

The drug flupirtine has been used in Europe for more than 25 years to treat pain associated with cancer, trauma, surgery and other forms of neuropathic pain, and is now being considered as a possible new treatment for fibromyalgia. What makes this drug so attractive is that it is a non-opiate analgesic meaning that it is non-addictive with no withdrawal effects, has been reported to have minimal side-effects, and works best for pain associated with noninflammatory conditions.

Flupirtine acts in the central nervous system suppressing pain perception transmission in the spinal-cord and the brain. It helps to control nerve excitability by reducing the amount of the neurotransmitter glutamate which causes nerves to get excited and transmit stronger pain signals. It is believed to target the N-methyl-D-aspartate receptor, a specialised glutamate receptor that has been linked to central sensitisation. So, overall it works to calm the nervous system down and reduce hypersensitivity.

In addition, flupirtine has muscle relaxant and neuroprotective properties, helping to dispel abnormally increased muscle tension so typical of fibromyalgia, and is well-tolerated with the most common adverse effects being drowsiness, dizziness, dry mouth and nausea. There also appears to be no build-up of tolerance to its effects. In a 12 month study on 104 patients with arthritis, flupirtine worked consistently without an increase in dosage for 75% of the participants¹. The researchers also found that participants did not have to be weaned gradually off the drug, supporting its non-addictive properties.

Despite being available in Europe for the past 25 years it is currently not available in the US or the UK. The drug company, Adeona Pharmaceuticals, has applied to the US Food and Drug Administration (FDA) and been granted permission to conduct a randomised, double-blind, placebo-controlled phase II clinical trial specifically investigating the effects of flupirtine on the symptoms of fibromyalgia. The company aims to demonstrate that flupirtine not only treats the pain of fibromyalgia, but also improves mood, fatigue, cognitive problems, sleep disturbance and overall function. It is hoped that this drug will be approved by the FDA for the treatment of fibromyalgia in the US.

Preclinical trials and clinical experience are certainly encouraging. An open label case-series carried out in 2000 in Belmont Massachusetts looked at the effects of flupirtine in four women with fibromyalgia². All of these women had tried multiple treatments for their FM symptoms with limited success. Three of the case studies had a dramatic response to flupirtine, describing their symptoms as being completely abolished. Case 1 experienced recovery from her fibromyalgia

pain, sleep disturbance, fatigue and depressive symptoms within several days and has remained free of symptoms for more than 18 months. Case 3 described recovery from pain and substantial improvement of fatigue with the initial sedation and dizziness resolving after several days. She continued to have full and sustained remission for more than 1 year. Case 4 had substantial relief from her myofascial pain and what she described as a 'miraculous' increase in energy and ability to concentrate. She experienced no significant adverse effects. Case 2, on the other hand, only experienced moderate relief from her joint pain and sleep disturbance.

These results are quite striking as flupirtine not only targets pain but appears to successfully relieve the other symptoms associated with fibromyalgia. If confirmed in the upcoming randomised controlled trial, it would demonstrate that flupirtine is a very effective drug for treating the symptoms of FM.

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References:

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