

Manual Pressure verses Shot Blocker in Reducing Intramuscular Injection-Related Pain: A Comparative Randomized Controlled Trial

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ABSTRACT

Background: Patients are unable to continue their planned management line because of a severe fear of the pain that is associated with intramuscular (IM) injection. Nurses have a moral and legal obligation to employ modern IM injection techniques to enhance the patient's experience. Non-pharmacological therapeutic alternatives, are used in pain management today, which can be executed without additional cost or time in clinical practice arena.

Aim: This study was conducted in order to compare the effect of shot blocker and manual pressure on reducing intramuscular (IM) injection-related pain in adults patients.

Methods: A prospective, comparative, randomized controlled trial (RCT). The study was conducted on 192 adults patients who received Diclofenac Sodium injections in Emergency Departments (EDs). The patients were randomized into 3 groups: ShotBlocker group (n=64), manual pressure group (n=64), and control group (n=64). Immediately after the injection the patients were asked to evaluate their level of pain. The Visual Analog Scale (VAS) was used to measure pain intensity.

Results: There are statistically significant differences in pain scores among the different groups being compared ($p < .001$). The shot blocker group had significantly lower pain scores compared to the manual pressure group (mean difference of -1.10938, $p < .001$) and significantly lower pain scores compared to the control group (mean difference of -3.17188, $p < .001$). The manual pressure group had significantly higher pain scores compared to the shot blocker group (mean difference of 1.10938, $p < .001$) and significantly lower pain scores compared to the control group (mean difference of -2.06250, $p < .001$). The control group had significantly higher pain scores compared to the manual pressure group (mean difference of 2.06250, $p < .001$) and significantly higher pain scores compared to the shot blocker group (mean difference of 3.17188, $p < .001$).

Conclusion: Shot Blocker and manual pressure applications were found to be effective in reducing pain levels in patients compared to the control group. While the Shot Blocker was found to be more effective in reducing pain levels when compared to the control and manual pressure groups. Therefore, ShotBlocker is recommended as an effective non-pharmacological method to reduce pain related intramuscular injection.

Keywords: Intramuscular Injection; Pain Management; Shot Blocker; Manual Pressure.

Bahrain Med Bull 2024; 46 (1): 1941 - 1948

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