

# EARLY OUTCOME OF ANTERIOR COLUMN POSTERIOR HEMITRANSVERSE ACETABULUM FRACTURES TREATED USING ALL ANTERIOR APPROACH AND ALL SCREW OR SCREW-PLATE FIXATION

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## INTRODUCTION:

Anterior column posterior hemitransverse fracture (ACPHT) is a complex acetabulum fracture. We report a series of three patients treated via all anterior approach and all screw or screw-plate fixation.

## MATERIALS & METHODS:

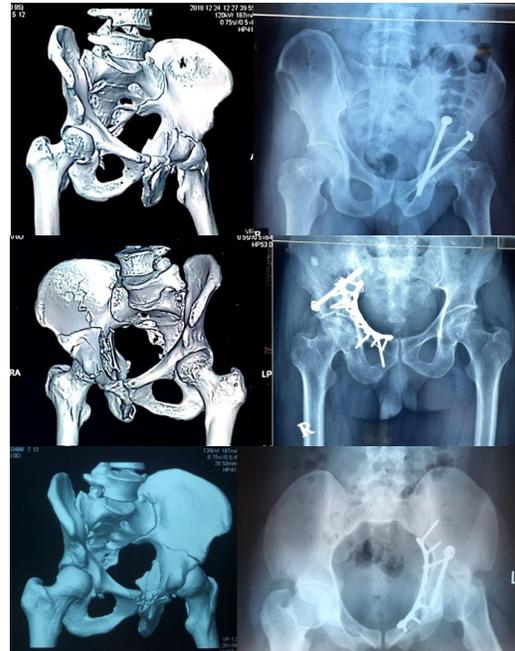
We reviewed three ACPHT patients who underwent surgery. The mean age was 36 years (21-49 years). One patient (A) underwent all screw fixation (*Figure 1a*). Two patients (B and C) underwent screw-plate fixation (*Figure 1b, c*). At six months follow up, patients were assessed using Merle d'Aubigné score for clinical outcome and plain radiographs for radiological union.

## RESULTS:

Two patients had Merle d'Aubigne score of 18 and one patient had the score of 16. Only one patient (B) had intermittent pain and slight limitation in hip flexion, others had painless normal hip motion. All three patients are able to walk normally without using aids (*Figure 2*). Radiological union was achieved in all patients.

## DISCUSSIONS:

Open reduction using anterior approach (modified Stoppa with lateral window) was required. Two patients (B and C) had comminution in the anterior column and plate fixation was done. Patient A had no comminution in anterior column and screw fixation was done. For all cases, posterior hemitransverse component was reduced indirectly from anterior<sup>1</sup> and only required screw fixation since there was no comminution. Screw fixation offers sufficient stability in ACPHT when compared to plate fixation<sup>2</sup>.



**Fig. 1a, b, c:** Pre and post op radiographs for patient A, B and C respectively.

Patient	Pain	Mobility	Ability to walk	Total
A	6	6	6	18
B	5	5	6	16
C	6	6	6	18

**Fig. 2:** Merle d'Aubigné score.

## CONCLUSION:

ACPHT can be treated using anterior approach without posterior approach. Screw fixation is a minimally invasive technique that reduces dissection and offers good stability.

## REFERENCES:

1. Kistler et al, Reduction of the posterior column in acetabulum fractures through the anterior intrapelvic approach. JOT 2015.
2. Busuttill et al, Screw fixation of ACPHT acetabular fractures offers sufficient biomechanical stability when compared to standard buttress plate fixation. BMC Musculoskeletal Disorders 2019.