

News & Views in ...

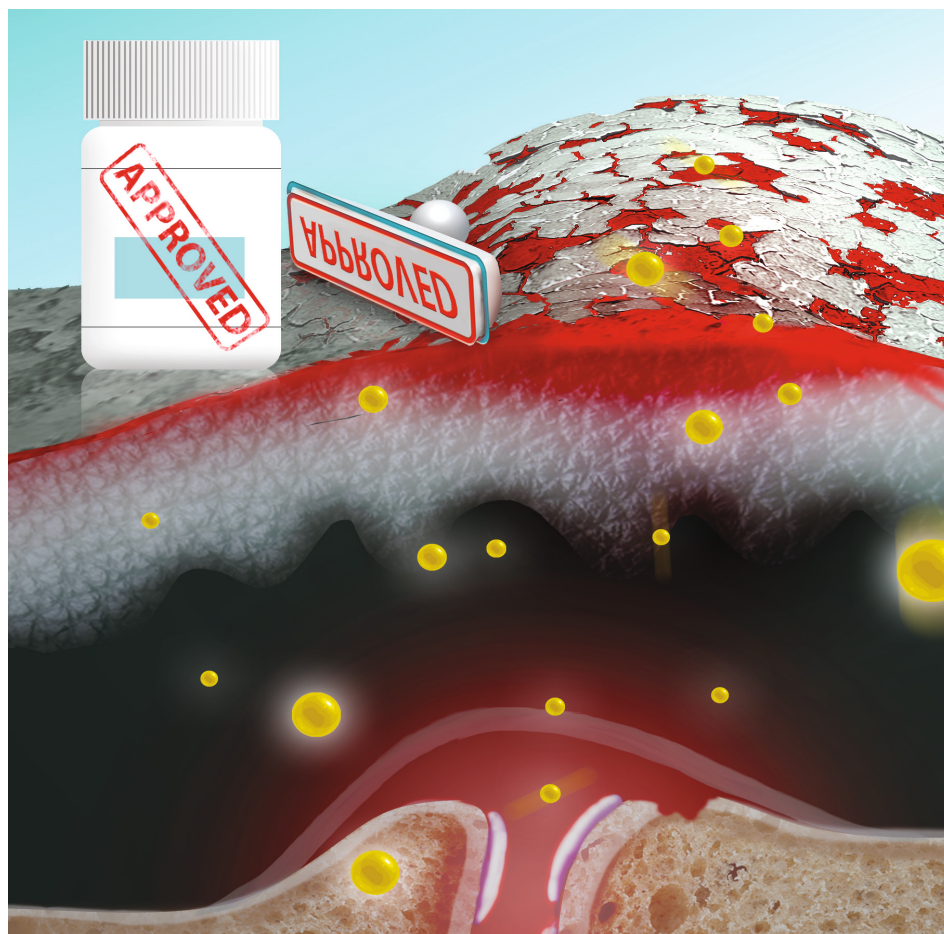
International Journal of Clinical Rheumatology

Highlighting the latest news in clinical rheumatology

Otezla® (apremilast) approved for the treatment of adults with active psoriatic arthritis

Following Phase III studies, demonstrating clinically significant improvements across multiple manifestations of psoriatic arthritis and a consistent safety profile, Otezla® (apremilast) has become the first oral therapy approved by the US FDA for the treatment of adults with active psoriatic arthritis. An oral therapy, Otezla modulates inflammation through intracellular inhibition of PDE4.

The approval followed safety and efficacy results from three multicenter, randomized, double-blind, placebo-controlled trials, conducted in adult patients with active psoriatic arthritis inadequately controlled by disease-modifying antirheumatic drugs (DMARDs) and/or biologics. Otezla treatment with or without concomitant DMARDs, compared with placebo with or without concomitant DMARDs, resulted in greater improvement



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in the signs and symptoms of psoriatic arthritis.

Commenting on the approval, Alvin Wells (Rheumatology and Immunotherapy Center, WI, USA) said, "The approval of oral Otezla is significant for patients living with psoriatic arthritis, which is a debilitating, painful disease that has a significant effect on a patient's day-to-day activities. Otezla offers physicians and patients a meaningful

new treatment option, with the potential to benefit psoriatic arthritis patients irrespective of prior treatment."

Philip Mease from the University of Washington (DC, USA) added, "The approval of an oral therapy with a novel mechanism of action for patients with psoriatic arthritis offers a different approach to patient care."

– Written by Dominic Chamberlain

Source: Celgene press release, OTEZLA® (apremilast) - first oral therapy approved by the US Food and Drug Administration for the treatment of adults with active psoriatic arthritis: <http://ir.celgene.com/releasedetail.cfm?releaseid=834687>

Rheumatoid arthritis patients at increased risk of developing kidney disease

A Mayo Clinic (MN, USA) study has observed rheumatoid arthritis (RA) patients to have a higher likelihood of developing chronic kidney disease when compared with the general population.

Researchers studied 813 RA patients and compared them with 813 patients without the disease. Over a 20-year period, individuals with RA were observed to have a one in four chance of developing chronic kidney disease, compared with a one in five risk for the general population.

"That might not seem like a lot, but in fact that's quite a big difference, and it has important implications for the course of RA and for the management of the disease," explained senior study author Eric Matteson (Mayo Clinic).

Factors contributing to the increased risk in RA patients include corticosteroid use, increased erythrocyte sedimentation rate, obesity, hypertension

and dyslipidemia. There are currently no specific medical guidelines for the management of chronic kidney disease in RA; however, it is hoped that this research will increase clinician awareness of the issue and eventually lead to the creation of guidelines.

Matteson recommends physicians to be cautious when prescribing medicines for RA patients in order to reduce the risk of medicine-induced kidney disease. RA patients should have blood and urine tests conducted annually to detect kidney problems. Behavioral interventions, including blood pressure awareness, a low salt diet and avoidance of medications that are toxic to the kidneys, specifically nonsteroidal anti-inflammatories, should also be considered.

Further investigations are being planned to aid understanding of the factors contributing to kidney disease development in RA patients, with the hope of uncovering new interventions to reduce this risk.

– Written by Hannah Wilson

Sources: Hickson LJ, Crowson CS, Gabriel SE, McCarthy JT, Matteson EL. Development of reduced kidney function in rheumatoid arthritis. *Am. J. Kidney Dis.* 63(2), 206–213 (2014); Mayo Clinic News: Vigilance for kidney problems key for rheumatoid arthritis patients: <http://newsnetwork.mayoclinic.org/discussion/vigilance-for-kidney-problems-key-for-rheumatoid-arthritis-patients-mayo-clinic-study-finds>

Predicting response: new study offers insight into which osteoarthritis patients will respond to NSAIDs

Results reported in a scientific poster today at the 30th Annual Meeting of the American Academy of Pain Medicine (AZ, USA) suggest that scientists can predict which osteoarthritis (OA) patients with neuropathic pain symptoms will respond to treatment with NSAIDs, by assessing the nervous system's own capacity to regulate pain. In the study, patients whose tests had indicated superior

conditioned pain modulation (CPM) had less pain and fewer neuropathic symptoms at study's end.

One of the investigators, Ajay D Wasan (University of Pittsburgh, PA, USA), noted that, "Clinically, these results indicate that neuropathic symptoms are very common in knee OA and that neuropathic processes, such as changes in conditioned modulation, predict

who will respond to a common treatment for knee OA. Patients with neuropathic pain symptoms in OA respond equally as well to topical NSAIDs as those who do not have neuropathic pain symptoms.”

The results come from a 5-week effectiveness study of diclofenac topical gel in 44 patients with knee OA. Patients were extensively tested as to genetically and environmentally influenced physical characteristics. The authors also used the Neuropathic Pain Questionnaire, the Knee Injury and Osteoarthritis Outcome Score, an exercise performance task and quantitative sensory testing (QST).

Of the 38 subjects who completed the study, 40% had significant neuropathic symptoms, which included burning or shooting sensations and sensitivity to touch. Pain sensitivity at baseline, as measured by QST, had modest correlation to symptoms.

After 4 weeks of treatment with diclofenac gel, there was a 30% improvement in pain on average, and significant response for neuropathic symptoms and improved function.

Using CPM, an index of endogenous pain-inhibitory capacity, calculated from QST measurements, investigators correctly predicted changes in pain intensity and in neuropathic symptoms. Subjects with higher CPM at baseline, representing better functioning endogenous pain-inhibitory systems, reported lower pain intensity and neuropathic pain symptoms at the study's end.

The variability of the pain experience along with observations that pain can change in the presence of other factors, including past memories, stress, anxiety, distraction or attention, further suggests the presence of endogenous pain modulatory systems.

– Written by Dominic Chamberlain

Source: Newswise press release: Higher functioning endogenous opioid system predicts better treatment response for neuropathic pain treated with topical NSAIDs: study: www.newswise.com/articles/higher-functioning-endogenous-opioid-system-predicts-better-treatment-response-for-neuropathic-pain-treated-with-topical-nsaids-study

Managing osteoarthritis pain: brain wave study suggests talking-therapy treatments may be the way forward

A recent study conducted by researchers at the University of Manchester (Manchester, UK) suggests that the abnormalities in the way the brain experiences pain may be to blame for the chronic pain suffered by osteoarthritis patients. This highlights the need for new therapies to target brain mechanisms to enable the brain to cope more effectively with chronic pain, including mindfulness-based talking therapies.

One of the study's authors, Anthony Jones (University of Manchester), commented, “The extent of pain experienced by sufferers of arthritis has always been thought to result from the direct consequences of joint destruction. However the extent of pain is often poorly related to the amount of damage and can spread to nearby regions of the body where there is no evidence of arthritic disease. We wanted to look at what might be causing this. Currently it is not understood why patients with arthritis have such variability in how much pain they experience but, in spite of this, we continue to spend large sums of money using potentially damaging anti-inflammatory drugs.”

Researchers thought that the spreading and intensification of pain in arthritis may be similar to that experienced by sufferers of fibromyalgia. Earlier

research suggested that patients with fibromyalgia have abnormalities in the way in which the brain deals with pain, prompting the team to look at the overlaps in how pain is processed in the brain in osteoarthritis.

The team measured brain waves in response to short painful laser pulses to the skin in patients with osteoarthritic or fibromyalgic pain and those with no pain. They reported that while anticipating the painful pulse, a brain area called the insula cortex increased its activity, and this predicted the extent and intensity of the patients' own chronic pain.

Another of the study's authors, Christopher Brown (University of Manchester), noted, “Increased activity in this brain area has been linked to a number of phenomena, including body perception and emotional processing, which might explain the greater pain perception in some patients. Interestingly, responses during pain anticipation were reduced in an area at the front of the brain called the dorsolateral prefrontal cortex. These reduced responses corresponded to less ability to develop positive ways of coping with the pain in both groups of patients. We think that boosting activity either directly or indirectly in this area of the brain is likely to result in better coping

and better control of pain responses in other areas of the brain.”

Another author, Wael El-Deredy (University of Manchester), added, “More research is needed but this suggests we should be putting more resources into a common approach to developing new therapies that target these potential brain mechanisms. Our previous work has shown that brain responses

to pain expectation can be altered by relatively short and inexpensive mindfulness-based talking therapies in patients with different types of chronic pain. Our current findings therefore provide both a new target for development of new therapies and some optimism for simple interventions to improve the brain’s control of chronic suffering endured by many patients with chronic pain conditions.”

– Written by Dominic Chamberlain

Source: University of Manchester press release: New research points to talking-therapy treatments to manage osteoarthritis pain: www.manchester.ac.uk/aboutus/news/display/?id=11695

About the News

The News highlights some of the most important events and research in the field of rheumatology. If you have newsworthy information, please contact: Dominic Chamberlain, Commissioning Editor, *International Journal of Clinical Rheumatology*, Future Medicine Ltd, d.chamberlain@futuremedicine.com