Original Paper

The effect of different types of Transcutaneous electrical nerve stimulations (TENS) on severity of pain related with insertion of intravenous catheter (Angiocut)

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Abstract

Background and Objective: In clinical situation, pain occurs during intravenous Catheterization (IVC). Finding methods to reduce pain related with insertion of Angiocut. This study was performed to evaluate the effect of types of Transcutaneous Electrical Nerve Stimulation (TENS) on the pain severity regarding to insertion of Angiocut is very important. This study was performed to evaluate the effect of types of transcutaneous nerve stimulation (TENS) on the pain severity regarding to insertion of Angiocut.

Materials and Methods: This clinical trial study was performed on the 80 patients of Internal and CCU wards of Fatemieh Hospital in Semnan, Iran during 2001. In this study, severity of pain related with insertion Angiocut assessed and compared in four conditions; No TENS, low TENS (5 Hz), high TENS (100 Hz) and burst TENS (with frequence 100 Hz And burst frequence 2 Hz). The severity of pain measured by testes visual analogue scale (VAS), One-way ANOVA, Tukey, and Dunnett tests were used for comparing means of pain severity in different conditions.

Results: Findings showed significant difference between severity of pain during Angiocut insertion in four conditions ($P<0.05$), so that the lower intensity of pain was in the high-TENS group, while higher pain was in the No TENS group. Significant difference was between intensity of pain in the No TENS group with high TENS and burst TENS group ($P<0.05$), but no significant difference was between low TENS and No TENS groups.

Conclusion: This study showed that TENS was a effective method to reduce pain during Angiocut insertion. The lowest severity of pain was obtained in high TENS method. therefore, high TENS method can suggest as a effective method to reduce pain during Angiocut insertion.

Keywords: TENS, Pain, Intravenous Catheterization (Angiocut)

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