



DERMATOLOGICAL SURGERY

APICAL TRIANGLE: A HIGH-RISK AND CAUTIONARY ANATOMICAL SITE FOR BASAL CELL CARCINOMA.

Jinmeng Zhang⁽¹⁾ - M. Laurin Council⁽²⁾

Hawaii Permanente Medical Group, Dermatology, Wailuku, United States⁽¹⁾ - Washington University School of Medicine, Dermatology, Saint Louis, United States⁽²⁾

Basal cell carcinoma (BCC) is the most common skin cancer, composing 75% of all cutaneous malignancies. Although the mortality associated with BCC is low, it can spread to adjacent tissues, causing local damage and significant morbidity. The facial H-zone, which follows the embryonic fusion planes, includes regions of mesenchymal migration and fusion of primordial facial processes. These areas, including the mid face and ears, have been found to be high-risk for BCCs. One study revealed that 35% of the midfacial lesions were located at the embryonic fusion planes, and BCC was more than four times more likely to occur on an embryonic fusion plane than on other regions of the midface. These locations were also associated with two or more stages of Mohs micrographic surgery (MMS), and were one of the predictive factors for extensive subclinical spread, requiring three or more MMS stages for tumor clearance.

The apical triangle is defined by the lateral border of the melolabial crease, medial border of the lateral ala, and inferior border of an imaginary horizontal line between the inferior edge of the ala and the melolabial crease. Many clinicians improperly reference the triangle as the alar crease, and it is also a site of embryonic fusion plane within the H-zone. It was discovered to have the highest BCC relative tumor density in midfacial lesions. In addition, we observed that BCCs at the apical triangle are more likely to have more subclinical spread and perineural invasion, requiring more than average numbers of Mohs stages per case. Often, these cases necessitate further resection and reconstruction by plastic surgery/otolaryngology, and need further adjuvant radiation. Our findings characterize the apical triangle as a significant high-risk anatomical location associated with greater morbidity, which renders extra precautions for clinicians and Mohs surgeons when managing BCC at this site.

