

CASE STUDY

HipAlign[®]

James B. Chen, MD

HipAlign in total hip arthroplasty for a patient with severe hip arthritis and pelvic erosions



James B. Chen, MD

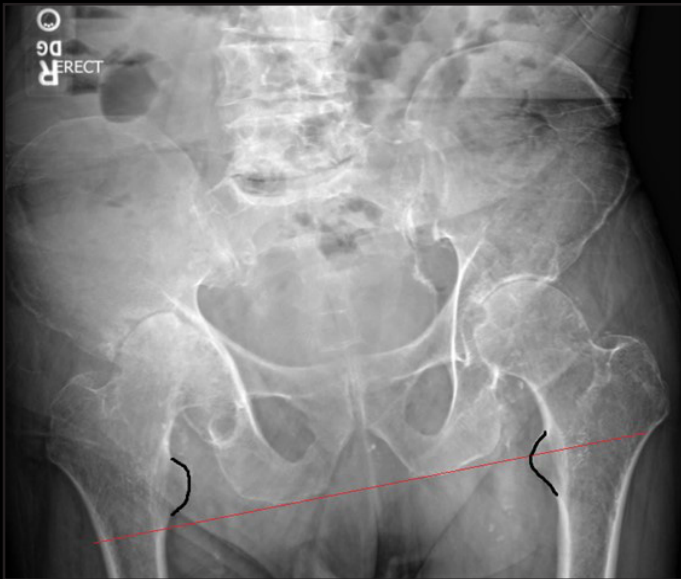
Community Orthopedic Medical Group
Mission Viejo, CA

Patient background:

- 72-year-old male (5'8" and 160 lbs) with severe right hip arthritis and pelvic erosions.
- Significant difficulty with ambulation over the past six months.
- Multiple previous femoral surgeries following a motor vehicle accident more than 50 years ago.

Clinical findings:

- Difficulty with weight-bearing activities, limited motion in the right hip, and a positive Stinchfield test.
- Leg length discrepancy: right leg was 4 cm shorter than left leg clinically, and 3 cm shorter radiographically.
- Increased laxity of the right total knee arthroplasty, with 3 mm opening medially and laterally under stress.



Imaging results:

- Radiographs confirmed the clinical findings, highlighting severe arthritis, pelvic erosions, and a significant leg length discrepancy.
- A CT scan confirmed the presence of inadequate acetabular walls, and further supported the surgeon's decision to perform THA utilizing technology to ensure proper placement of the acetabular component.

Preoperative plan:

- THA utilizing HipAlign Lateral.
- The initial femoral leg length discrepancy was 4 cm.
- The planned surgical leg length goal was to lengthen by 3 cm to restore equal hip position and minimize the risk of sciatic nerve injury.
- The surgical plan included specific inclination and version targets to optimize the hip joint's function.
- Goal to avoid existing hardware to prevent complications.



Intraoperative findings and approach:

- A posterior THA was performed without complication.
- Cup positioning:
 - 44° of inclination
 - 6° of anteversion
- Due to acetabular abnormalities, the cup was positioned to maximize fixation due to the presence of deficient walls.
- To compensate for the lack of acetabular anteversion, additional femoral anteversion was applied.
- Final leg length measurement: 31 mm longer.

Final implant choices:

Acetabular cup: Multi-hole jumbo 66 mm with 3 screws

Acetabular liner: 40 mm liner

Femoral Stem: Size 8

Femoral Head: +10.5 mm

Additional implants: 8-hole large fragment plate to support lateral femur





Why OrthAlign for this case?

HipAlign was instrumental in this case, primarily for its ability to accurately measure the change in leg lengths between native and final reductions. Since I entered the procedure with the goal of lengthening the leg by 3 cm, I wanted a tool that allowed for precise measurement and adjustment, which greatly **enhanced my confidence** before and after surgery. Additionally, HipAlign facilitated precise placement of the acetabular cup based on preoperative planning, ensuring **optimal outcomes for the patient**.

- James B. Chen, MD

The author was a paid consultant of the company at the time that this case study was prepared.



CASE STUDY

www.orthalign.com | info@orthalign.com
153 Technology Drive, Suite 100
Irvine, CA 92618