Commentary

A Narrative Review of Intra-Articular Corticosteroid Injections for Low Back Pain: Nikolai Bogduk

It is with great respect that I comment on the narrative review of intra-articular corticosteroids (IAS) for low back pain (LBP) by Dr. Bogduk. Dr. Bogduk is a purist, which has advantages and disadvantages. It is advantageous when conducting research, performing systematic reviews, lecturing, writing guidelines, and treating most patients. It is a disadvantage, however, when treating those patients who do not conform to the norm or who fail to respond to therapies that have been researched well and proven effective. Based on the published evidence, expert opinion and practice, and personal experience, I believe there is a role for IAS injections for lumbar facet joint (zygapophysial) pain in a limited number of well-selected patients. The subject has been reviewed elsewhere recently [1].

Evidence-Based Medicine

Physicians must practice evidence-based medicine (EBM), defined by Sacket et al. as the integration of the best available research evidence with clinical expertise [2]. Dr. Bogduk has reviewed the best available evidence regarding IAS for proven lumbar facet pain, and he feels there is no role for IAS. I am not as convinced that the literature is so convincing, nor are others [1]. Clinical expertise is the ability to use clinical skills and past experience to identify each patient’s unique diagnosis and plan the best treatment [2]. EBM leaves room for using treatments for which there may not be proof of efficacy provided there is no proof of lack of efficacy or significant risk of harm. Many times, said treatment just has not been adequately or properly studied. I believe this to be the case with IAS for facet pain. As is often said, “the absence of proof is not the proof of absence” [3]. So when definitive data are lacking, a physician needs to rely on experience and expert opinion.

Dr. Bogduk discusses the costs of performing a procedure that may not be useful. Cost cannot be the driving force behind medical decision making or treatment. EBM is not meant to be an effective cost containment tool and may in fact increase the cost of care [2].

While it is true that consensus is not the same as correctness, consensus often defines the standard of care. Therefore, I thought it would be interesting to know the current practices of spinal injection specialists with regard to IAS. I conducted an informal e-mail poll of expert spinal injection specialists. All have active practices and most have written and lectured about spinal injections.

All but one of them uses IAS for many if not most of their patients with facet joint pain, and some use IAS in virtually every patient. This should not imply IAS has been proven to work, just that it appears to many critical and expert spine injection specialists that they appear to work. Some feel it makes the diagnosis of facet joint pain more secure when there is both a good response to medial branch blocks (MBB) plus a steroid phase. The consensus was that many patients receive three to six months or more of relief, and they can avoid radiofrequency neurotomy (RFN). For those patients who get three or more months of relief, they would repeat IAS up to three or four times per year.

Diagnosis of Facet Pain

I certainly agree that IAS injections should not be used for nonspecific LBP. I feel they should be reserved for patients with proven facet joint pain who, for any of several reasons including patient choice, are not candidates for RFN.

That said, I feel the diagnostic criteria used by Dr. Bogduk may be too rigorous. The diagnosis of facet joint pain is presumably established when the patient gets meaningful relief after each of two MBB. Dr. Bogduk opines that there must be 100% relief of LBP after MBB to establish the diagnosis of facet joint pain, and that accepting lesser degrees of relief leads to an incorrect diagnosis. I cannot agree. While these rigorous standards are appropriate in the research setting, it is an unrealistic standard to use clinically. It has been established that 50% reduction of chronic pain can make a substantial improvement in a person’s quality of life [4]. The 50% standard is a more ap-
appropriate goal of treatment. It does not appear reasonable to withhold a treatment that provides 50% relief. Patients may have more than one source of LBP, only one of which may be a facet joint, in which case 100% relief after IAS injection should not be expected nor can it be attained. In some patients, the pain from the injections itself might obscure some of the relief of the MBB.

Treatment of Facet Joint Pain

Radiofrequency neurotomy is considered the treatment of choice for facet joint pain. The mean duration of relief for lumbar RFN appears to be about 10–12 months, with a range of 4–19 months, which reflects a great variability of response in clinical circumstances [5]. How does this compare with the duration of relief, if any, from IAS?

Dr. Bogduk found only one study that addressed the outcome of IAS in patients with lumbar facet pain, and reviews this 1991 study in some detail [6]. Carette et al. looked at outcomes of IAS for facet pain at one, three, and six months, but not beyond. At the six month follow-up, the authors described “very marked” improvement in pain and Sickness Impact Profile in the IAS group, but deterioration in the saline group. They were not able to explain this outcome, and offered several possible explanations why the improvement was not likely to be due to IAS. Instead, they chose to attribute the clinical and statistically significant difference to “the more frequent use of poorly defined cointerventions” in the IAS group. It almost seemed that they were looking to explain why this unexpected good outcome could not be valid, and dismissed the findings.

In some instances RFN may not be feasible. For example, the physician may not have sufficient training or access to the necessary equipment to perform RFN, or the patient may have prior intertransverse fusion with pedicle screws, which makes MBB and RFN technically very difficult. In these instances and others, IAS that provided three or more months of relief is a very reasonable treatment when it works. Greater than 50% relief for several months can make a significant improvement in quality of life, and because low doses of corticosteroids are used, it is probably safe to repeat the IAS several times per year.

Conclusion

Intra-articular corticosteroids should not be used for nonspecific LBP. The results of one study that addresses the effectiveness of IAS for facet joint pain are subject to different interpretations. EBM makes room for treatments based on clinical expertise and expert opinion when the science is lacking. Based on published research and expert opinion, IAS can play a role in a limited number of patients with proven facet joint pain. It is not reasonable to discard IAS facet joint injections because relief may only last three to six months and may be less than 100%. IAS may present a reasonable alternative when RFN is not practical or available, may provide relief for many months, and has very low risk.

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References