## Hip Surgery: Revision Risk Higher if Age <75

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FROM THE WORLD CONGRESS ON OSTEOARTHRITIS

SAN DIEGO – People who are overweight or younger than 75 years when they have a total hip replacement face an increased risk for revision within 12

Major Finding: Patients had a higher revision risk after a total hip replacement if, at the time of their initial surgery, they had a BMI greater than 30 kg/m² (OR, 1.5); a cemented femur implant stem (OR, 1.4); a prior contralateral THR (OR, 1.4); previous orthopedic surgery (OR, 1.5); or an age younger than 75 years (OR, 1.5).

**Data Source:** Case-control study involving 1,672 patients.

**Disclosures:** The work was funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases. Dr. Katz said he has no relevant financial disclosures.

years; the risk is also increased if cement was used to hold the femoral stem of the implant in place, a study has shown.

Based on the findings, "when you talk to somebody who is in their mid- to late 70s about hip replacement, I think you can say revision is not particularly likely. For a younger person, they should recognize that we may have to go back again. At that point, they'll be older and have greater surgical risk," said the study's lead author, Dr. Jeffrey Katz, professor of medicine and orthopedic surgery at Harvard Medical School, Boston.

Using hospital records and Medicare claims data, Dr. Katz and his associates examined the presurgery characteristics of 836 people who had initial total hip replacements (THRs) from July 1995 to June 1996 and subsequent revisions sometime before 2009. The researchers then compared those patients to 836 matched controls who also had THRs in the mid-1990s but whose prosthetic hip had not been revised by the time their case had a revision.

Patients who had a prior contralateral hip replacement, who had a prior history of other orthopedic surgery, and who lived with others, instead of alone also had a higher revision risk. Odds ratios were modest but statistically significant, ranging from 1.3 to 1.7.

"Age and weight were not surprising. We thought we might see an effect of sex [since] there is a literature of males being at higher risk, but we did not. There is also literature on comorbidity being associated with revision, which we did not see," Dr. Katz said at the congress.

The cement finding (OR, 1.4) adds "to what is a rather conflicted literature on the durability of cemented versus uncemented designs," he said.

Cement techniques – including techniques for reaming out the femur and applying the pressure to the cement – have

improved since the mid-1990s, so "you have to be careful interpreting the [cement] data. They may not apply to the way cement is used now," Dr. Katz said.

The researchers also found a higher risk of revision if, at the time of their initial surgery, patients had a body mass index (BMI) greater than  $30 \text{ kg/m}^2$  (OR, 1.5) or were in the highest tertile for weight (OR, 1.7) or height (OR, 1.4).

Height, weight, and BMI are likely re-

lated to the biomechanical load on the implant, Dr. Katz noted. Regarding the greater risk below age 75 years (OR, 1.5), younger, more active patients may be more likely to have a faulty THR fixed. Increased risk for prior contralateral hip replacements (OR, 1.4) or orthopedic surgery (OR, 1.5) may indicate a willingness and ability to undergo surgery.

The added risk from living with others

(OR, 1.3) "may represent having the social support in place to deal with rehab and a temporary dependency," which facilitates elective surgery, he said at the congress, which was sponsored by the Osteoarthritis Research Society International.

The manufacturer of the implants, the initial surgeon's level of experience with the procedure, and the reasons for the revisions were not captured by the study.



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References: 1. Fife RS, Chase WF, Dore RK, et al. Cevimeline for the treatment of xerostomia in patients with Sjögren syndrome: a randomized trial. Arch Intern Med. 2002;162(11):1293-1300. 2. Petrone D, Condemi JJ, Fife R, Gluck O, Cohen S, Dalgin P. A double-blind, randomized, placebo-controlled study of cevimeline in Sjögren's syndrome patients with xerostomia and keratoconjunctivitis sicca. Arthritis Rheum. 2002;46(3):748-754. 3. EVOXAC [package insert]. Edison, NJ: Daiichi Sankyo, Inc.; November 2006.

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7/11

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