

EVALUATION OF PEDIATRIC INTRACAPSULAR NECK OF FEMUR FRACTURE FIXATION WITH MOORE'S PINS

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ABSTRACT

Paediatric femoral neck fractures are uncommon injuries and are usually caused by high-energy trauma. Low-energy trauma can result in pathological neck fractures and stress fractures of the neck, due to repetitive activity. Surgical options can vary based on age, Delbet classification and displacement of the fracture. Treatment for displaced fractures is by closed or open reduction and Moore's fixation. Fixation should be supplemented by spica cast immobilization in younger children. The high rate of complications occurs due to the vascular anatomy of the hip and proximal femur. Avascular necrosis, coxa vara, premature physeal closure, and non-union are the most common and these often result in poor outcome.

KEYWORDS : Child, Fracture Neck Of Femur, Hip, Paediatric, Pathological, Moores Pins

INTRODUCTION

Fracture neck of femur in children are rare. Hip fractures constitute approximately 1% of all fractures in children. Most of the fractures result from high-energy trauma. Complications are associated with serious long-term morbidities. Undesirable and unpredictable results occur despite of good fixation and care.

CASE STUDY

Aim

To evaluate clinical and radiological outcome of closed reduction and internal fixation of paediatric intracapsular neck of femur fracture with Moore's pins

Methods

A prospective study of 7 patients admitted in our hospital during the period of JAN 2018 – DEC 2019

Inclusion Criteria

All Type: 1, 2, 3 Delbet classification

Age 5: 14yrs

Exclusion Criteria

Age <5yrs and >14yrs

Type: 4 Delbet classification (INTERTROCHANTERIC FRACTURES)

Infective pathological IC fracture

Delayed presentation to the hospital (>2 weeks)

Results

All patients were followed up for 6 to 12 months, and the mean follow-up duration was 7 months.

5 Displaced IC fractures and 2 undisplaced fractures.

1 belonged to type-1, 4 were type-2 and 2 type-3

Associated injuries seen in 3 patients

The mean time of injury to surgery was 2 days 8 hrs.

6 out of 7 fractures united on the average of 8 weeks (range, 6-10 weeks).

According to Ratliff criteria 5 patients showed good results 1 patient fair and 1 patient poor.

DISCUSSION

Pediatric femoral neck fractures are uncommon.

The average incidence, worldwide is 1% of all pediatric fractures.

May be higher in our environment.

Most cases result from high-energy trauma.

The presence of physis and vascular peculiarities make pediatric femoral neck fractures an important clinical entity.

The risk of severe complications like AVN and growth arrest, make prompt treatment of pediatric femoral neck fractures a priority.

Of all the complications reported in the literature, AVN is the most common and most devastating.

Quick et al, reported an average incidence of 6-53% for AVN in pediatric femoral neck fractures.

In our study, AVN occurred in 1 patient, and risk factors identified include:

- Type of fracture and displacement
- Late presentation.

CONCLUSION

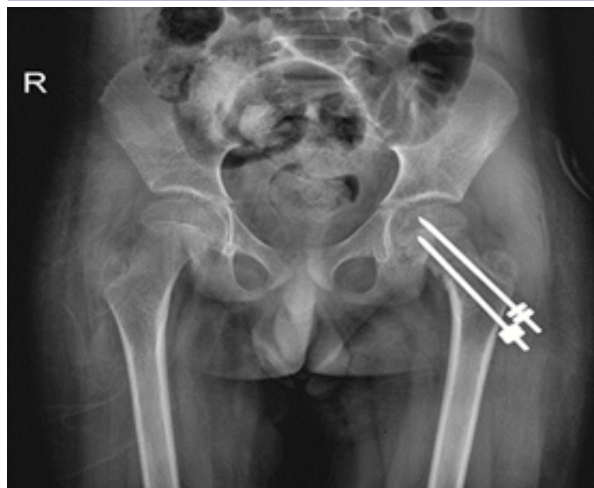
The risk of vascular disruption and physeal damage was minimal on using MOORE'S PINS.

Functional and radiological outcome of pediatric intracapsular femur neck fractures were good on internal fixation using MOORE'S PINS.

CASE STUDY 1 PRE-OPERATIVE



DEL BET CLASSIFICATION- TRANSCERVICAL



IMMEDIATE POST-OPERATIVE



IMMEDIATE POST-OPERATIVE



3 MONTHS FOLLOW UP



3 MONTHS FOLLOW-UP



POST-OP RANGE OF MOTION



POST-OP RANGE OF MOTION

**CASE STUDY 2
PRE OPERATIVE**



DEL BET CLASSIFICATION- TRANSCERVICAL

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