**New disc technology and procedure being used at Williamson Medical**

**Center improves cervical spine surgery outcomes**

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The gold standard surgery we’ve been doing for decades to relieve pain from a herniated disc in the neck is the anterior cervical discectomy fusion, where the disc is removed and either a bone spacer or a plastic implant is placed in the disc space to restore disc height and remove pressure on the pinched nerves or spinal cord. A metal plate and screws are placed on the front of the neck to hold the implant in place. The result of this procedure is a segment that no longer moves, or is “fused”.

This procedure has worked wonders at alleviating pain from a herniated disc, but the procedure does limit some of the mobility in the cervical portion of the spine.

“What we have found over the years is that when you take away the spine’s ability to move at certain disc levels, it can put pressure on surrounding discs and lead to a condition known as adjacent segment disc degeneration, or increased wear on the surrounding discs,” said John Klekamp, M.D.

In short, that means a patient could possibly end up coming back for additional surgeries every 8 to 10 years.

This is the same surgery Peyton Manning had on his C 6-7 vertebrae and he went on to play professional football for the Denver Broncos, so you can see it is a very beneficial surgery. Klekamp said he does several of these types of procedures each week.

But now Williamson Medical Center is taking a successful procedure and making it even better by hopefully eliminating the need for follow up surgeries long-term.

“The new procedure is called a cervical disc arthroplasty and we are using an FDA-approved device called the Mobi-C, where artificial discs are placed between the vertebrae and are designed to allow the neck to maintain normal motion and potentially prevent the adjacent levels from degenerating, possibly preventing future surgeries,” he said.

**WHY NEED THIS SURGERY?**

The reason someone might need either of these surgeries is cervical stenosis, where the spinal cord is pinched or a cervical disc herniation, where the nerve root is pinched.

Common things that cause these conditions range from severe arthritis to a degenerative arthritis that eventually leads to disc bulges and or bone spur formation that then puts pressure on the cord or nerve root.

The fusion has historically been very successful. Surgeons have been doing the original cervical fusions for more than 50 years, with very good results, except for that approximate 10 percent chance of adjacent disc segmentation.

**NEW AND IMPROVED**

“With traditional fusions, we have an 80% to 85% chance of good to excellent results – short term,” he said. “It’s the long-term effects are what we are hoping to improve with the arthroplasty.”

But the arthroplasty does also have some short-term advantages over its fusion counterpart. Because motion is encouraged, patients are able to get out of their neck collar sooner after surgery, which allows them to get back to work sooner.

“Early movement is new for someone like me who has been doing the fusion surgery for so long,” Klekamp said. “It feels great as a surgeon to be able to say you can move your neck and we don’t have caution for three months. We want you moving your neck pretty quickly, so we don’t have lengthy lifting and driving restrictions.”

Once you get the implants in place and start the motion process, it heals pretty well, according to Klekamp. Patients can start physical therapy immediately with this new procedure. “With the fusion, we don’t want you to move at all for almost two to three months,” he said.

Another advantage with the disc arthroplasty surgery is it doesn’t require the use of additional bone like the fusion does.

“With a fusion, we either harvest bone from the patient’s hip or we use donor bone. Traditionally, this bone is placed into the disc space to fuse it. This means the patient may have a second surgical site that can have some associated pain and requires additional healing time. With the arthroplasty, there is no bone graft.”

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As patients come back for surgeries adjacent to prior fusion sites, Klekamp is able to replace the previous fusion with the arthroplasty.

Both surgeries take about two hours to perform and have the same post-operative recovery period, although the arthroplasty does incorporate movement more quickly than the fusion. Most patients have an overnight stay after surgery, but in many cases, it is considered an outpatient procedure where they will be kept here for observation after surgery, but if the patient is doing well, they are allowed to go home that night.

As this procedure has gained momentum over the last couple of years, insurers are seeing the value of it so most of them cover the procedure. “I am not aware of any pushback because the insurers see it as a one-time charge instead of a procedure that will need to be repeated in 10 years.”