

The Effectiveness of Using Modified Transcutaneous Spinal Electroanalgesia on Patients with Acute Sickle Cell Painful Episode

Ibrahim A. AL-Dabbous, MBBS, DCH, ABCP* Amin A. AL-Gafly, MCs, SS**
Ali H. AL-Jam'a, MBBS, ABCIM*** Ghada A. Alqudaihi, MBBS, MSc****

Objective: To evaluate the effectiveness of modified Transcutaneous Spinal Electroanalgesia (mTSE) on acute painful episode in sickle cell disease (SCD).

Design: Prospective Non-Randomized Experimental Study.

Setting: Pediatric and Medical Ward, Qatif Central Hospital, Eastern Province of Saudi Arabia.

Method: A prospective study conducted between April to July 2004. It included all SCD patients admitted in pediatric and medical wards with moderate/severe acute pain involving lower back and/or lower limbs, not responding to the initial management over the first four hours of presentation. Modified Transcutaneous Spinal Electroanalgesia (mTSE) was used for 90 minutes. Data entry and analysis were done by Epi-Info software (Version 3.2.2).

Result: One hundred seven patients were included in the study. Age ranged between 5 and 50 years. Males were 57 (53.27%); 50 (51.10%) of the females were adults and 32 (56.14%) of the males were pediatrics. The mTSE had lowered the pain level to mild in 20 (38.46%) adults, compared to 32 (58.18%) children. Twenty-eight (49.12%) males showed improvement, compared to 28 (56%) females. Post-mTSE pain score was 3.6 ± 2.5 , compared to 7.5 ± 2.1 pre-mTSE, (p -value <0.01). The response to mTSE was more apparent in pediatrics (3.1 ± 2.7) compared to adults (4.1 ± 2.2), P -value=0.01. Pediatric male patients responded better to mTSE (2.8 ± 2.6) compared to adult male patients (4.1 ± 1.8), P -value=0.005.

Conclusion: Our preliminary study reveals the efficacy of mTSE in controlling bony pain of acute painful episodes in SCD patients.

* Consultant
Pediatric Department
** Senior Physical Therapist
Physiotherapy Department
*** Consultant
Internal Medicine Department
**** Epidemiologist
Epidemiology Department
Qatif Central Hospital
Qatif, Kingdom of Saudi Arabia
Email: idabbous@gmail.com