Conclusion: The dedicated KJD device provides user-friendly equipment for clinicians and patients, as indicated by the shorter intervention duration and patient questionnaire outcomes, and contributes to further implementation of KJD as treatment for end-stage knee OA.

References:

[1] MP Jansen *et al*, PLOS ONE 2020

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FRI0408

KNEE JOINT DISTRACTION AS TREATMENT FOR OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Knee osteoarthritis (OA) is a common cause of invalidity and is often treated with a total knee arthroplasty (TKA). While TKA is cost-effective, reduces pain and improves function, it brings a greater risk of a future revision surgery when performed in younger patients. Knee joint distraction (KJD) is a joint-preserving OA treatment that may postpone TKA and possibly prevent a revision. In the past years, multiple studies have investigated this surgical treatment.

Objectives: To evaluate short- and long-term clinical benefit and tissue structure changes after KJD treatment for knee OA.

Methods: MEDLINE, EMBASE and Web of Science were searched for eligible clinical studies evaluating a change in at least one of: Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Visual Analogue Score of pain (VAS-pain), Knee injury and Osteoarthritis Outcome Score (KOOS), EuroQol-5D (EQ5D), radiographic joint space width (JSW) or MRI cartilage thickness after KJD. The primary clinical and structural outcome parameters were the WOMAC and minimum JSW, respectively. Random effects models were applied on all outcome parameters and outcomes were compared with control groups found in the included studies. For continuous data the mean difference (MD) and 95% confidence interval (95%CI) were calculated and for dichotomous data the risk difference and 95%CI, following the Cochrane handbook.

Results: In total 11 articles reporting on 7 different KJD cohorts with in total 127 patients and 5 control groups at multiple follow-up moments were included, with 2 of the studies being randomized controlled trials (RCTs). The WOMAC (figure 1) was compared to pre-treatment in 3 cohorts after 1 year (patients n=62) and 2 years (n=59) and in 1 cohort after 5 years (n=20) and 9 years (n=8), showing a significant increase at all time points (all p<0.001). The VAS-pain showed similar results at the same 4 time points, as did the KOOS and EQ5D, which were evaluated only after 1 (n=42) and 2 (n=39) years.

The minimum (figure 2) and mean JSW are reported in 3 cohorts after 1 (n=59) and 2 (n=59) years and in 1 cohort after 5 (n=20) and 7 (n=8) years. Both JSW measures were statistically significantly increased after 1 and 2 years, but after 5 and 7 years the JSW increase was no longer statistically significant. Similarly, the MRI cartilage thickness showed an increase at 1 and 2 years, but not at 5 years (all n=20).

Complications were reported in 5 studies with 87 patients, with 57 patients developing one or more pin tract skin infections, giving a risk of pin tract infections of 63% (95%CI 45-81), the majority of which could be treated with oral antibiotics. Only a small amount of other complications occurred and were all treated successfully.

Overall, clinical and structural outcomes were comparable with control groups, including high tibial osteotomy and TKA as compared after 1 and 2 years in the two RCTs. Apart from pin tract infections, complications were not different in severity and number between control groups and KJD.

Conclusion: KJD causes clear benefit in clinical and structural parameters over time, short- and long-term. Although the total number of patients is limited, effect sizes are large. Longer follow-up with more patients is necessary and could improve patient selection for this intensive treatment, while preventing pin tract infections could lighten the patients' treatment burden. Irrespectively, KJD provides an additional option in joint-preserving treatments for OA and a viable alternative to joint replacement, especially in younger patients.

Figure:

Figure 1: Change in total Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score 1, 2, 5 and 9 years after treatment with knee joint distraction. References can be used multiple times because of division in patient cohort and years of follow-up. SD: standard deviation; CI: confidence interval.

Figure 2: Change in minimum joint space width (JSW) 1, 2, 5 and 7 years after treatment with knee joint distraction. References can be used multiple times because of division in patient cohort and years of follow-up. SD: standard deviation; CI: confidence interval.

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PREVALENCE AND FACTORS ASSOCIATED WITH CHRONIC PAIN WITH NEUROPATHIC CHARACTERISTICS IN PATIENTS WITH KNEE OSTEOARTHRITIS IN CAMEROON, SUB-SAHARAN AFRICA

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Background: Recent studies suggest that pain in osteoarthritis (OA) is not only nociceptive, but also has neuropathic characteristics (1). To our knowledge, no study has been carried out in sub-Saharan Africa to assess the neuropathic pain associated with knee OA.