undisplaced fracture of superior pubic ramus and acetabulum, without any intra-articular fragment (Figure 1). Examination per abdomen was normal, but patient had profuse hematuria. Urgent cystourethrogram showed extravasation of dye and rupture of bladder. Emergency laparotomy was performed to repair bladder and bullet was removed. It was a life saving measure. Aspiration of hip and arthrogram were not carried out as violation of capsule was obvious from the course of the bullet. Immediate internal fixation for FNF was deferred in view of potentially infected hip and upper tibial skeletal traction was applied. It helped maintenance of acetabular contour and healing of wound. Arthroscopy of hip was not needed as patient did not develop any sign of infection under good antibiotic cover. For FNF, after careful analysis, we opted for a partial hemiarthroplasty with Austin Moore prosthesis (Figure 2), to avoid future risks of non-union and avascular necrosis which, are common complications with such fractures. This is seen in the study by William T. Long, et al in their series. However, bipolar arthroplasty was a better option in compromised acetabulum.

In conclusion, treatment must be based on careful assessment of the injury, and available expertise and facilities. There is no dogmatic treatment protocol for gunshot fractures.

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References