An Innovative Threesome Reduction in Posterior Hip Dislocation with Ipsilateral Femur Fracture

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INTRODUCTION:

Most common associated fracture with posterior hip dislocation is acetabular wall fracture. However, ipsilateral femur fracture can happen in posterior hip dislocation. We report a case of posterior hip dislocation with ipsilateral femur fracture reduced with triplanar (threesome) method.

REPORT:

21 year old gentleman, motorbike rider alleged road traffic accident. Patient had deformed left thigh, his left lower limb shorten compared to right side. X-ray showed left posterior hip dislocation with ipsilateral femur fracture. No vascular compromised over affected limb. Closed reduction attempted under sedation in casualty but unsuccessful. Hence, closed reduction under general anesthesia in operating theater (OT) was performed.

2 temporary Schanz pins inserted over neck of femur and proximal femur, respectively, in different plane to reduce the dislocation (1st and 2nd plane). Both pins connected with rod to form handle to apply lateral force for traction. Patient s left lower limb was placed on traction table for axial traction to assist in reduction (3rd plane).

Once external fixation handle was form, traction applied on traction table, lateral traction applied manually by surgeon and reduction done under I/I guidance. Post reduction, skeletal traction was inserted for stabilization until definitive fixation. Interlocking femur inserted 2 weeks after the initial surgery.

DISCUSSION:

This reduction method proved useful in reducing the dislocation without requiring open reduction thus saving OT time. Technique is easily replicated as instruments are readily available in OT. It also requires low surgical skill threshold.

However, drawbacks include requiring more OT staff for reduction, risk of stress fracture during pin insertion, risk of implant failure during pin insertion and limited patient pool as require good bone quality to avoid pin pull out during the procedure.

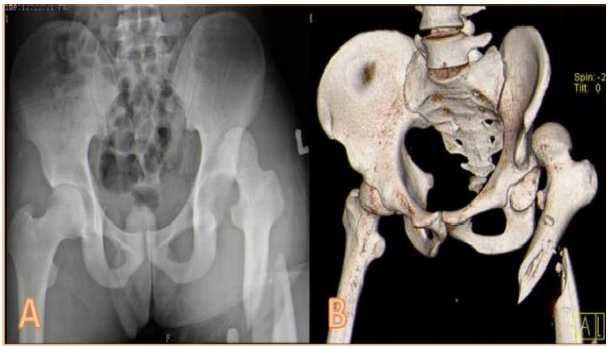

Figure A: Plain radiograph of pelvis (AP view) shows left posterior hip dislocation with proximal femur fracture

Figure B: CT scan with 3D reconstruction shows left posterior hip dislocation with proximal femur fracture

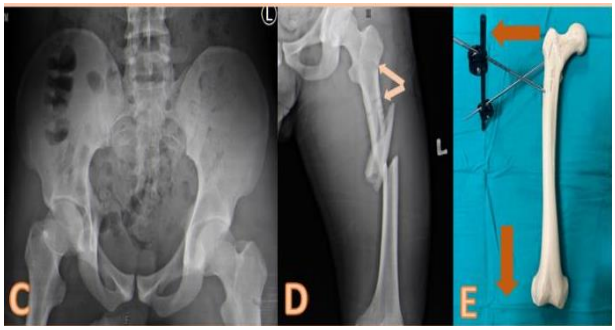

Figure C: Plain radiography of pelvis (AP view) shows successful reduction of left hip

Figure D: Plain radiography of hip shows pin insertion site

Figure E: Saw bone of right femur with 2 Schanz pins over proximal femur. 2 arrows show lateral force by Schanz pin and axial traction by traction table.

CONCLUSION:

A threesome approach of pin insertion, axial traction and lateral force is an efficient way to reduce a posterior hip dislocation with ipsilateral femur fracture.

REFERENCES:

1. Pengyu Li et al External fixation-assisted reduction for neglected hip dislocations with limb length discrepancy