**Short Communication**
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# Controlling of Axial Back Pain: An Overview

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## Short Communication

The current issue is a controversial topic spine pain from Intervertebral Disc Diseases (IDD) and its management. Although this issue does not address physiotherapeutic management or common surgical interventions for IDD, it focuses more on what pertains to the discipline and practice of Pain Medicine [1]. The first article describes potential pathophysiologic mechanisms of IDD. This is an important contribution because it will help us understand the potential mechanisms by which the interventional procedures, later discussed in this issue, may help patients affected with this problem. Two subsequent articles address discography and its role as a diagnostic modality both as a protest for surgery and spine procedures. The rest of the articles describe the available minimally invasive thermal and decompressive disc techniques, focusing more on intradiscal electrotherapy (IDET) and nucleoplasty. Unfortunately, none of the articles give us a clear answer to the pathophysiologic mechanisms of axial discogenic back pain and the appropriate way to manage it. The level of evidence is weak and controversial at best. And while there are encouraging signs on perhaps one front (nucleoplasty), we are still in search of a unified prototype that encompasses a systematic approach of assessing, diagnosing, and treating axial discogenic back pain.

The scope of the problem is large as the statistics show. It is believed that 80% of the general population will likely experience low back pain in their lifetime, and contrary to previous common beliefs, chronic low back pain (CLBP) persists in a category of patients. Although it is not clear what the prevalence of discogenic pain is, some studies suggest that it is an important source of CLBP in one-third of patients [2].

### The source

The patient with axial back pain has four possible tissue based sources of spine pain: the spinal musculature, what is referred to classically as muscle strain; the posterior elements, including the zygoapophyseal joints (also known as the facet joint); the end plates, notoriously difficult to evaluate with current imaging techniques; and the intervertebral disc. Clinical history, pain patterns, and physical examination are somewhat helpful in distinguishing among this etiologist. However, an individual suffering from axial back pain may have more than one of these elements involved in the generation of pain. Consequently, the use of both diagnostic techniques as well as therapeutic treatments for a single entity may not be successful in identifying the pain source or alleviating pain.

### The degenerative cascade

Low back pain is often associated with the degenerative cascade of lumbar spine disease. Kirkcaldy-Willis described these changes in the 1980s, which have subsequently been confirmed by both in vitro and in vivo observations. There is interplay between the three joints of the spine, the two zygoapophyseal joints, and the vertebral-disc joint, which, depending on the particular environmental stressors to the spine as well as genetic and anatomic predisposition, can lead to pathologic changes.

These pathologic changes start a chronic disease process with an insult to one element, which then can lead to multilevel spondylosis. Various stages in this process can be painful. Examples of pathologic changes that are thought to lead to pain in the axial spine include end plate fractures, disc degeneration with in-growth of nerves beyond the outer third of the annulus as well as expression of abnormal inflammatory mediators, and synovitis of the zygoapophyseal joint (Z-joint).

### The problem

Research into the diagnosis of axial back pain is faced with many challenges which obviate a simplistic research design. Let us first review the challenge in the diagnosis. By definition, pain is a subjective sensation; this subjective sensation is altered and complicated by psychological overlay, as addressed by Hart's article in this issue of the Journal. As noted above, clinical history and physical examination techniques, and current imaging studies do not clearly delineate the source of axial spine pain. Indeed, the pathophysiology of spine degeneration suggests to us that, in the process of the degenerative cascade, an individual with axial spine pain may have more than one tissue element involved in his or her pain.

## References

[1] Chang, Sew Kee, Tiak Lim Wang, and MingTeh. "Extraskeletal Ewing's sarcoma presenting with pulmonary embolism." Aus Radiology 40(1996):175-178.

[2] Masoud, Salim Rashid. "Fatal tumour pulmonary embolism." *Resp Case Rep* 5(2017):209-301.

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