

Prevalence of SIJ Pathology: A retrospective observational study

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Declaration

- The authors declare no conflict of interest



Introduction

Lower back pain (LBP) is the leading cause of disability in the UK & worldwide⁽¹⁾

Sacroiliac Joint (SIJ) pathologies are said to be underdiagnosed, underappreciated and undertreated⁽²⁾

Existing consensus on literature suggest prevalence at 15-30%⁽³⁾; a single centre study in 2018 found a prevalence of 40%⁽⁴⁾



Aim

- Limited published evidence to support true prevalence of SIJ pathology
- This study aims to produce literature evidence for prevalence of SIJ pathology



Method

Medical records from a spinal surgeon clinic at Cardiff, UK across 8 years (2014 – 2022)

Patients that presented with lower back / buttock pain identified (n=969)
(All had FABER and Thrust tests as part of their examination)

Patients clinically suspected with potential SIJ pathology had MRI of SI joint (n=265)

MRI findings, medical history, risk factors and examination findings were noted



MRI Findings

Normal SIJ
n= 234
[88.3%]



Fig 1. Normal SIJ, Coronal T1⁽⁵⁾

Inflammatory SIJ
n= 12
[4.5%]

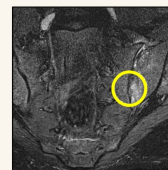


Fig 2. Bone marrow oedema, Oblique Coronal TIRM⁽⁶⁾

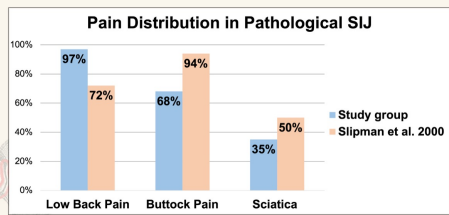
Degenerative SIJ
n= 19
[7.2%]



Fig 3. Anterior marginal osteophytosis, Axial image⁽⁷⁾



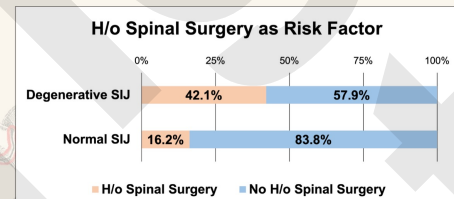
Presenting Symptoms



- Distribution of pain in patients with pathological SIJ are known to vary extensively among patients⁽⁹⁾

Risk Factors Identified

- Risk factors analysed: leg length discrepancy, age, history of spine surgery, trauma and systemic inflammatory disease



- History of spine surgery shows a statistically significant correlation with degenerative SIJ ($p=0.0049$)

Pain Provocation Tests

- FABER and Thrust tests were performed on every patient with back pain
- In this study, these tests yield low sensitivity and specificity
- When used in combination, specificity is 90.2%

	Sensitivity	Specificity
FABER	19.4%	22.6%
Thrust	85.5%	88.0%
Combination of both	16.1%	90.2%

What does this mean?

- 11.7% of patients with SIJ scanned had pathological SIJ
- From the whole cohort of 969 patients with low back issues, there are only 31 pathological SIJ
- Prevalence= 3.2%, much lower than published literature
- Pain provocation tests used in combination yields high specificity, useful as a rule out test^(10,11)

Conclusion

- Limitation: MRI findings does not prove it is the cause of symptoms
- Next step: Analyse if treatment to other areas resolve symptoms
- Low prevalence rate from this study might suggest a lower index of suspicion
- Additional published evidence is required for meta-analysis to determine more accurate prevalence of SIJ pathology

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Thank you

