

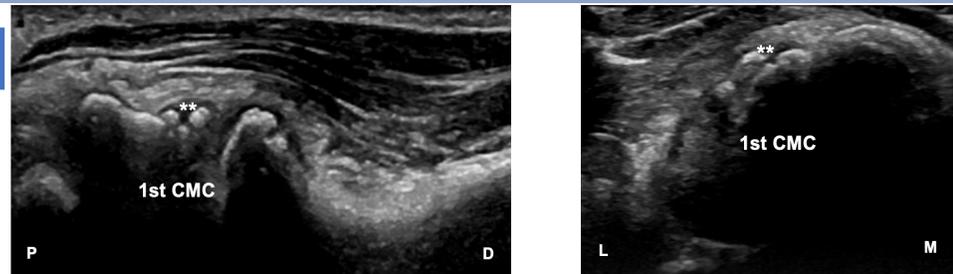


Effectiveness of ultrasound guided versus blind glucocorticoid Injection in the treatment of first carpometacarpal joint in patients attending St. James's hospital, Ireland.

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INTRODUCTION

Osteoarthritis is a common and debilitating disease. The first carpometacarpal joint (CMC1) is one of the most frequently involved. Intra-articular glucocorticoid injections are frequently used. Ultrasound guidance can facilitate injection accuracy. Figure1



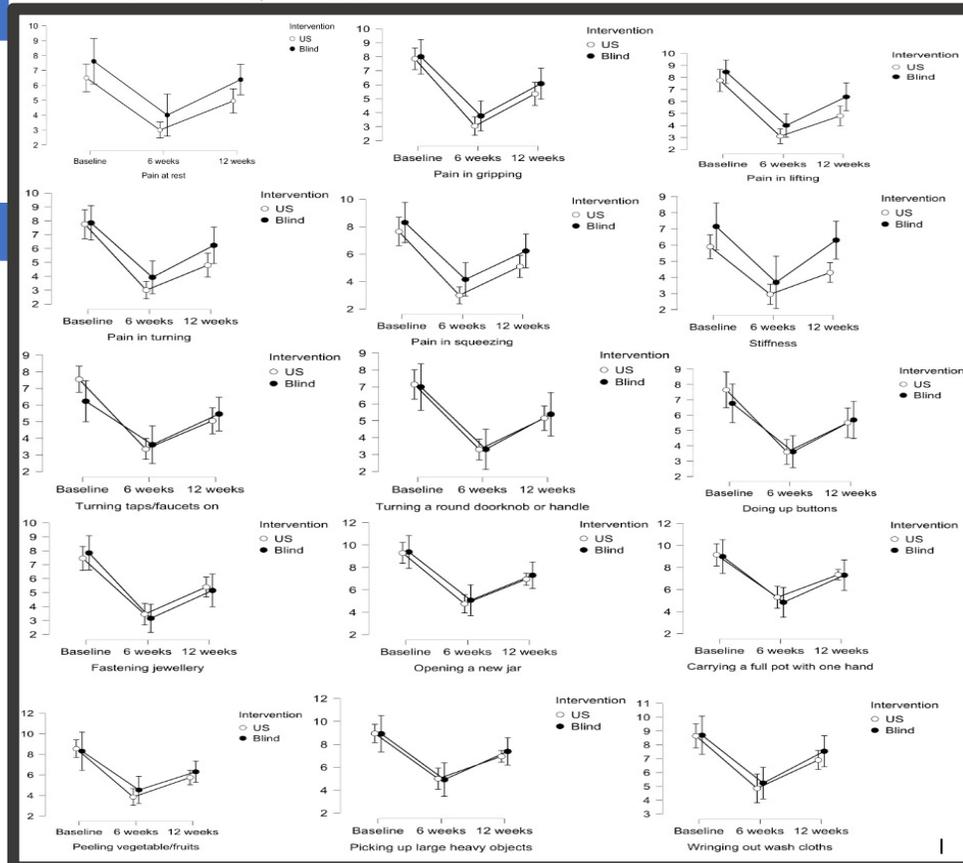
• Transverse (right), Longitudinal (left) scans of left 1st CMC with osteophytes and bone irregularity **. L: lateral, M: medial, P, proximal, D, distal

AIMS AND OBJECTIVES

To evaluate the effectiveness of ultrasound-guided versus blind approach to intra-articular injection to CMC1, using the Australian Canadian osteoarthritis hand index (AUSCAN).

METHODS

An observational descriptive study was conducted at St James's hospital between Jan-July 2021. Adult patients diagnosed with symptomatic first thumb (CMC) osteoarthritis with Eaton-Littler stage 2 and more whom failed conservative measures were involved while those who received glucocorticoid in the last three months from presentation were excluded. The injection consists of 20mg of depomedrone with a local anaesthetic, 0.5 ml 1 % lidocaine. Two physicians, one used the ultrasound and other the anatomical landmark to proceed with treatment. A standardized questionnaire named Australian Canadian osteoarthritis hand index (AUSCAN) to assess hand pain, stiffness and function in 10-points scale at baseline, 6 and 12 weeks were collected and analyzed using descriptive analysis.



RESULTS

There were 33 patients enrolled. The mean age was 63 years. Most were female (n=28, 84.8%) and about 72.7% (n=24) were non-smoker. 97% (n=32) were right-handed and 3% (n=1) left-handed (3%). The mean duration of CMC1 pain was 10 months (SD=2.5). 36.4% (n=12) and 45.5% (n=15) of participants had not previously used a hand splint or had a glucocorticoid injection to CMC1. 69.7% (n=23) had a right CMC1 injection. 60.6% (n=20) had ultrasound-guided injection and 39.4% (n=13) had the blind approach. Both groups achieved a statistically and clinically significant level of change in AUSCAN score at week 6 ($P \leq 0.05$) with a recurrence of symptoms at week 12 ($P \leq 0.05$) at the subgroup level, at both intervals the AUSCAN scores were better than baseline ($P \leq 0.05$). Figure2. There was no difference between the two groups regarding baseline pain on the day of clinic presentation (mean VAS score; US group= 6.6 vs blind group= 7.5; $P=0.18$). No significant differences were identified between two groups in terms of changes from baseline to 6, 12 and between 6 to 12 weeks in pain, stiffness and hand function ($P > 0.05$).

CONCLUSION

No difference was found between performing ultrasound-guided and blind CMC1 injection on pain score, stiffness or function. The study supports the use of either approach for the management of CMC1 osteoarthritis. This may facilitate injection in a primary care setting to expedite care.