

ABSTRACT

Background: Primary palmar hyperhidrosis is a chronic autonomic disorder characterized by excessive sweating of the palms beyond physiological requirements. The condition significantly affects functional activities, psychosocial confidence, and quality of life among young adults. Conservative physiotherapy modalities such as Transcutaneous Electrical Nerve Stimulation (TENS) and iontophoresis have emerged as non-invasive treatment options for symptom control.

Aim: To compare the effectiveness of TENS therapy and iontophoresis therapy in reducing palmar sweating and improving Hyperhidrosis Disease Severity Scale (HDSS) scores among young adults with primary palmar hyperhidrosis.

Methods: A pilot comparative experimental study was conducted among 10 young adults aged 18–30 years diagnosed with primary palmar hyperhidrosis. Participants were equally divided into two groups: Group A received TENS therapy and Group B received iontophoresis therapy. Both interventions were administered three times weekly for three weeks. Outcome measures included gravimetric sweat rate assessment and HDSS scoring before and after intervention. Statistical analysis was performed using SPSS version 26.0. Paired t-test and independent t-test were used, and statistical significance was set at $p < 0.05$.

Results: Baseline gravimetric sweat rates were comparable between groups, with Group A showing 52.4 ± 6.1 mg/min and Group B showing 51.7 ± 5.8 mg/min. After intervention, both groups demonstrated improvement; however, iontophoresis produced greater reduction in sweating severity. Post-treatment sweat rate in the iontophoresis group decreased to 36.8 ± 5.4 mg/min, whereas the TENS group showed only moderate reduction. HDSS scores improved in both groups, with superior improvement observed in the iontophoresis group. Statistical analysis revealed significant differences between the two interventions ($p < 0.05$), indicating greater effectiveness of iontophoresis therapy in reducing palmar sweating and improving functional comfort.

Keywords: Gravimetric Sweat Test, HDSS, Iontophoresis Therapy, Primary Palmar Hyperhidrosis, TENS Therapy

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