

Could Dextrose Prolotherapy being an Alternative Option to Hyaluronic acid Intraarticular Injection for Knee Osteoarthritis in Terms of Safety & Cost-Effectiveness? A Randomized Controlled Prospective Study

Dheyaa Mohammed Abdulwahab*, Waleed Faris*, Saad Abdul Azeez Abdul Lateef*, Kareem Hummood Hamad**, Sarmed muhammed mutasem**, Younis Abdul Rahman Rasheed Al Radhwany***

ABSTRACT

Knee osteoarthritis (KOA) is a common degenerative joint ailment marked by knee discomfort and impairment. The aim of this study is to evaluate Dextrose Prolotherapy (DPT) as an alternative to hyaluronic acid intraarticular knee injection for the treatment of KOA in term of safeness & cost-effectiveness. **Methods:** The present study was prospective randomized observational trial. Participants were assigned to one of two groups. Group 1; DPT was applied intraarticularly via 10cc injection on 60 patients and Group 2; single dose of Hyaluronic Acid (HA) (80 mg/4 mL) was administrated intra-articularly to other 60 patients. All affected persons were assessed prior to infiltrating and at 1, 3 and 6 after injection. **Results:** No significant differences in the distribution of demographics (gender and age) or patient classifications with Grade II OA and Grade III OA among the patients who administered IA DPT or injected with HA in knee OA treatment ($p > 0.05$). The difference did not reach significance between the WOMAC (Western Ontario and McMaster osteoarthritis index questionnaire) mean of 73.2 obtained in the DPT groups when contrasted with HA group with a WOMAC mean of 75.9 and $p < 0.05$. WOMAC score of each group decreased significantly when compared with the baseline at month 3 in both groups. The mean WOMAC was 51.08 in the HA group and 48.5 in the DPT ($P < 0.001$). At 6 months, the mean WOMAC score of the DPT group was 56.7 and this was 62.8 in the HA group ($P < 0.001$). **Conclusion:** The general DPT treatment has comparable outcome with that of HA injections.

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* Associate Professor, Orthopedic Surgeon
Department of Surgery
Al-Iraqia University College Medicine, Iraq.
Email: ajym3991@gmail.com

** Lecturer, Orthopedic Surgeon, Department of Surgery
Al-Iraqia University College Medicine, Iraq.

*** Professor, Orthopedic Surgeon Department of Surgery
Al-Iraqia University College Medicine, Iraq.