

5th International Conference on

Clinical & Experimental Dermatology

July 13-15, 2015 New Orleans, USA

Anesthetic blister induction to identify biopsy site prior to Mohs surgery

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Background: Wrong-site surgeries in dermatology are not uncommon due to difficulty finding the initial biopsy site. In fact, a survey of Mohs surgeons indicated that 14% of malpractice cases resulted from wrong-site surgery. The Mohs surgeon may be unable to determine the surgical site if the referring physician does not include detailed documentation such as a photograph, diagram or written description of the biopsy site including anatomical landmarks as reference. However, patients often return for Mohs surgery many weeks following the initial biopsy. By this time the biopsy site has healed and become less visible to both patient and physician making it difficult even with proper documentation. Patients themselves may have incorrect site recall particularly if the biopsy was in a location not visible to the patient. A study by Perri et al revealed that 31.4% of patients could not accurately identify their biopsy site. Despite these attempts to decrease wrong-site surgery further techniques are exigent in confirming the surgical site.

Objective: To investigate the utility of anesthetic blister induction at a suspected biopsy site to identify the location prior to Mohs surgery.

Methods: A patient presented with a clearly identifiable neoplasm which was biopsied and histologically diagnosed as a squamous cell carcinoma. Subsequently, the patient was scheduled for Mohs surgery. On presentation for the surgical procedure, the initial biopsy site was not clearly identifiable and delayed initiation of treatment. Upon injection of local anesthetic, blister formation was developed in the initial biopsy site; clearly depicting our surgical location. Our presented surgical case was confirmed with frozen sections upon Mohs surgery.

Results: The biopsy site was easier to locate with the assistance of a blister that formed as a result of local anesthetic administration.

Conclusions: This is a clear example of how a new technique of blister formation secondary to anesthetic injection can highlight what may be an obscure operative site. The bulla formation induced amongst the weakly adherent malignant keratinocytes allows operation site identification with higher degree of certainty. Through the use of many available means to confirm biopsy site location, dermatologists can prevent unneeded delay and damage to the patient. As various methods develop and provide assistance in Mohs surgery, we describe preoperative bulla formation as an additional or adjunctive tool to surgical site identification.

Biography

Emily Tongdee has completed her B.S. degree in biology at the age of 20 years from the University of Florida and is currently a third year medical student in the class of 2017 at Florida International University Herbert Wertheim College of Medicine. She has co-authored a publication in breast cancer research in the Journal of Biological Chemistry and in dermatology in the Journal of Drugs in Dermatology. She is currently invested in publishing papers in dermatology. She is especially interested in pursuing a combined residency in internal medicine and dermatology.

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