Hyaluronic acid injections can improve the quality of life in patients with rhizarthrosis

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Background

Rhizarthrosis, or osteoarthritis of the first carpometacarpal joint, is currently considered a common pathology, associated with aging. It is the second cause of osteoarthritis worldwide[1] and, despite its high prevalence, only a small number of patients seek medical attention[2].

Adequate conservative treatment can alleviate symptoms and even reduce the need for surgery in up to 70% of cases[3]. The possibilities of conservative treatment include intra-articular (IA) injection of corticosteroids and hyaluronic acid (HA)[4]. The efficacy of IA HA has been proven in other joints, especially in knee, but the data in rhizarthrosis are scarce.

Most HAs had been registered as medical devices worldwide and the new EU Medical Devices Regulation (MDR 745/2017) enter in force 2023 requires a continuous post-market clinical follow-up to ensure the safety and performance of these products. In compliance with the MDR, this work aimed to evaluate a marketed HA in a cohort of patients with rhizarthrosis under real conditions of clinical practice.

Objective

Considering that currently no therapeutic intervention for rhizarthrosis is universally accepted, the objective of the present work has been to analyze the efficacy of HA in terms of pain relief and function improvement in a cohort of patients suffering from rhizarthrosis and treated under conditions of clinical practice.

Methods

Observational, post-marketing, retrospective, follow-up study. Between January 2020/June 2022, patients were treated in the Rheumatology Dpt of a 3rd level hospital with a single injection of HA (Adant®, Meiji Pharma Spain) and followed for 6 months. Pre/post Visual Analogue Scale (VAS) for pain, and functional questions (key, grip and button) were used for efficacy assessment. Patients' data were pseudonymized and included in a database for further analysis. The chi2 test was used, for qualitative variables, and the T or Mann Whitney tests for quantitative ones. The pre/post comparison of the VAS was made with the t test for paired samples. The study was approved by the Ethics Committee of the hospital.

Results

Twenty patients with a mean age of 61 years, 80% women, were studied. An 80% had bilateral rhizarthrosis, 70% had Kellgren-Lawrence 3-4 (moderate-severe) (Figure 1) and 65% had other concomitant pathologies (Figure 2). The 80% had received 2 previous HA injections. The volume administered varied from 1 to 2 ml (55%-45%).

At 6 months, the mean reduction in pain vs. baseline was 77% ($p<0.001$) (Figure 3). A 35% of the patients had an improvement ≥80% and the others between 70 and 79%. Regarding functional capacities, the 80% achieved complete recovery (Figure 4).

Grade of improvement on pain or function was not associated with basal characteristics, neither the number of previous injections nor the volume administered. All patients were satisfied with the treatment. There were no adverse events recorded.

Figure 1: Distribution of Kellgren-Lawrence grade (%)

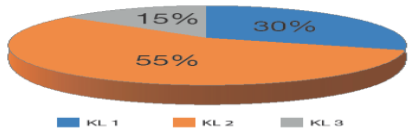


Figure 2: Concomitant pathologies

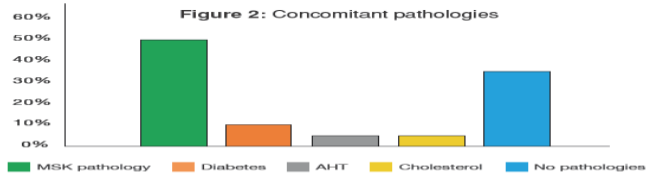
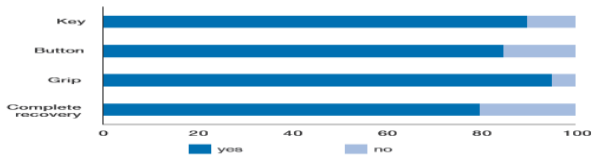


Figure 3: Evolution of VAS pain

Figure 4: Functional recovery at 6 months (%)



Conclusions

- Six months after single injection, all patients had benefited from treatment, either due to decreased pain, improved functional abilities, or both.
- HA injection is a useful therapeutic option in patients with rhizarthrosis with an excellent safety profile.

References
1. Long H, Liu Q, Yin H, et al. Prevalence Trends of Site-Specific Osteoarthritis From 1990 to 2019: Findings From the Global Burden of Disease Study 2019. Arthritis Rheumatol. 2022 Jul;74(7):1172-1183.
2. Wilkens SC, Meghpara MM, Ring D, et al. Trapeziometacarpal Arthrosis. JBJS Rev. 2019 Jan;7(1):e8.
3. Berggren, M., Joost-Davidsson, A., Lindstrand, J. et al Reduction in the need for operation after conservative treatment of osteoarthritis of the first carpometacarpal joint: a seven-year prospective study. Scand J Plast Recons 35, 415–417 (2009).
4. Fuggle N, Bere N, Bruyère O, et al. Management of hand osteoarthritis: from an US evidence-based medicine guideline to a European patient-centric approach. Aging Clin Exp Res. 2022 Sep;34(9):1985-1995. doi: 10.1007/s40520-022-02176-y. Epub 2022 Jul 21. PMID: 35864304; PMCID: PMC9464159.