

## عنوان مقاله:

Tantalum Versus Titanium Acetabular Cups in Primary Total Hip Arthroplasty: Current Concept and a Review of the Current Literature

## محل انتشار:

مجله استخوان و جراحی عمومی، دوره 10، شماره 5 (سال: 1401)

تعداد صفحات اصل مقاله: 10

## نویسندگان:

Rohit Rambani - *Department of Orthopaedics, Pilgrim Hospital, Boston, United Lincolnshire NHS trust, Lincolnshire, UK*

Mayur Nayak - *Department of Orthopaedics, Pilgrim Hospital, Boston, United Lincolnshire NHS trust, Lincolnshire, UK*

Miss Sheweidin Aziz - *University Hospitals Leicester NHS Trusts, Leicester Royal Infirmary, Infirmary Square, Leicester, LE1 5WW*

Krishan Almeida - *University Hospitals Leicester NHS Trusts, Leicester Royal Infirmary, Infirmary Square, Leicester, LE1 5WW*

## خلاصه مقاله:

Background: Primary total hip arthroplasty (THA) is becoming an increasingly popular and efficacious medical procedure. There have been a number of studies evaluating tantalum acetabular cups compared with the conventional titanium acetabular cups for use in total hip arthroplasties. We conducted a systematic review and summarize clinical studies comparing tantalum acetabular cups with the conventional titanium acetabular cups for use in primary total hip arthroplasties. Methods: A literature search was performed to find all relevant clinical studies until March ۲۰۲۰, which then underwent a further selection criteria. The inclusion criteria was set as follows: Reporting on human patients undergoing primary total hip arthroplasty; Direct comparison between tantalum acetabular cups with conventional titanium acetabular cups for use in primary total hip arthroplasty; Radiological evaluation (cup migration, osteointegration); Clinical (functional scores, need for subsequent revision, patient-reported outcomes; Post-operative complications; Reporting findings in the English Language. After a thorough search a total of six studies were included in the review. The primary outcome measures were clinical outcomes, implant migration, change in bone mineral density and rate of revision and infection. Results: Tantalum is superior to titanium with regards to fewer radiolucencies, ۱۰۰% survivorship at ۱۲ years postoperatively, improved long-term implant osteointegration and survivorship as well as decreasing osteolysis and mechanical loosening. There has been no significant difference in radioisometric analysis, bone mineral density or Harris Hip Score. Revision and infection rates were found to be significantly lower in tantalum group at ۱۰ years from pooled data of national joint registry (England and Wales), while it was found to be higher in the same at ۹ years from pooled data of Swedish and Australian registry although this is not statistically significant. Conclusion: The use of tantalum should be reserved for cases of high risk of failure or mechanical loosening, where failure of a contralateral joint occurred. The use of Tantalum carries lower risk of failure and infection. Further studies with longer follow-up would be useful in drawing further conclusions. Level of evidence:

**کلمات کلیدی:**

acetabular cup, Primary total hip arthroplasty, Tantalum, Titanium

**لینک ثابت مقاله در پایگاه سیویلیکا:**

<https://civilica.com/doc/1444537>

