Commentary: NuNec™ Cervical Disc Arthroplasty Improves Quality of Life in Cervical Radiculopathy and Myelopathy: a 2-Year Follow-up

In this article, the authors present a case series with up to 2 yr of data on 43 patients treated using a polyether-ether-ketone artificial disc with an integrated cam-locking system and hydroxyapatite covering. The series includes patients with radiculopathy and myelopathy and reports visual analog scale (VAS) neck, VAS arm, neck disability index (NDI), and EuroQol 5 Dimension (EQ-5D) outcomes as well as radiographic outcomes including heterotopic ossification and range of motion. They were able to maintain an average 76% to 85% rate of follow-up for 2-yr clinical outcomes but only a 52% rate for radiographic outcomes. Average preoperative pain and disability scores were typically lower than previously reported trials despite at least 6 wk of conservative therapy prior to treating, and 10% had clinically significant heterotopic ossification before surgery indicating less stringent indications. Pain scores did not show a significant improvement at 2 yr, and although there were significant improvements in EQ5D, 36-Item Short Form Survey (SF-36) physical subscores, and NDI, the mean differences were only 0.12, 4.01, and 9.0, respectively. These improvements are lower than previously reported randomized clinical trials and may not indicate a meaningful clinical difference to change management decisions. In addition to the low follow-up data on radiographic outcomes, range of motion was reduced from 6.6° to 4° by 2 yr.

Controversy still exists regarding the use of disc arthroplasty in the cervical spine. Despite the advances in technology and numerous devices on the market including the ones presented, many surgeons have not adopted arthroplasty routinely in practice. The technology certainly has its merits and many studies provide low-to-moderate evidence supporting its use particularly in regard to reoperation. However, as with any procedure, depending on the indications, results can be less than ideal even if a difference is found. Discussions on cost have also been debated in the literature with many still favoring fusion, and it would be interesting for the authors to report the cost data of this device. Similar to the device presented by the authors, further high-quality evidence and more significant clinical changes are necessary before arthroplasty becomes a standard of practice, like arthrodesis.

Disclosure
The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

REFERENCES