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New key to pain relief

By Lisa Melton

Epilepsy drugs are being used to treat the agony caused by damaged nerves

THE PAIN that Valerie Colwill felt was worse than anything she had experienced before. Her battle with sciatica began in her mid-thirties, and after a decade of discomfort she opted for surgery to put an end to it.

The solution seemed simple: an operation would relieve the trapped nerves in the spine and the pain would vanish. But two operations later the discs were in the right place, yet the pain shooting down her buttock and leg was excruciating.

“I was so disappointed. I couldn’t believe that I had gone through such an operation and was still in agony,” she says.

Feeling distraught but determined, Colwill began a two-year quest for a treatment that would rid her of this disabling pain. Initially she met little sympathy. “They made me feel as though I was a pathetic person who couldn’t cope,” she says. But Colwill (not her real name) persevered and was eventually referred to a pain specialist. The encounter was a turning point. “It was a completely different ball game. As soon as he told me ‘You have chronic neuropathic pain, I know what you are going through’, I felt instant relief.”

Colwill began treatment with gabapentin, a drug that was originally used to treat epilepsy. To her astonishment and relief, the pain subsided. “Without it I would have been mentally unstable,” she says. A pain-management course accelerated her recovery and now she is back at work teaching disabled children. She has also weaned herself off drugs.

An anti-epileptic drug may seem a bizarre solution for back pain, but in the past decade scientists have begun to understand why these compounds work for mysterious pain conditions that involve nerve trauma.

Pain that is rooted in the nervous system — neuropathic pain — can be agonising, and in many cases fails to improve over time. In the United Kingdom more than half a million people suffer from it.

A variety of physical conditions can trigger it. Surgery, diabetes and viral infections such as shingles, as well as diseases of the nervous system (known as neuropathies) can lead to the problem.

Neuropathic pain is different from normal pain. “Pain can be friend or foe,” says Professor Marshall Devor, a pioneer in pain research from the Hebrew University of Jerusalem, Israel. “We know that pain is usually a warning from the body that something is wrong, but sometimes the warning system itself fails.”

When the pain-processing system goes awry, the result may be a pain response that is grossly exaggerated. For some people with neuropathic pain, even the slightest touch or the pressure of clothing and sheets can be unbearable.

Until a decade ago the outlook for those with neuropathic pain was bleak. It didn't help that during the 1970s and 1980s the only drug that seemed to work was an antidepressant, amitryptiline. Scientists now understand that antidepressants can also have an analgesic effect.

Today, despite rapidly accumulating knowledge, it is still rare for doctors to suspect nerve damage. Consequently they prescribe traditional painkillers that have little or no effect.

For Colwill, an anticonvulsant proved a turning point. True, not everyone responds to them, yet today they have become the drugs of choice for many pain clinicians.

Both tricyclic antidepressants and anti-epileptics block the mechanisms that lead to hyperexcitability of the brain and spinal cord and silence excessive nervous activity that causes pain. New anticonvulsants such as pregabalin and promising new compounds such as cannabinoids are in the last stages of clinical trials and may be available in the near future.

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