Drug-free, ultra-deformable phospholipid vesicles (TDT 064) as topical therapy for the treatment of pain associated with osteoarthritis: a review of clinical efficacy and safety.

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Current Medical Research and Opinion. 2014 Apr;30(4):599-611. doi: 10.1185/03007995.2013.860018. Epub 2013 Nov 26.

Summary

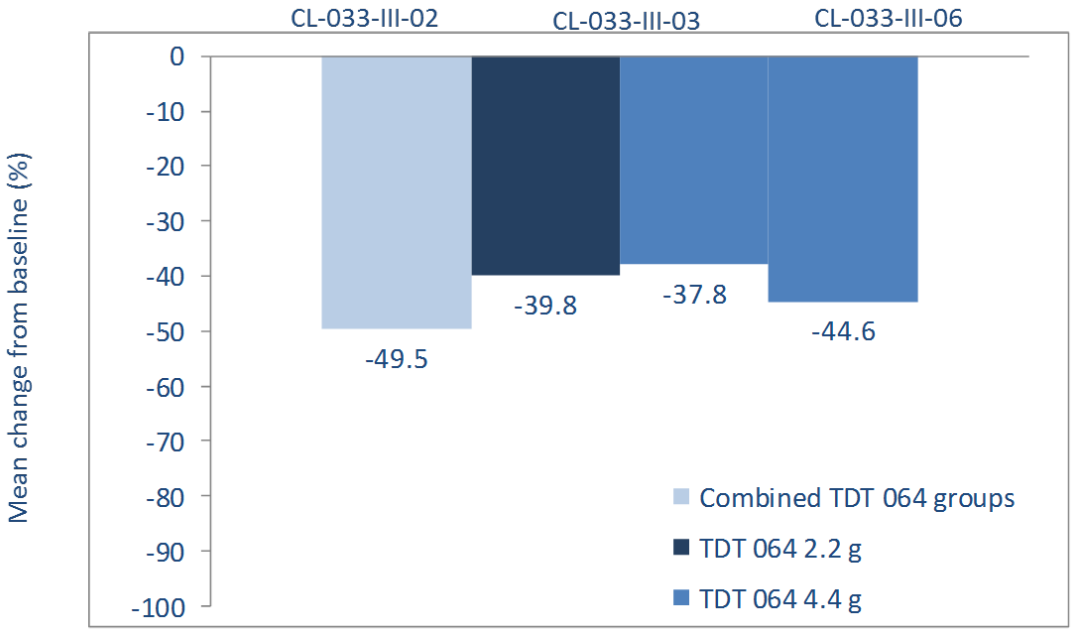
It is well recognised that there is a need for new treatment options for patients suffering from the pain and stiffness associated with their osteoarthritis (OA). The existing treatment options do not work for all patients, but more importantly are not suitable for all patients. OA is particularly prevalent in elderly patients who often have co-morbidities and take medication for other conditions. These comorbidities and medications put these patients at risk of serious, sometimes fatal, side effects from the most commonly used pain medications – NSAIDs.

Data on the efficacy of TDT 064 in OA are available from the clinical development program which included six randomized, comparative trials. More than 1600 patients across these studies were treated with TDT 064. This summary reports the efficacy and safety data from the clinical studies of TDT 064 alone from three randomised, comparative trials.

These studies assessed pain, physical function and joint stiffness in the knee joint using the Western Ontario and McMaster Universities Arthritis Index (WOMAC), a globally recognised clinical assessment routinely used in OA trials.

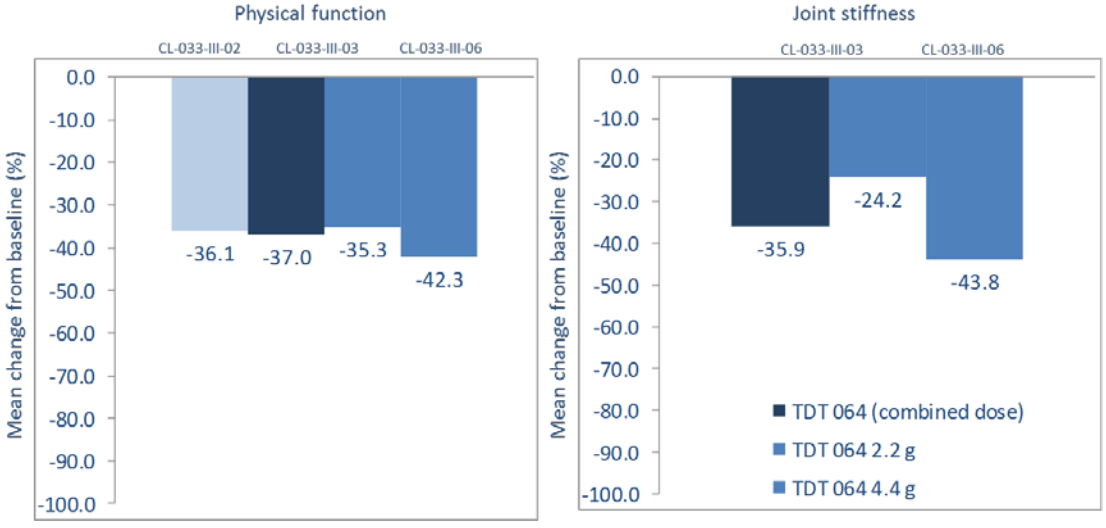
Patients treated with TDT 064 showed progressive, consistent and clinically relevant improvements in the WOMAC subscales for pain (Figure 1).

Figure 1: Mean percentage change from baseline in WOMAC Pain Subscale scores after 3 months of therapy in 943 patients in the three clinical trials



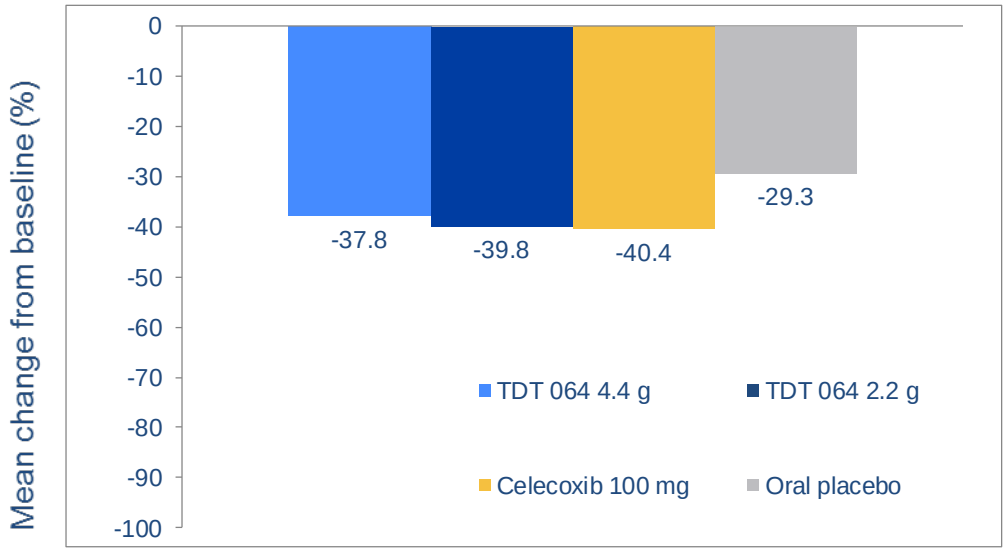
Reduced physical function and joint stiffness are also common complaints from patients with OA and these studies demonstrated that TDT 064, used twice daily, also improved joint function and joint stiffness (Figure 2).

Figure 2: Mean percentage change from baseline in WOMAC Physical Function and Joint Stiffness Subscale scores after 3 months of therapy in 943 patients in the three clinical trials



One of these studies, study CL-033-III-03, compared the effects of TDT 064 with those of the commonly prescribed oral NSAID, celecoxib. 2.2 g of TDT 064 (the clinical dose) was found to have efficacy comparable to that observed among patients receiving oral celecoxib and statistically superior to that observed in patients taking oral placebo. After 12 weeks' treatment, pain had improved by 39.8% from baseline, compared with 40.4% for oral celecoxib (Figure 3).

Figure 3: Mean percentage change from baseline in WOMAC Pain Subscale scores for two doses of TDT 064, oral celecoxib and oral placebo in study CL-033-III-03



TDT 064 was well tolerated by the patients in these studies with skin and subcutaneous tissue AEs being the most commonly reported. Dermal AEs most frequently associated with use of TDT 064 included erythema, dry skin, itching, and rash. Typically, these were of mild-to-moderate intensity and transient, beginning after ~2 weeks' treatment, and resolving within a few weeks even with continued use. Re-administration of TDT 064 was usually possible once any skin reaction had resolved.

The authors of this paper concluded that a pronounced effect of TDT 064 was evident in all three studies in which it was used alone and that it is well tolerated when used alone or in combination with oral NSAIDs, with typically mild-to-moderate AEs mainly affecting the skin. These data support the use of TDT 064 as a topical treatment for patients with OA.