

## AB133. 8. Lateral trochanteric pain following total hip arthroplasty: radiographic assessment of altered biomechanics as a potential aetiology

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**Background:** Lateral trochanteric pain (LTP) is a complication of up to 17% of cases of total hip arthroplasty (THA). LTP is believed to be associated with the surgical alteration of femoral offset and centre of rotation. The aim of our study was to evaluate the effect of femoral offset and centre of rotation on the incidence of LTP post-THA.

**Methods:** A retrospective case control study was developed from 158 patients who underwent a THA over a 2-year period to form two patient cohorts. Twenty-nine patients diagnosed with LTP were matched with 110 control subjects. The direct lateral approach was used in all cases.

Anterior-posterior pelvic radiographs before and after surgery were compared to assess the femoral, cup and global offsets and limb length discrepancies between the two groups. Statistical analyses were performed using the Mann-Whitney U test and independent samples t-test.

**Results:** Twenty-nine diagnosed with post-operative LTP. Sixty-two percent of symptomatic patients were female ( $P=0.13$ ). The median ages were 74.33 (symptomatic) and 70.71 (control) ( $P=0.11$ ). The differences (pre-post) of the femoral ( $P=0.17$ ), cup ( $P=0.5$ ) and global offsets ( $P=0.99$ ) and mean of limb length discrepancy (LLD) ( $P=0.83$ ) were not significant between the two groups.

**Conclusions:** No relationship was found between LTP and femoral offset or femoral centre of rotation. Disruption of the soft tissues during a lateral approach with resultant abductor tear, tendon defects and tendinitis might play a role in LTP and explain the apparent efficacy of corticosteroid injections.

**Keywords:** Lateral trochanteric pain (LTP); hip; arthroplasty; radiographic

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