

Prevalence estimate of extra-articular sacroiliac joint pain in chronic low back pain subjects using dual diagnostic lateral sensory branch blocks

Introduction

The prevalence of sacroiliac joint pain (SIJP) in chronic low back pain (CLBP) patients has been reported to be between 13-30%. These estimates have been calculated using clinical features of the CLBP and single and/or dual intra-articular diagnostic injection of short and long-acting anesthetic.

The prevalence of extra-articular SIJP (EASIJIP) has not been established. However, as a clinical entity there is reason to suspect it does exist. Multi-site, multi-depth injections to block the lateral sensory branches have been shown to effectively block extra-articular SIJ structures and not intra-articular SIJP. By employing dual lateral sensory branch blocks, one may be able to estimate the prevalence of EASIJIP in CLBP with clinical features compatible with SIJP. Such data would be meaningful as a viable treatment intervention would be radiofrequency ablation of the blocked lateral sensory branches. Furthermore, validation of these blocks would be valuable if they could be shown to reliably predict successful neurotomy outcomes.

The current study was undertaken to provide preliminary prevalence estimates of EA SIJP in CLBP patients and to compare this estimate to that of SIJP diagnosed via intra-articular blocks.

Methods

CLBP patients presenting with low back pain, in the absence of history of any lumbosacral surgery, caudal to the L5 segment will undergo intra-articular injection of 2% xylocaine (contrast confirmation of no extravasation). If the subject's low back pain is reduced $< 75\%$, the subject will then undergo dual, comparative diagnostic lateral sensory branch blocks. These diagnostic blocks will be performed according to Dreyfuss et al (Pain Med 2009). Post injection reduction in low back pain $\geq 75\%$ will indicate a positive blockade. Patients reporting a reduction in low back pain 30 minutes after the initial block with 2% xylocaine, will undergo a second block with 0.75% marcaine. Low back pain scores will be assessed through eight hours post blockade.

The proportion of patients, out of the entire cohort of CLBP, reporting $\geq 75\%$ pain relief after each injection will be calculated, and reported with 95% confidence interval, as the prevalence of EA SIJP. The proportion of subjects reporting $\geq 75\%$ relief after the first injection but $< 75\%$ relief after the second, will be calculated as the false-positive rate of single diagnostic blocks.

The proportion of CLBP patients diagnosed with EASIJIP will be compared to published historical proportions of intra-articular SIJP.