On the nature of neck pain, discography and cervical zygapophysial joint blocks


Bogduk N, Aprill C.

FROM ABSTRACT:

To determine the prevalence of disc pain and zygapophysial joint pain occurring simultaneously in the same segment of the neck, 56 patients with post-traumatic neck pain underwent both provocation discography and cervical zygapophysial joint blocks.

Both a symptomatic disc and a symptomatic zygapophysial joint were identified in the same segment in 41% of the patients.

Discs alone were symptomatic in only 20% of the sample.

Zygapophysial joints were symptomatic but discs were asymptomatic in 23%.

Only 17% of the patients had neither a symptomatic disc nor a symptomatic zygapophysial joint at the segments studied.

These observations indicate that the investigation of neck pain by discography alone or by zygapophysial blocks alone constitutes an inadequate approach to neck pain, which fails to identify the majority of patients whose symptoms stem from multiple elements in the 3-joint complexes of the neck.

THESE AUTHORS ALSO NOTE:

Cervical spondylosis is a condition “characterized by narrowing of the intervertebral foramina by cartilaginous or osseous bars and osteophytes stemming from the intervertebral discs and zygapophysial joints, which encroach upon the spinal nerves and may cause nerve root compression, intrathecal fibrosis [The Fibrosis of Repair], and axonal degeneration.”

These pathological changes constitute a basis for sensory and motor loss in the upper limbs for radicular pain, “but they are not an adequate explanation of neurological signs.”

Neck pain is a symptom that “correlates poorly with cervical spondylosis.”

[Important]

“Many patients with neck pain show absolutely no signs of spondylosis.”

[Important]
Neck muscle injury “does not provide a satisfying model for persistent or chronic neck pain” because extremity muscle injuries heal rapidly, “in a matter of days or weeks.”

Persistent neck pain suggests injury to tissues that heal poorly or slowly, such as the intervertebral disc and the facet joints. “However, painful disorders of these structures are not demonstrable by plain radiography, computed tomography or magnetic resonance images.” [Extremely Important]

No findings on plain radiography, computed tomography or magnetic resonance images are correlated with pain. [Important]

Discography will stress a painful disc and reproduce a patient’s pain.

Anesthetizing a painful facet joint or the medial branch of the posterior primary rami that innervates a painful facet joint will completely eliminate its pain.

The patients in this study were chronic, having pain for at least 6 months.

<table>
<thead>
<tr>
<th>Facet and Disc Pain</th>
<th>41%</th>
<th>41%</th>
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<tbody>
<tr>
<td>Face Pain Only</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Disc Pain Only</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Total with Facet Pain</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>Total with Disc Pain</td>
<td>61%</td>
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</table>

The most frequent finding was “both a symptomatic disc and a symptomatic zygapophyiscal joint at the same segment,” seen in 41%. [Note the most common finding was a segmental lesion, important for chiropractors.]

The second most frequent finding was a symptomatic zygapophysial joint, alone, with no disc involvement, found in 23%.

“This indicated that 64% of the sample had a symptomatic zygapophysial joint.” [41% + 23% = 64%]

The third most frequent finding was a symptomatic disc alone, with no zygapophysial joint involvement, at 20%.

This indicated that 61% of the sample had a symptomatic disc. [41% + 20% = 61%]

[Consequently, the zygapophyiscal joint was more often involved in the patient’s pain than the disc, by 3%, 64% over 61%.

“If cervical segments are fully investigated, it emerges that cervical discs are not the most common, primary source of neck pain.”
“The disc may be abnormal but not an active source of pain. It may have the potential to cause pain but may not actually be causing pain in the patient at the time of investigation.” “Discography may reveal the subclinical potential of the disc to cause pain.” [This is very important, because it implies that a degenerated disc may be asymptomatic, but can become a source of pain if stressed.]

“A large proportion, if not the majority, of patients with post-traumatic neck pain have symptomatic zygapophysial joints.”

“The high prevalence of cervical zygapophysial joint pain should be heeded. Unless zygapophysial joint blocks are performed, those patients with zygapophysial joint pain will remain unrecognized for, at present, there are no other means of establishing this diagnosis.”

If the zygapophysial joint is the source of neck pain, and not the disc, major surgical intervention is not indicated.

KEY POINTS FROM DAN MURPHY

1) Many patients with neck pain have no signs of spondylosis.
2) Many patients with cervical spondylosis have no neck pain.
3) Injuries to muscles heal relatively quickly and therefore do not provide a satisfying model for chronic neck pain.
4) The injuries that cause chronic neck pain are not demonstrable by plain radiography, computed tomography or magnetic resonance images.
5) The most frequent tissue sites for chronic neck pain is both the facet and disc of the same segment. [A segmental lesion]
6) The facet joint is more often involved in the patient’s pain than the disc, by 3%, 64% over 61%.
7) Cervical discs are not the most common, primary source of neck pain.
8) The majority of post-traumatic neck pain arises from the facet joint.
9) The only way to truly document facet pain is with diagnostic joint blocks. [This concept cuts two ways. An insurance medical review (IME) cannot rule-out cervical facet pain without the aid of diagnostic joint blocks.]