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RESEARCH ARTICLE

A RARE CASE OF CORONAL FRACTURE OF THE RIGHT PATELLA

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ABSTRACT

Coronal fractures of the patella are an uncommon occurrence as compared to transverse fracture of the patella. We present a case of comminuted displaced fracture of the patella with disruption of the patellofemoral articulation which was treated with cancellous screws. Immediate mobilisation and active physiotherapy was started. The scope of the study was to identify the pattern of patella fracture, treat it accordingly and return to the patient the near normal knee motion so as to decrease the dependency of the patient on others for her activities of daily living. X rays and CT scans were used to identify the pattern of the fracture, which revealed a comminuted pattern of patella fracture and the decision to operate was taken.

INTRODUCTION

Patella fractures are a fairly common occurrence and usually are transverse or comminuted. The incidence of which is 1% of all skeletal injuries, its subcutaneous location makes it vulnerable to injuries.

We present a rare presentation of patella fracture which appeared transverse radiologically but was not transverse intra operatively. The rarity of the fracture pattern was the foundation of this research work.

52 year old female patient with history of fall at home sustained injury to her right knee, and complained of pain, swelling and difficulty to bear weight on her right lower limb.

Examination revealed tense swelling, warmth and tenderness diffusely present over the right knee, patella felt as 2 pieces with a gap in between, ROM being virtually nil, varus/valgus stress test negetive and no neurovascular deficits distal to the injury.

X ray showed a transverse fracture of the patella with fracture of the inferior pole.

CT scan highlighted the gross comminution pattern of the fracture with disruption of the patellofemoral articulation, keeping these injuries in mind the pt was taken for ORIF.

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MATERIALS AND METHODS

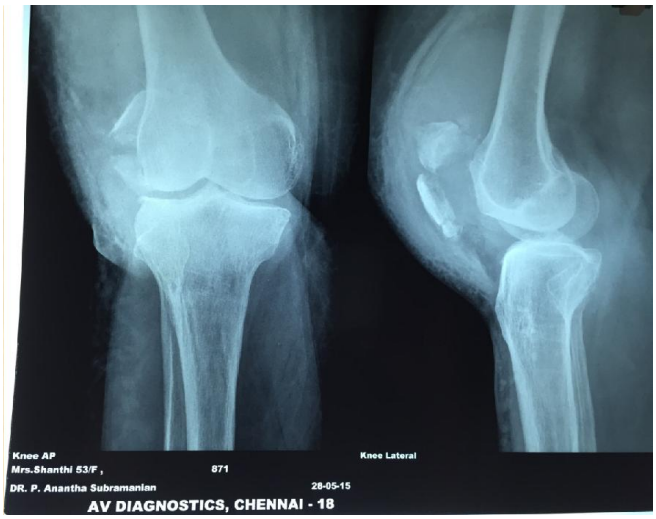


Figure 1. Anteroposterior and Lateral views of the right knee joint showing a comminuted fracture of the patella with fracture of the inferior pole

RESULTS

After viewing the radiology of the patient the decision to operate was taken. Through midline incision the joint was opened and fracture site identified. The fracture was found to be coronally split with comminuted fracture of the inferior pole. After appreciating the fracture pattern, fracture was reduced and held with reduction forceps.

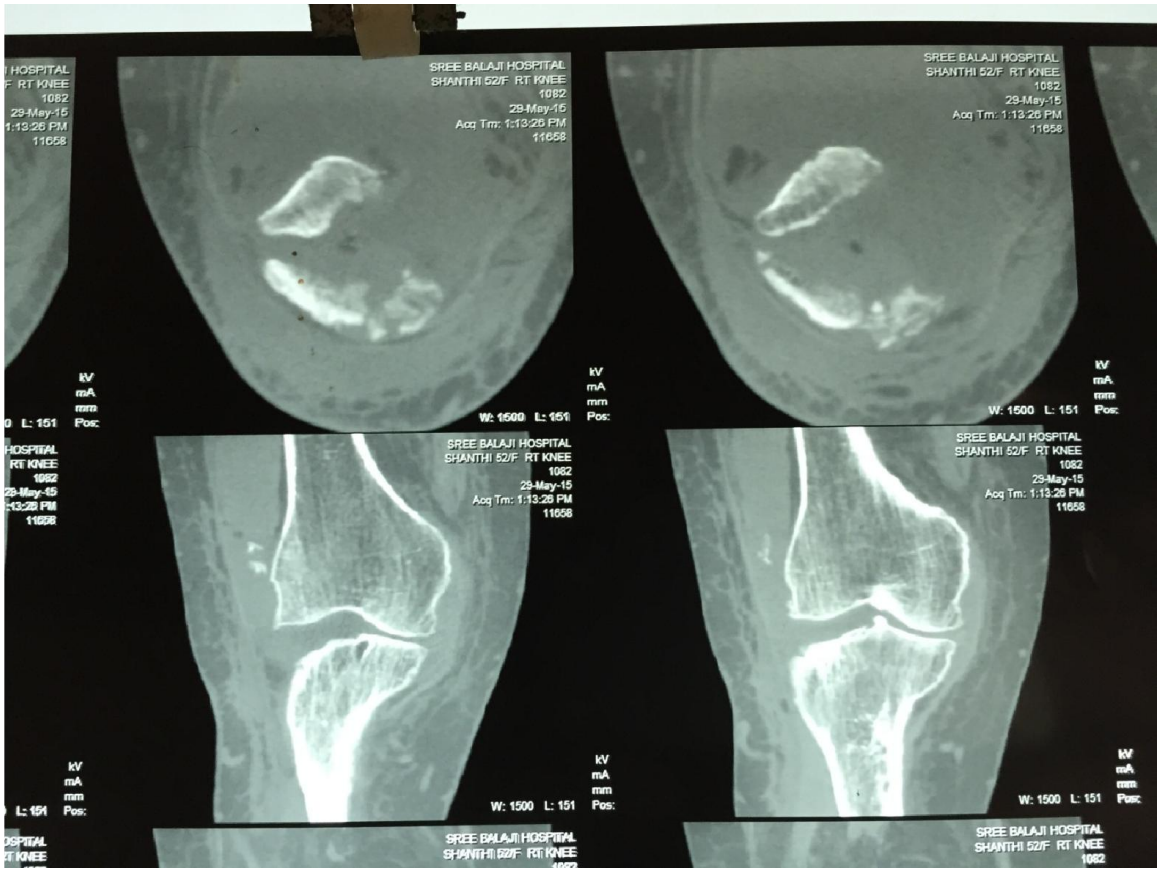


Figure 2. CT scan of the Knee joint showing comminuted transverse fracture of the patella

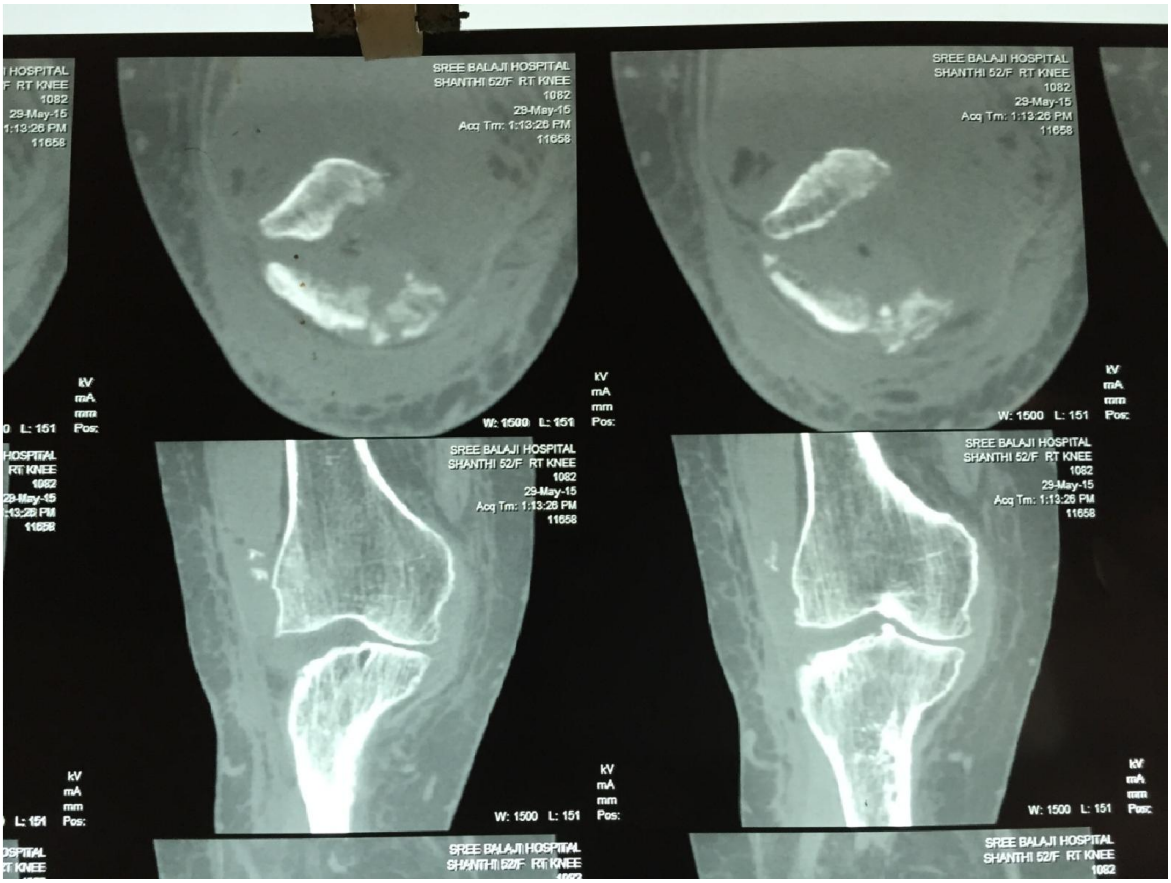
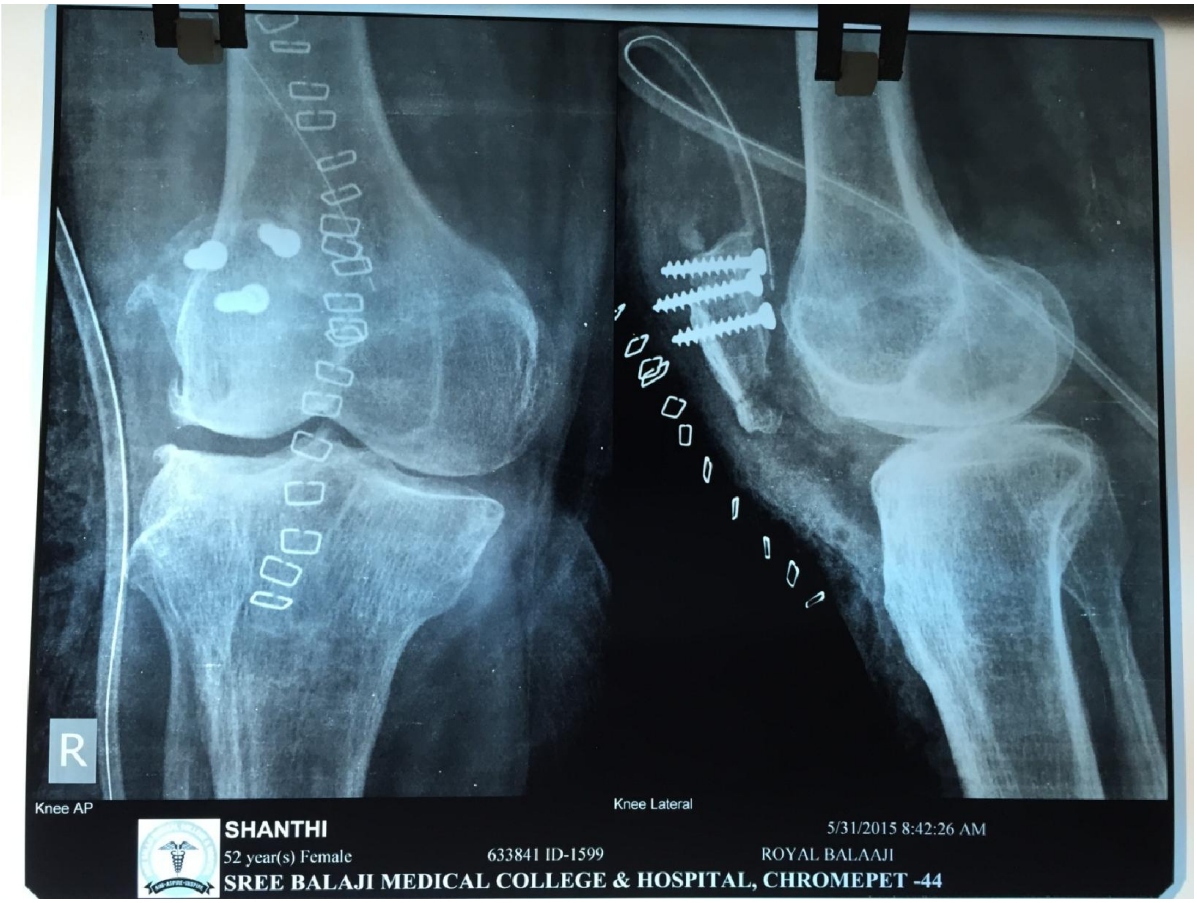


Figure 3. CT Scan of the knee showing the same



Post op X- ray showing screw fixation of the patella

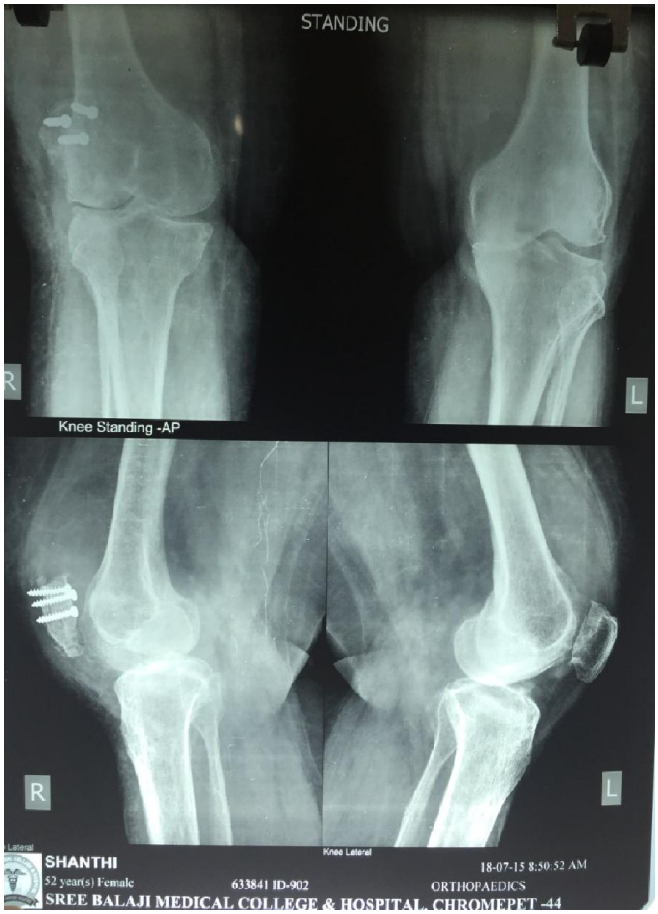


Figure 5. Pt showing active range of motion of 0-100 deg flexion

Figure 6. Pt exhibiting full extension without any extensor lag.

Three screws were passed in a triangular fashion with the base being at the superior pole. Cancellous screw fixation was done from posteriorly to anteriorly through the articular surface. Screws were passed perpendicular to the fracture and screw heads were counter sunk so it does not come in contact with the articular surface of the femur. The fixation was found to be stable.

DISCUSSION

Post operatively immediate non weight bearing walking was encouraged along with active physiotherapy. 3 weeks post op pt was allowed 30 deg flexion. At 6 weeks 60 deg flexion and full wt bearing with walker support. At 8 weeks 90 deg flexion and full wt bearing without walker support and full range of motion. Slow mobilization protocol was followed because of excessive porotic quality of the bone.

Patella fractures are a fairly common occurrence and usually are transverse or comminuted fractures. Usually managed with tension band wiring as providing tension to the fracture fragments causes inter fragmentary compression. This patient had a grossly comminuted fracture. The real anatomy of the fracture could only be appreciated intra operatively. Hence the decision to fix the fracture with cannulated cancellous screws was taken intra operatively.

REFERENCES

Matthew I. Rudloff: Fractures of the Lower Extremity. In Campbell's operative Orthopaedics, volume III, twelfth edition: S. Terry Canale, James H. Beaty, International edition page no 2681.

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