



***Title***

**RADIOGRAPHIC EVALUATION OF A MONOBLOCK ACETABULAR COMPONENT:  
A MULTICENTER STUDY WITH 2- TO 5-YEAR RESULTS**

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***Purpose/Premise***

A radiographic evaluation with an average follow-up of 33 months was conducted to determine cup stability and osseointegration in primary THA patients implanted with a porous tantalum monoblock acetabular component.

***Material and Methods***

Serial radiographs were assessed for cup stability and signs of successful osseointegration in 414 of 542 patients (574 hips) who had undergone consecutive THAs performed by nine surgeons at seven hospitals, and were available for minimum two-year follow-up. Follow-up ranged from 24 months to 58 months. Of the 160 cases not available for analysis, 123 did not have minimum two-year data, 19 were deceased, eight were lost to follow-up, seven were revised early, and three were revised for sepsis.

***Outcomes***

Postoperative acetabular gaps were found in 100 zones in 80 hips (19%). Twenty-nine gaps were found in Zone I, 67 in Zone II, and four in Zone III. The most recent follow-up revealed that 84 (84%) of the zones with gaps had completely filled in. All 4mm and 5mm gaps had filled in. No progression was found in any postoperative gap. Also, there were no continuous radiolucencies at the periacetabular interface, no lysis, and no revisions for loosening.

***Conclusion/Recommendation***

The authors concluded that short-term results show that the use of this porous tantalum material may address some of the mechanical problems that can result in loss of fixation or revision arthroplasty. Further follow-up is necessary to determine whether the monoblock design and low modulus of elasticity of the material will reduce stress shielding and osteolysis.

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