REAL-WORLD OUTCOMES FOLLOWING POSTERIOR AND LATERAL APPROACH SACROILIAC JOINT FUSION PERFORMED BY INTERVENTIONAL PAIN PHYSICIANS

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BACKGROUND

Minimally invasive sacroiliac joint fusion is increasingly used for chronic SI joint-mediated pain refractory to conservative care. Comparative real-world outcomes remain limited, particularly for procedures performed by interventional pain physicians.

METHODS

Retrospective review of 4 physician's outcomes from a single-center review after Institutional Review Board approval

80 patients treated from January 2020 through May 2025

- 33 posterior interpositional procedures
- 47 lateral transiliac procedures

Outcomes included one-month pain relief, visual analog scale score, blood loss, complications, contralateral surgery, and revision for recurrent SI joint pain

Continuous and categorical comparisons used appropriate parametric or nonparametric tests. Statistical significance: $p < 0.05$

INTERPRETATION

Both approaches produced favorable short-term pain outcomes with low perioperative complication rates. ***The observed difference in revision patterns warrants prospective study with longer and balanced follow-up.***

CONCLUSION

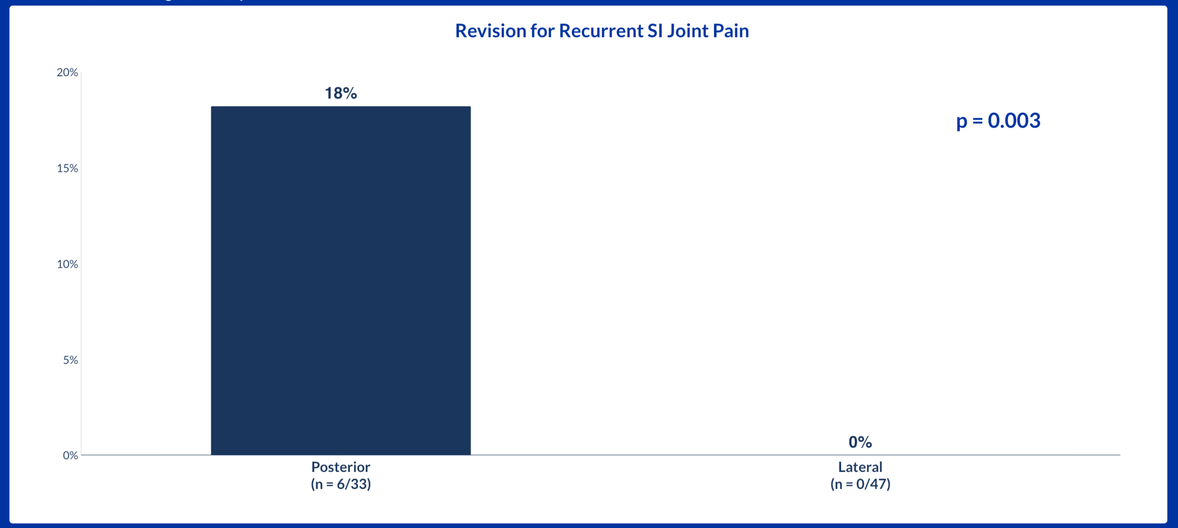
1. Both approaches provided meaningful short-term pain relief.
2. All 6 revisions for loss of efficacy occurred after posterior fusion and were converted to lateral transiliac fusion.
3. Prospective comparison is needed.

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Revision occurred after 18.2% of posterior procedures versus 0% of lateral procedures

All revisions followed loss of surgical efficacy



SHORT-TERM PAIN OUTCOMES

POSTERIOR

80%

Median one-month pain relief
IQR 65%-100%

1-MONTH VAS
2.0 (IQR 2.0-4.0)

LATERAL

90%

Median one-month pain relief
IQR 80%-100%

1-MONTH VAS
3.0 (IQR 1.5-6.5)

Overall mean VAS improved from 6.6 preoperatively to 3.4 at one month

SUPPORTING RESULTS

BASELINE

	Posterior	Lateral
Age, mean	59.8	56.6
Female	66%	66%
BMI, median	30.0	32.3
Pre-op VAS	6.4	6.7

PROCEDURAL DEVICES

Posterior:
- PainTEQ LINQ 69.7%
- CornerLoc GRAFTS 24.2%
- Nevro1 6.1%

Lateral:
- SI-BONE iFuse TORQ 93.6%
- Alevio SI-Cure 6.4%

SAFETY

Intraoperative complications:
- Posterior: 0/31
  - Two posterior grafts were incidentally identified within the ilium; neither patient elected
- Lateral 1/44 lateral (superficial hematoma).
- One lateral patient developed a superficial surgical-site infection.

OTHER OUTCOMES

	Posterior	Lateral
EBL 5 mL	24/25 (96%)	39/40 (97.5%)
Contralateral surgery	1/33 (3.0%)	3/47 (6.4%)
Revision	6/33 (18.2%)	0/47 (0%)
Revision p value	0.003	
Time to revision	16.8 +/- 12.2 mo	0 +/- 0 mo

KEY LIMITATIONS

1. Retrospective, single-center design
2. Small, nonrandomized groups
3. Variable follow-up; lateral 7-31 months
4. No consistent long-term pain or functional outcomes
5. Multiple device platforms

DISCLOSURES

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