

## Paper #111

# Technique and Early Results of a Two-Incision, Minimally Invasive Interlocking Periacetabular Osteotomy

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### Summary:

The TIMI PAO offers unique advantages for patients with hip dysplasia and enables reliable correction of significant deformities, a low rate of complications, and excellent functional outcomes in the early follow-up period.

### Abstract:

#### Purpose

The purpose of this study was to provide a technique description and early outcomes of a minimally invasive, two-incision interlocking periacetabular osteotomy (PAO) developed at our institution.

#### Methods

This was a prospective, longitudinal study of the first 150 consecutive patients undergoing the TIMI (two-incision, minimally invasive) PAO – an interlocking osteotomy combining the benefits of the Birmingham Interlocking Pelvic Osteotomy (BIPO) and the Ganz PAO. The technique provides direct visualization of the sciatic nerve and the ischial osteotomy and allows for immediate weight bearing postoperatively. Demographic characteristics, intra- and peri-operative parameters and functional outcomes were documented. All patients underwent hip arthroscopy 3-10 days prior to the PAO to address concomitant pathologies. Mechanical deep venous thrombosis (DVT) prophylaxis was used for 2 weeks postoperatively.

#### Results

The mean age at the time of operation was 29.7 years (range, 14 to 53 years). Females accounted for 88% of patients included in this study. Average postoperative length of stay was 4 days. A concomitant proximal femoral de-rotational osteotomy was performed in 14 patients. Preoperative lateral center edge angle (LCEA) was 18.5 degrees (range, -5 to 30 degrees), which improved to 32.3 degrees (range, 21 to 45 degrees) postoperatively. The mean iHOT-12 score improved from 37 preoperatively to 94 at 24-month follow-up ( $p < 0.01$ ). Two patients had postoperative hardware loosening with resultant loss of correction requiring re-fixation. Paresthesias in the distribution of the lateral femoral cutaneous nerve (LFCN) were common (65% at 2 weeks postoperatively), but resolved in 85% of patients within the first 6 months. There were no infections or DVTs.

#### Conclusions

The TIMI PAO offers unique advantages for patients with hip dysplasia and enables reliable correction of significant

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