

Review study notes rare occurrence of anterior disc replacement revisions

Thirteen of 1,000 patients who underwent lumbar total disc replacement at a specialty spine center required a planned repeat anterior surgery at the same level.

ORLANDO, Fla. — Just over 1% of lumbar total disc replacements performed anteriorly by surgeons at a large U.S. spine practice required subsequent anterior surgery at the same level, according to an investigator who presented these findings at the 2010 Annual Meeting of the North American Spine Society, here.



Scott L. Blumenthal

Among 1,000 consecutive lumbar total disc replacement (TDR) cases reviewed as part of the study, "All the 're-ops' that patients underwent were without complication," Scott L. Blumenthal, MD, of the Texas Back Institute, said at the meeting.

He was among 11 surgeons at his specialty spine center, including some with limited TDR implantation experi-

ence, who performed the index surgeries and revisions in the 10-year period from March 2000 to February 2009 that investigators analyzed.

Records review

For the study, Blumenthal and colleagues reviewed records of the FDA investigational device exemption (IDE) trials and surgical logs of patients who underwent lumbar TDR at the center and received one of four possible disc prostheses used there. After eliminating patients whose re-operations were at a different level than the original TDR surgery level, they turned their attention to the corresponding adverse events logs.

Blumenthal mentioned that common causes for anterior re-operations of any kind following TDR included: anterior migration of implants that might impede vascularity; metal hypersensitivity; prosthesis malposition; or improper siz-

ing of the implant.

None of the 13 patients who needed a reoperation did so for a vascular injury, Blumenthal said. Ongoing pain was the reason most patients needed an anterior revision of a TDR, with device migration or loosening being the next most frequent indication for subsequent same-level surgery.

"The plan for the surgery needs to be taken into consideration both in terms of the structural integrity of the anterior column [and] the type of revision ..."

— SCOTT L. BLUMENTHAL, MD

Surgical planning useful

To help other spine surgeons keep the risk of complications to a minimum during TDR revision, Blumenthal recommended, "The plan for the surgery needs to be taken into consideration

both in terms of the structural integrity of the anterior column [and] the type of revision — whether it is a re-implantation or a fusion. But with careful planning and acute awareness of the potential problems, the anterior 're-ops' can be accomplished safely.

"Thus, conservative re-operation of disc replacement patients should not discourage the acceptance of this procedure, in our opinion," he said. — by Susan M. Rapp

Reference:

Blumenthal SL, Zigler JE, Guyer RD, et al. Anterior re-operation at the same level following lumbar total disc replacement. Paper #25. Presented at the 2010 Annual Meeting of the North American Spine Society, Oct. 5-9, 2010, Orlando, Fla.

Scott L. Blumenthal, MD, can be reached at Texas Back Institute, 6020 W. Parker Road, #200, Plano, TX 75093; 972-608-5000; e-mail: sblumenthal@texasback.com.

Disclosure: Blumenthal receives royalties from DePuy Spine, has stock options in Spinal Motion and Vertiflex, Annulex, Centinel Spine and Implant. He has speaking/teaching arrangements with DePuy and is on the scientific advisory board of Annulex and Vertiflex.