Effect of Topical Anesthetic Cream on Pain During Periareolar Injection of Technetium Tc99m Sulfur Colloid for Sentinel Lymph Node Biopsy in Breast Cancer: A Randomized Control Trial

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Abstract:
Background: Injection of Tc99m to localize nodes for sentinel lymph node biopsy is reported by patients as very painful. The purpose of this study was to determine if anesthetic cream reduces pain associated with periareolar injection of Tc99m and to help elucidate conflicting literature regarding the efficacy of anesthetic cream for this procedure.

Methods: A randomized, double-blind, placebo-controlled methodology was used for adult females with breast cancer undergoing periareolar injection of Tc99m for sentinel lymph node biopsy. Pain levels were compared using anesthetic cream (2.5% lidocaine/2.5% prilocaine) vs. placebo. Patient exclusion criteria included use of opioids or adjuvant pain medication or injecting Tc99m the day before surgery. The Numerical Rating Scale was used to assess pain levels immediately after the injections.

Results: Comparing 23 experimental and 26 control patients, there was no significant difference between the experimental (median = 4) and the control group (median = 5) on level of pain experienced U=0.492, P > .05.

Conclusions: The experimental group had a slightly lower median pain score; however, there was no statistically significant difference between those who used the cream compared with those who used a placebo, supporting the conclusion that anesthetic cream does not reduce pain during Tc99m injections. This study adds to the current literature to provide a stronger position that there is no benefit to using anesthetic cream for this procedure.