all biomechanical parameters, which was statistically significant for mean peak torque and total work of maximal repetition. In terms of flexion biomechanics, the differences were less striking, but the footprint group did have a statistically significant advantage in terms of work in the last-third of the repetitive testing period. However, clinical outcomes were good or excellent for patients in both groups. The groups are obviously relatively small and the procedures were performed in a single centre after a change in practice, i.e. the Endobutton procedures were performed first before the standard technique was changed to a footprint reconstruction. However, overall the authors feel the evidence strong enough to recommend adopting a footprint technique as standard.

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Spine

X-ref *For other Roundups in this issue that cross-reference with Spine see: Research Roundups 3 & 5.*

No benefit of early versus late ambulation after incidental durotomy in lumbar spine surgery

Incidental durotomy is common during elective spine surgery, with the incidence quoted as reaching up to 17% in some series. In the short-term, incidental durotomy can lead to prolonged hospital stay, meningitis, and low pressure symptoms. In terms of treatment, most will aim to repair the dural tears, which is typically followed by a period of prolonged mandatory bed rest (BR) to reduce the hydrostatic pressure at the repair site. Despite these precautions, persist leaks continue to plague these patients and can be a long-term bothersome problem. A group from **Zurich (Switzerland)** investigated the incidence of revision surgery following persist cerebrospinal fluid (CSF) leak after surgical inadvertent durotomy repair.[1] In all, 60 patients who underwent lumbar spinal surgery and sustained an incidental durotomy repaired intraoperatively were randomized to receive early ambulation (EA) or 48 hours' BR postoperatively. There were no differences in age, sex, and preoperative Oswestry Disability Index. Two patients in each group required revision surgery due to persisting CSF leak, one in the BR group required antibiotic treatment for pneumonia, two were treated for postoperative lung oedema, and one sustained multiple embolic strokes. No medical complications were recorded in the EA group. Two patients in the BR group required surgery to treat wound complications. One patient in the EA group required surgery for a persistent wound leak without signs or symptoms of a CSF leak. The study concludes that there is limited benefit in prolonged BR after repair of an incidental durotomy, and that prolonged BR may be associated with significantly more medical complications. While there are clearly limitations to the design and sample size of this small randomized controlled trial, we applaud the authors for adding some high-quality evidence to this difficult debate.

Is fusion needed for patients with lumbar spinal stenosis and substantial low back pain?

There are conflicting reports which explore the impact of lumbar decompression with or without fusion on lower back pain and leg pain when treating lumbar stenosis. As a result, it remains unclear whether patients with substantial back pain may improve with decompression alone, and whether the amount of postoperative leg pain affects the ultimate outcome of decompression surgery. This study performed in **Matsueshi (Japan)** evaluates the effect of decompression alone for patients with severe lower back pain.[2] The team identified 222 patients who underwent spinal decompression without fusion, all of whom presented with a picture of low back pain and had completed one-year follow-up. The Numerical Rating Scale (NRS) and Japanese Orthopaedic Association Back Pain Evaluation Questionnaire (JOABPEQ) was completed by each patient both before surgery, and at three- and 12-months postoperatively. The overall mean NRS scores for lower back pain, leg pain, and numbness significantly improved at