Letters to the Editors

Current DMOAD options for the treatment of osteoarthritis

Sirs,

I read with interest the article by Drs Oo and Hunter about disease-modifying osteoarthritis drugs (DMOADs) in osteoarthritis (OA) (1). They state that "no DMOAD has as yet been approved by regulatory bodies such as the EMA (European Medicines Agency) or FDA (Food and Drug Administration, USA)" (1), implying that there are currently no DMOADs available.

However, perhaps the picture is not quite so bleak. As they mention, regulatory guidance from the FDA and EMA states that the approval of a DMOAD requires evidence of inhibition of loss in knee or hip joint space width (JSW) on plain radiograph with relevant symptomatic benefit. Based on these criteria, I would like to suggest that there are 2 agents already available that can be used as DMOADs.

The first drug is crystalline glucosamine sulphate (CGS), manufactured by Rotta/Rottapharm/Mylan. In two randomised, double-blind, placebo-controlled trials, CGS taken over 3 years improved pain and retarded joint space loss compared to placebo (2, 3). A Cochrane review on glucosamine separated the products into "non-Rotta" and "Rotta" (CGS) preparations to differentiate the other glucosamine preparations from CGS. The conclusion from the Cochrane review was that the Rotta preparation was superior to placebo in the treatment of pain and functional impairment resulting from symptomatic OA (4). In addition, only CGS was shown to slow radiological progression in knee OA (4). A more recent meta-analysis showed that CGS was the only intervention that had an effect on reducing pain in patients with knee OA, in trials that were conducted for at least 1 year, together with an improvement in joint space narrowing (5). As glucosamine is a naturally occurring substance in the human body, CGS is generally well tolerated.

The second drug is strontium ranelate (StR), previously licensed for osteoporosis. The original manufacturer stopped production in 2017, but there is now a generic version, currently available in the United Kingdom. In a randomised, double-blind, placebo-controlled trial, StR taken over 3 years improved pain with less reduction in JSW compared to placebo (6). The recent meta-analysis also confirmed an improvement in joint space narrowing with StR (5). However, as StR has been found to be associated with an increase in cardiovascular risk, it is recommended that treatment with StR should not be started in people who have or have had ischaemic heart disease, peripheral arterial disease, cerebrovascular disease or uncontrolled hypertension (7). Thus, although there are restrictions on who can take StR, it may be useful in selected patients, especially those who have both OA and osteoporosis.

To conclude, there are many drugs/interventions that can help relieve pain in patients with OA, but not many have an effect on halting disease progression. The 2 drugs mentioned above both relieve OA symptoms and retard cartilage loss, thus having a DMOAD effect. However, there remains a large unmet need for more effective and safe DMOADs that can consistently stop or even reverse disease progression in OA.

S.S. YEAP, *MBChB, MD*

Department of Medicine, Subang Jaya Medical Centre, Subang Jaya, Selangor, Malaysia.

Please address correspondence to:
Swan Sim Yeap,
Subang Jaya Medical Centre,
1, Jalan SS 12/1A,
47500 Subang Jaya, Selangor, Malaysia.
E-mail: swanyeap@gmail.com

Competing interests: Dr Yeap has received honoraria for scientific advisory board attendance from Amgen, Eli Lilly, Mylan and Zuellig Pharma.

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