Value of Examination Under Fluoroscopy for the Assessment of Sacroiliac Joint Dysfunction

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Introduction

SI joint pain accounts for approximately 15-30% of patients who have presented with axial lower back pain. In addition to history, there are several types of clinical examinations for the diagnosis of SI joint pain; however the accuracy of clinical examination for SI joint dysfunction is quite limited.

Materials and methods (NA for case report)

Prospective comparison IRB approved study addressed the efficacy of examination under fluoroscopy for the assessment of SI dysfunction to the commonly practiced five physical exam test. A total of 22 male VA patients with unilateral low back pain of more than 2 months duration were randomly chosen. Each patient was subjected to Gapping test, Fabere test and Gaenslen’s test. Second a blinded physician placed each patient prone under fluoroscopic guidance, asking the patient to point to the most painful area. This area was then marked with a radio-opaque object (penny in our case). A site within 1 cm of the SI joint was considered a positive test. Next a diagnostic injection with 1cc 2% lidocaine was done with a positive result as more than 2 hours of greater than 75% reduction in pain. In 2-3 days this was followed with a therapeutic injection under fluoroscopy with 1 cc 0.5% bupivacaine and 40mg methylprednisolone. Each patient was then reassessed after 6 weeks.

Results/Case report

Sensitivity and specificity of the fluoroscopic examination were 0.82 and 0.80 respectively; PPV and NPV where 0.93 and 0.57 respectively. Area under ROC curve was 0.812 which is considered a "good" test.

Discussion

SI joint pain has been considered a primary source of low back pain yet diagnostic approaches remain quite limited and evidence supporting SI as a pain generator is largely empirical, being derived from successful treatments of patients with SI symptoms. In our study the fluoroscopic penny test, combined with physical exam maneuvers may help the diagnostician obtain an accurate diagnosis by helping to rule out alternative diagnosis. In conclusion the fluoroscopic penny test is a valuable addition to the interventional pain physician’s armament for diagnosis of SI pain. Based on our studies the penny test is the most sensitive and specific maneuver for SI joint dysfunction.

References (Maximum 5)

5. Mazza DB. Diagnosing SI joint disorders—provocative testing. YouTube® video 2011;6:50. youtube.com/watch?v=ukDJ_OxOuBY

Disclosures

I declare that there are no conflicts of interest or support that may cause bias in my presentation.