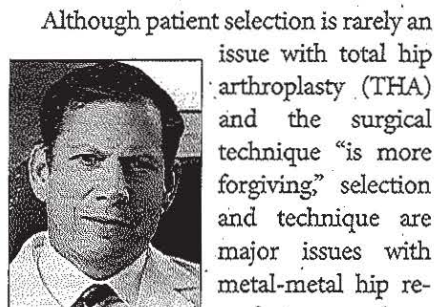


## Study finds hip resurfacing offers clinical benefits over total hip

Despite being proclaimed as “The operation of the century,” total hip arthroplasty is far from an ideal procedure. In fact, one study found that “in spite of a good hip score, only 43% of patients had all of their expectations completely fulfilled,” said **Robert L. Barrack, MD**, chief of service, Orthopedic Surgery, at Washington University School of Medicine in St. Louis, Mo.



Robert L. Barrack

Although patient selection is rarely an issue with total hip arthroplasty (THA) and the surgical technique “is more forgiving,” selection and technique are major issues with metal-metal hip resurfacing replacement arthroplasty (SRA), according to Barrack, who spoke at the Current Concepts in Joint Replacement 2010 Winter Meeting. The indications for SRA are also “narrower, the implant is more expensive, and the technique is more demanding and less forgiving.” To justify the use of SRA rather than THA, Barrack noted, there should be some objective clinical advantage.

Barrack was part of a recent multi-

center study that evaluated the current level of success and function of modern hip implants in returning high-demand patients to crucial activities. A modern implant was defined as an uncemented tapered titanium stem combined with an advanced bearing surface or a surface replacement.

### Data collection

All patients were younger than 60 years old with a high demand (a pre-morbid UCLA score greater than 6). A novel method of collecting data was also employed.

“It was completely unbiased and blinded,” said Barrack, consisting of a phone questionnaire to evaluate functional outcome among hip implants at a minimum of 1-year follow-up.

Patients were from one of five geographically diverse medical centers, each with expertise and experience in various types of advanced bearing surfaces, and had a cementless tapered titanium stem with ceramic-ceramic, metal-metal (standard and large head), metal on cross-linked polyethylene or a surface replacement.

Moreover, the study contracted the University of Wisconsin Survey Center

as an independent third-party surveyor because of its “long track record in administering health questionnaires for state and federal agencies,” Barrack said. The survey center “had no knowledge or interest in bearing surfaces, so it was truly unbiased.”

The study began with a consecutive series of 1,400 patients, of whom more than 60% completed the detailed survey, for a large sample size of more than 800 patients.

“All of these patients were very successful with modern implants in returning to employment – over 90% in every category of work, even for heavy and very heavy activity according to Department of Labor categories,” Barrack said. “There was no difference in implant type.”


### Perceptions

However, patients who underwent SRA were much less likely to perceive a limb length discrepancy, thigh pain or to limp in comparison to their THA counterparts. SRA patients were also more likely to run for exercise, run longer distances, and walk for longer distances as well.

Conversely, SRA patients “had a higher incidence of noises emanating

from the hip than other bearing surfaces, although this was transient and asymptomatic,” Barrack said.

In addition, bone density testing in a select group of SRA patients revealed substantially less stress shielding in the proximal zones at 6 months that continued to improve at 1 year. Therefore, “we now allow these patients full activity at 6 months,” Barrack said.

In conclusion, SRA demonstrated objective evidence “of a higher level of function and satisfaction compared to a similar THA cohort in limp, walking, running, perceived limb length equality, and thigh pain,” said Barrack, who advocates continued use and investigation of SRA in selected patients. – *by Bob Kronemyer* 

### Reference:

Barrack RL. The case for hip resurfacing: A big picture. Paper #8. Presented at the Current Concepts in Joint Replacement 2010 Winter Meeting, Dec. 8-11, Orlando, Fla.

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