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Case Report

An unreported variant of fracture neck femur: a case report

Ganesh Singh Dharmshaktu*

Department of Orthopaedics, Government Medical College, Haldwani-263139, Uttarakhand, India

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***Correspondence:**
Dr. Ganesh Singh Dharmshaktu,
E-mail: drganeshortho@gmail.com

ABSTRACT

Fracture neck femur is common but 'unsolved' injury. Despite many classifications certain fractures do not fit into well recognized patterns or classifications. We report an unreported variation of the intraoperatively detected fracture. The fracture consisted of a subcapital fracture with a long intramedullary spike along the neck of femur attached to proximal segment. The patient was managed accordingly with good functional outcome.

Keywords: Fracture neck femur, Classification, Management, Hip trauma

INTRODUCTION

Hip fractures are common injuries with 20% incidence with neck femur fractures comprising of almost half of the load.[1] Apart from trauma, increase in the life expectancy with rise in incidences of osteoporotic neck fracture, more than six million cases can be expected by 2050.[2] Subcapital and transcervical are main patterns of intra-capsular fracture neck femur based on anatomical location of fracture. The treatment and result are not however found to be linked to the location of fracture.[3] Classifications by Garden and Pauwel are widely used classifications based on degree of displacement and plane of fracture respectively.[4,5] Neither of any classification describes a pattern of fracture involving a subcapital fracture with a long intramedullary spike through neck.

CASE REPORT

A 62 year old lady presented to us with history of tripping on a slippery ground over her right hip region. The lady was active, socially ambulant and otherwise healthy. She had pain and difficulty in bearing weight to the injured extremity and was escorted to the hospital. Clinical examination was limited with pain and discomfort. A provisional diagnosis of fracture neck femur was made and the appropriate radiographs ordered. The lady had a 'routine' looking fracture neck of femur (Figure 1). The patient and attendants were explained about the treatment options with pros and cons as well as prognosis. The patient chose surgical intervention with hemireplacement arthroplasty with Austen Moore prosthesis.

Figure 1: Radiograph of the injury showing a 'routine' fracture neck femur.

After informed consent and well anesthetised patient, the posterior, Moor's approach was chosen under aseptic precautions as per surgeon's preference and expertise. The fracture site was reached under clear direct vision. There was a unique pattern of fracture noted with a long spike through neck of femur attached to proximal segment. The extraction of the head requires use of an extraction screw but that procedure might destroy this unique pattern. We carefully manipulated the fracture and removed the head with a Murphy's skid placed under the head and levering it out of acetabulum thus protecting the spike. The head was delivered uneventfully after a few attempts and the extracted head was washed and kept aside for the detailed evaluation after the procedure. The surgery was performed as standard procedure and the Austen Moore prosthesis of adequate size was inserted and hip joint reduced and checked for adequacy of the reduction clinically. The wound was closed in layers in standard manner with due attention to suture capsule and short rotators of the hip meticulously. A suction drain was placed before the final dressing followed by a radiographic evaluation under image intensifier as per institution policy. The appropriateness of the procedure and concentric reduction confirmation was ensured before taking patient out of theatre.

Extracted head was photographed for possible publication from different angles. The subcapital fracture with a long intramedullary spike along the neck attached to the proximal segment was noted as rare pattern (Figure 2).

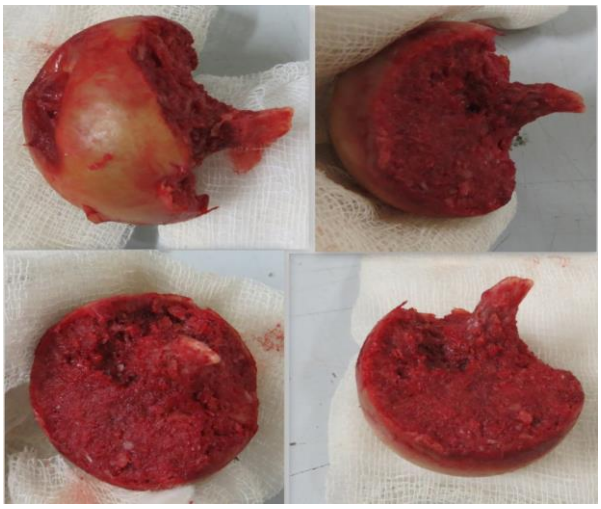

Figure 2: The extracted head with described fracture pattern.

The post-operative radiographs showed satisfactory position and fixation of the prosthesis (Figure 3). The lady was advised weight bearing to tolerance on walker after third post-operative day. The wound and stitches healed uneventfully and patient regained painless functions with performing unassisted activities of daily living with due precautions and advices. There were no immediate or remote complications reported in the follow up of eighteen months.

Figure 3: Post-operative radiograph with hemi-replacement arthroplasty.

DISCUSSION

Fracture neck femur injuries in the elderly are debilitating injuries with surgical intervention used in most cases to ensure the early return of function. Hemi or total joint replacement has been a successful option widely practiced and chosen wisely as per the patient requirement. The precarious vascular supply and host of other factors associated with osteoporosis warrants reliance on methods of osteosynthesis less preferred as modality of treatment especially in advanced age group.[6] The increased longevity has increased chances of increase burden of this injury in coming time and need for better understanding and management. Many a times fracture patterns do not fit a standard classification system and newer patterns are needed to be reported for any amendment in the classification. The presented report of a rare variant of fracture neck femur involving a subcapital fracture with a long intramedullary spike along the neck attached to the proximal segment is not reported previously as per the literature search done by author. The unique fracture pattern however had little impact on the treatment protocol and the standard care ensured a good functional outcome for the patient.

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