

MetroHealth Medical Center

RESEARCH DAY 2023

Abstract Submission Form

Poster Title: Incidence of Sacroiliac Joint Pain Following Lumbar Fractures: A Retrospective-Cohort Study

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Category: PHERI/HCR

Background: Sacroiliac joint (SIJ) pain commonly affects patients with low back pain and can arise from traumatic and degenerative causes. However, the incidence of SIJ pain following lumbar fractures is not well understood.

Methods: TriNetX, a national network of de-identified patient records, was retrospectively queried. The lumbar fracture cohort included 239,199 adults, while the no lumbar fracture group included 6,975,046 adults. Following a propensity-score match (PSM) based on demographics and risk factors for SIJ, there were 239,197 patients in each cohort. The incidence of SIJ pain and clinical outcomes were analyzed from 1 day to 1 year following the index event. Moreover, the location and type of single-level lumbar fractures were reported. The incidence of SIJ pain for single-level fractures was compared using a chi-square goodness-of-fit.

Results: The lumbar fracture cohort was more likely to develop SIJ pain at 3 months (OR: 5.3, 95% CI: 4.8 – 5.9), 6 months (OR: 4.4, 95% CI: 4.1 – 4.8), and 1 year (OR: 3.9, 95% CI: 3.6 – 4.2) post-fracture. Among single-level lumbar fractures, the incidence of SIJ pain at 1 month ($p=0.005$), 6 months ($p=0.010$), and 1 year ($p=0.003$) varied significantly, with the highest incidence in the L5 cohort.

Conclusions: Our findings suggest that lumbar fractures are a risk factor for developing SIJ pain. Moreover, the incidence of SIJ pain is greater following an L5 fracture than an L1 fracture. Further investigation is warranted to determine how the type and treatment of lumbar fractures affects the incidence of SIJ pain.