Sacroiliac joint (SIJ) pain is a common cause of low-back pain, with a high prevalence within spine clinics1-4 and reportedly causing 15%-30% of low-back pain cases.5,6 Despite this high prevalence, SIJ pain likely remains underdiagnosed,7 and failure to correctly diagnose SIJ pain may result in unsuccessful surgical procedures on other areas of the body, which do not improve patient quality of life.8,9

For patients diagnosed with SIJ pain who have insignificant or nondurable responses to conservative measures, surgical treatment with arthrodesis of the SIJ can result in substantial pain relief and improvements in quality of life.10 A number of minimally invasive (MIS) techniques have emerged that significantly reduce the complexity and morbidity of the operation, and SIJ fusion can often be performed as an outpatient procedure.11,12

Some patients can experience recurrence of their symptoms after initially successful SIJ arthrodesis procedures, possibly due to pseudoarthrosis.13,14 The SIJ is a large, complex joint that transfers significant loads from the spine to the pelvis and lower extremities.15,16 Poor fixation and immobilization of the joint17 or inadequate joint preparation may result in implant loosening and failure to achieve bone arthrodesis,18 which can place patients at risk for symptom recurrence. In fact, SIJ fixation alone without joint preparation has been reported to have a revision rate as high as 30%.19

Anton et al.20 report on an MIS technique to prepare a relatively large surface area of the SIJ and introduce graft material to promote bone arthrodesis with high efficacy. A strength of the study is the high rate of radiographic follow-up demonstrating fusion, reflected by bridging bone between the ilium and sacrum in almost 95% of patients, with a concomitant low revision rate of 1.7%. Notably, the described technique did utilize bone morphogenetic protein, which likely enhanced fusion rates at the expense of added cost. Another potential concern are the clinical outcomes: although there was statistically significant improvement in pain and disability, the degree of improvement was rather modest, particularly given the high fusion rates. As the authors note, the smaller sample size of those with clinical outcome data may have been the cause of the limited improvement.

Overall, the technique presented by Anton et al.20 is novel and its compatibility with existing MIS SIJ fusion implant procedures is appealing. However, further investigations are warranted to determine whether the added time and cost associated with this technique are justified by improved clinical outcomes.

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References

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