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Pinpointing pain

**Reference:**

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[“Origins of Pain,”](#) by Haider Warraich -[Forum], mentions the shortcomings of magnetic resonance imaging as an indicator for spinal pain. If one looks only at mechanical and anatomical explanations of pain, this surely is true. Especially in the previous century, spinal imaging focused on findings associated with degenerative spinal changes, including disk degeneration and disk herniation. Although a disk herniation definitely can be a possible cause of pain irradiating in the leg, it is only rarely a cause of local back pain. In general, computed tomography and MRI are reliable indicators of these changes. So they do very well in identifying the cause of -radicular pain, or pain originating from a nerve that is pinched by a herniated disk or a narrowing of the spinal canal and its outlets (a phenomenon called spinal stenosis).

But recently the interest of spine radiologists has shifted to finding the pain generator in local low back pain, which can be classified as somatic pain. By using newer MRI techniques, we are now able to reliably detect small inflammatory changes in the spine, mainly in the vertebrae. In many people, these inflammatory changes are believed to be associated with local pain, and as such, they can pinpoint the pain generator. This can be highly beneficial to a patient, for example, in the case of an inflamed facet joint, not an unusual finding in low back or neck pain. These small joints can be precisely targeted by interventional radiologists or pain physicians either with injections -using local painkillers and anti-inflammatory drugs or, in patients with more persistent pain, by neurolysis, a procedure where the pain fibers are interrupted by freezing them with a special device.

Many radiologists need to be updated on these developments because they still believe that spinal imaging is all about spine degeneration. This can lead to unnecessary treatments because degenerative changes that are normal for age can be identified as abnormal and suspected to be the cause of a patient’s complaints. Failing to identify the pain generator and consequently treating something else without any beneficial result leads to disappointment and disbelief in spinal imaging’s relevance, even among some radiologists.

Luckily, a new generation of radiologists is very active in research on spinal imaging in low back pain. Not only are we able to find the pain generator in a significant percentage of patients with low back and neck pain, but research is also focusing on chronic and neuropathic pain caused by a lesion or disease of the pain system itself. Though still in its infancy, researchers are starting to visualize the workings of the pain system in people with chronic pain in the hope of finding out what is -going wrong and being able to treat them effectively.

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