

ABSTRACT

Background: Osteoarthritis (OA) is the most common form of arthritis. The high prevalence of OA worldwide, including in Indonesia and the high life expectancy in Yogyakarta, becomes one of the reasons this study was conducted. Moreover, the side effects of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) as the most common drugs for OA have been revealed. The high proportion of Sodium Chloride in various modalities of hypertonic solution therapy in previous studies becomes one of the reasons of using the iodized salt as the material. Besides, its availability in Indonesia is wide so that later the result can be widely and easily implemented.

Objectives: To analyze the effectiveness of iodized salt water therapy towards improvement of Knee injury and Osteoarthritis Outcome Score (KOOS) in patient with knee OA.

Method: This is a single blind randomized control clinical trial study with 22 participants involved. They are divided into the control group who received ~0% of iodized salt water therapy and experimental group who received 10% iodized salt water therapy. The KOOS questionnaire was obtained in day 0, day 10, and day 24 of the study.

Results: Baseline characteristic of both groups show no significant difference. For KOOS subscales score, no significant improvements were found in experimental group compared to placebo, both between day 0 and day 10 (pain: $p=0,158$ with 95%CI: -25,68 - 4,48; symptoms: $p=0,537$ with 95%CI: -16,78 - 9,01; ADL: $P=0,908$ with 95%CI: -7,85 - 7,01; sport/recreation function: $p=0,081$ with 95%CI: -32,98 - 2,07; and quality of life: $p=0,208$ with 95%CI: -25,12 - 5,81) and between day 10 and day 24 (pain: $p=0,020$ with 95%CI: -31,35 - (-3,01); symptoms: $p=0,093$ with 95%CI: -18,33 - 1,53; ADL: $P=0,024$ with 95%CI: -23,45 - (-1,83); sport/recreation function: $p=0,050$ with 95%CI: -39,08 - (-0,01); and quality of life: $p=0,188$ with 95%CI: -31,63 - 6,63).

Conclusion: There is no statistically significant improvement of patients who underwent iodized salt water therapy for all subscales of KOOS.

Keywords: Osteoarthritis; Iodized Salt Water Therapy;
Salt Water; Knee Injury and Osteoarthritis Outcome
Score (KOOS).