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Commentary

Commentary on “Sacroiliac joint fusion in patients with Ehlers Danlos syndrome: A case series”



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Ehlers Danlos syndrome (EDS) is a genetic condition that affects connective tissue and can lead to a wide range of symptoms, including chronic pain and instability of the spine/related joints. The reviewed study by Beijk [1] retrospectively evaluated a continuous case series of patients who underwent Sacroiliac (SI) joint fusion for SI joint dysfunction in patients with EDS. This study is unique as there have been few studies on the orthopaedic management of patients with EDS and no studies specific on SI joint fusions for this patient population.

Patients with genetically or clinically diagnosed EDS who had undergone SI joint fusion at a single institution over a period of 7 years (January 2012– December 2018) with a mean follow up of 36 months were included in the study. The patients' pain and functional outcomes were evaluated with questionnaire (satisfaction performance scale- 0– 100 points), and clinical data, along with imaging details, were extracted from their files. The intraoperative fluoroscopy and postoperative CT scans were conducted to assess adequate positioning of the implants

In total, 16 patients were included in the study of which 14 underwent bilateral fusion of the SI joints and two underwent unilateral fusions, resulting in a total of 30 SI joint fusions. All of them were female, the median age was 46 years and the mean BMI was 23.3 kg/m². Before the surgery, 15 of the 16 patients received diagnostic lidocaine injections, which resulted in significant pain relief and justified the procedure.

The final outcomes were reported using the satisfaction performance scale. Seven patients were completely satisfied (100 points) with the mean score of the cohort being 78.1 points. Only 3 patients had a score of less than 50 and they all were noticed by the authors to have a low implant surface contact within the SI joint.

One of the patients who underwent a unilateral fusion received three implants, while the rest received two. Unfortunately, one patient did not experience any pain relief from the surgery. However, the rest of the patients reported at least some decrease in symptoms. This lack of relief in the one patient was attributed by the authors to insufficient implant surface area contact and was successfully resolved with a revision surgery, which involved the addition of a third implant.

The results of this case series suggest that sacroiliac joint fusion is appropriately considered for patients with EDS who are suffering from sacroiliac joint pain. A significantly long follow up period (mean = 36

months) with a rare disorder is a definite strength of this study. The authors found that the procedure was effective in reducing pain and improving function, with a high level of patient satisfaction calculated by a validated clinical questionnaire. Additionally, they also found that the procedure had a higher chance of symptom relief with increased surface area of fusion at the SI joint.

It is important to note that there are limitations to this study. This is a retrospective case series without a control group and further research, including larger, randomized controlled trials, is needed to fully understand the efficacy and safety of sacroiliac joint fusion in patients with EDS. The details of the diagnostic algorithm were not provided, more specifically the threshold percentage of relief following lidocaine injections. There was no mention of the fusion rates across the SI joint in the study which could have been evaluated using CT scans at a later visit. Furthermore, two implants were used in most patients hence applicability to SI joint fusions in other countries like the United States of America where three implants are commonly used, is questionable.

In conclusion, on reviewing this study, SI joint fusion appears to be a viable and minimally invasive option for patients with Ehlers Danlos Syndrome who are suffering from sacroiliac joint pain due to their hypermobility across these joints. The majority of subjects in this study underwent bilateral fusions which is not surprising given the nature of their disease. Further research is needed to fully understand the benefits and risks of this procedure in this population, but this study provides valuable feedback regarding the need for a stable construct and avoiding the risk of poor clinical outcomes by using three implants and increasing the implant contact surface area.

Declarations of competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Reference

- [1] Beijk I, Knoef R, van Vugt A, Verra W, Nellensteijn J. Sacroiliac joint fusion in patients with Ehlers Danlos Syndrome: a case series. *N Am Spine Soc J (NASSJ)* 1 Dec 2021;8:100082.

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