RHEUMATOLOGY

Editorial

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Should Rheumatology be a core discipline of a chronic pain multi-disciplinary team?

Rheumatology and chronic pain

Chronic back pain is a common and debilitating condition that will affect up to 80% of the population at some point in their life time, reflecting a high socioeconomic impact [1]. The aetiology of chronic back pain is still not fully understood, but three key areas of interest are identified: disc herniation, degenerative disease and local inflammatory disease. Epidural glucocorticoid injections are a common non-surgical intervention for axial chronic back pain [2]. The use of epidural glucocorticoid injections has significantly increased over the last 20 years, matched to a growing evidence base for their use [3, 4]. Chronic back pain remains a difficult clinical presentation to treat, with a varied response to pharmacological therapy, epidural glucocorticoid injections and surgical intervention. Non-specific chronic back pain has the worst response rate to therapy. Therefore, it is important that we look to identify those patient groups that are more likely to respond to an invasive intervention early. The question that remains is, with the current evidence regarding epidural glucocorticoid injections and the various techniques, would the addition of a rheumatologist help a chronic pain multi-disciplinary team (MDT) to identify those patients more likely to respond to epidural glucocorticoid injections?

Chronic lower back pain management requires the input of a wide variety of professionals. It is generally accepted that the MDT should include an anaesthetist, physiotherapist, occupational therapist and psychologist/psychiatrist [5]. Yet other specialists can provide additional and valuable expertise. Colleagues in Canada have provided an analysis of the structure of the chronic pain MDT, identifying the undervalued benefit of rheumatology expertise [5]. There is no current guidance on the core members of the chronic pain MDT.

A definitive diagnosis in many patients with chronic lower back pain is difficult to obtain. The additional expertise of a rheumatologist may help to identify the underlying aetiology and rule out non-axial conditions that risk being grouped with discogenic pain syndromes. Epidural glucocorticoid administration is unlikely to be beneficial to these non-axial chronic lower back pain patients [3], but an accurate and early identification of discogenic and non-discogenic chronic back pain remains difficult [6]. It is likely that undiagnosed non-discogenic chronic back pain leads to an overestimate of the number of non-responsive patients to epidural glucocorticoid injections. Alternative methods, such as facet joint blocks, are available for non-discogenic back pain.

The UK's NICE guidelines suggest epidural glucocorticoid injections for non-surgical management of chronic lower back pain [2]. There are three common methods for the administration of an epidural glucocorticoid: transforaminal, interlaminar and caudal. Evidence suggests that there is improved pain control with epidural steroid injection when compared with pharmacological therapy [7]. However, this is disputed in a Cochrane Systematic Review that failed to demonstrate a significant improvement in pain relief with epidural glucocorticoid injections [8].

Glucocorticoid epidurals have been shown to be a cost-effective method of non-surgical management of chronic lower back pain. It is estimated to cost approximately £8000–27 000 per quality-adjusted life year [9].

There are a proportion of patients with discogenic back pain that respond to epidural glucocorticoid injections. The current systematic reviews of the literature do not identify a statistically significant difference between transforaminal or caudal epidural glucocorticoid injections [8]. Both types of epidural glucocorticoid injections have been shown to have improvement in pain control of patients with chronic lower back pain in recent meta-analysis [3]. Caudal epidural glucocorticoid injections are superior in that they are simpler, as the site of injection is constant. There is an association with more significant complications with transforaminal epidural glucocorticoid injections, which involve administration of the glucocorticoid close to the vertebral artery, carrying an increased risk of embolization. Therefore, one would conclude that we have a definitive treatment that is safe.

Currently, systematic reviews of the literature have failed to identify whether one method of glucocorticoid administration is better than another [8]. However, more recent randomised control trials have shown that transforaminal administration of the glucocorticoid may provide improved pain control at 6 months [10]. The data from these trials were specifically looking at radicular type pain, commonly from entrapment of a nerve root and/or herniation of the lumbar disc. The implication of this data is that the use of epidural glucocorticoid injection is oversimplified. Instead, further subgrouping of conditions should be undertaken, where possible, allowing for selection of the most appropriate epidural glucocorticoid injection method [6, 8]. This can only be done through further diagnostics and rheumatological input.

Transforaminal epidural glucocorticoid injections can be performed at the specific level of radiological pathology or

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at a site that clinically corresponds to the patient's symptoms. However, this degree of accuracy is dependent on image guidance using fluoroscopy, and often requires patient referral to a specialist provider. This complexity comes with a high associated cost and impact on resourcing [3, 10].

Non-discogenic pain conditions can often present as a primary care referral to a rheumatologist. A sacroilitis secondary to a spondyloarthropathy can be a relatively common presentation. In those patients administration of an intraarticular glucocorticoid injection is used to relieve the inflammation, just as an epidural glucocorticoid injection does with discogenic back pain. This highlights that the alternative glucocorticoid injections are available with these patients, but again their diagnosis can be difficult. The introduction of a rheumatologist and their expertise in inflammatory conditions would further reduce the need for unnecessary trials of epidural glucocorticoid injections.

It remains vitally important that an accurate diagnosis is sought prior to implementation of a management plan. However, the aetiology of the chronic lower back pain remains a perplexing conundrum in many cases. Broadening the involvement of specialties in the MDT, in particular involving rheumatologists, will assist in making the often-difficult diagnosis. Non-discogenic chronic back pain may benefit from alternative approaches, thereby saving the patient from a non-beneficial invasive intervention. Which method of administration of epidural glucocorticoid injections is more appropriate for discogenic back pain remains to be answered. There is increasing evidence to suggest transforaminal administration may provide improved long-term pain relief in radicular pain.

Further research is required to determine whether a subgroup of chronic back pain suffers who are more likely to respond to epidural glucocorticoid injections are easily identifiable at initial assessment with the addition of a rheumatologist.

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References

1 Devon R. Epdemiology and risk factors for spine pain. Neurol Clin 2007;25:353–71.

2 National Institute of Health and Care Excellence (NICE). Osteoarthritis: the care and management of osteoarthritis in adults. Clinical Guideline 59. London: NICE, 2008.

3 Liu J, Zhou H, Lu L, Li X *et al*. The effectiveness of transforaminal versus caudal routes for epidural steroid injections in managing lumbosacral radicular pain. Medicine 2016;95:E3373.

4 Wilkinson I, Cohen SP. Epidural steroids for spinal pain and radiculopathy: a narrative, evidence-based review. Curr Opin Anaesthesiol 2013;26:562–72.

5 Kudrina I, Shir Y, Fitzcharles MA. Multidisciplinary treatment for rheumatic pain. Best Pract Res Clin Rheumatol 2015;29:156–63.

6 Kulcu DG, Naderi S. Differential diagnosis of intraspinal and extraspinal non-discogenic sciatica. J Clin Neurosci 2008;15:1246–52.

7 Cohen SP *et al*. Epidural steroid injections compared with gabapentin for lumbosacral radicular pain: multicenter randomized double blind comparative efficacy study. BMJ 2015;350:h1748.

8 Staal JB, de Bie R, de Vet HCW, Hildebrandt J, Nelemans P. Injection therapy for subacute and chronic low-back pain. Cochrane Database Sys Rev 2008;(3):CD001824.

9 Whynes D, McCahon RA, Ravenscroft A, Hardman J. Cost effectiveness of epidural steroid injections to manage chronic lower back pain. BMC Anaesthesiol 2012;12:26.

10 Manchikanti L, Buenaventura RM, Manchikanti KN *et al*. Effectiveness of therapeutic lumbar transforaminal epidural steroid injections in managing lumbar spinal pain. Pain Physician 2012;15:E199–245.