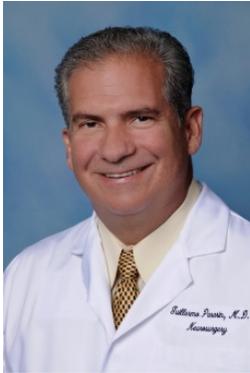


BECKER'S SPINE REVIEW

8/07/14 - [Link to story](#)



Ask Spine Surgeons is a weekly series of questions posed to spine surgeons around the country about clinical, business and policy issues affecting spine care. We invite all spine surgeon and specialist responses.

Question: What are some of the most positive trends in spine surgery today?

Guillermo Pasarin, MD, Neurosurgeon, Florida Medical Center, a campus of North

Shore, Ft. Lauderdale: In today's spine-related surgery, one of the latest and most exciting trends is the preservation of mobility. Previously, some cases in spine surgery required the stability of the spine to be performed by using instruments on the spine such as metallic

screws and hardware or so-called fusions. The word "fusion" would often elicit fear and anxiety in patients because of the notion that mobility would be limited and that a robotic patient would come out of the surgery.

In fact, the mobility of the spine is not significantly altered by a fusion — depending, of course, on how many levels are fused. What happens naturally is that the multiple joints and disc spaces above and below the fusion take on the work of the mobility since the fused segments cannot. Therefore, they are subject to an excessive amount of strain which then alters the dynamics of those motion segments causing an accelerated degenerative process to occur.

Imagine a chain with multiple links that can be made into a circle. Now imagine you were able to weld two of those links together. The links to the left and to the right of that welded segment can still make a circle, but it requires more work on their part as the welded segment cannot move. Similarly, in the spine, it is the adjacent level that suffers, leading to potentially more treatment and possibly even more surgery down the road.

The newer method of treatment is to preserve mobility with "dynamic instrumentation." The new armamentarium given to the spine surgeon today offers the ability to preserve motion, limiting the need for fusions and preserving adjacent levels so as to limit the alteration of adjacent segments. Artificial disc technology in the cervical spine is one of today's greatest additions to the armamentarium as it preserves mobility without fusing the relatively mobile cervical spine segments.

This procedure has been extensively studied in Europe and recently has been approved by the FDA for single-level cervical disc replacement. This arthroplasty has, to date, offered very good results in clinical trials and in my clinical practice. Currently, we are waiting for [additional] trials to be analyzed by the FDA for single-level cervical disc replacement.

However, the future looks bright and the preservation of cervical range of motion and mobility seems to be at the forefront for future technology for the rest of the spine. The notion of total joint replacement is not new in the orthopedic world of hips, shoulders and knees but within the spine it is a relatively new concept and one with expanding horizons.