

Randy W. Head II

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LSU Health Sciences Center, New Orleans, LA

Dr. Caitlin G. Robinson, MD, FAAD, FACMS
Louisiana Mohs and Skin Surgery

“A Rare Co-Occurrence of Hidradenocarcinoma and Squamous Cell Carcinoma on the Left Posterior Calf Treated with Mohs Micrographic Surgery”

Introduction: Hidradenocarcinoma is a rare malignant tumor of the eccrine sweat glands, accounting for 6% of eccrine tumors, and 0.001% of all tumors. Additionally, these tumors can be aggressive. The current ten-year overall survival rate is estimated to be 60.2%, with a high likelihood of the tumor metastasizing to distant sites. Histologically, the tumor appears as a nodular, dermally based mass that can infiltrate the dermis and subcutaneous fat. The individual tumor cells can have a basaloid appearance, eosinophilic cytoplasm, or a transparent, washed-out cytoplasm. Clinically, the tumor presents as a slow-growing, painless firm nodule that can secrete serosanguineous fluid. Due to its rarity, hidradenocarcinoma has no established treatment guidelines. Most recommendations suggest wide local excision as the primary treatment option. However, in the right clinical setting, Mohs micrographic surgery (MMS) could be considered. In the following case, a rare co-occurrence of hidradenocarcinoma associated with squamous cell carcinoma in situ (SCCIS) is successfully treated with MMS.

Case: A 68-year-old female presented for Mohs surgery of a biopsy-proven SCCIS located on the left posterior calf. Upon examination, two <1cm pigmented nodules adjacent to the prior biopsy site were noted. Various treatment options were discussed for the SCCIS. These treatments included Mohs surgery, excisional surgery, radiation therapy, and topical therapies. The patient was assigned a Mohs appropriate use criteria (MAUC) score of 6, indicating that additional information and physician judgement were required to determine appropriateness of Mohs surgery. Given the size greater than 1 cm and nodular appearance, it was decided to proceed with Mohs surgery. The lesion was debulked and processed for evaluation along with the first Mohs layer. Following evaluation of the Mohs slides, the 1st layer revealed a dermal mass consisting of monomorphic, basaloid cells. Due to the unexpected histology, Mohs surgery was paused, and the specimen was submitted for permanent sectioning and dermatopathological evaluation. The pathology resulted as hidradenocarcinoma. Because the histology of the tumor was easily recognizable to the surgeon, Mohs surgery was continued. An initial margin of 0.5 cm was taken around the prior surgical site. Utilizing hematoxylin and eosin (H&E) histochemical stains, frozen section analysis showed no evidence of residual tumor at the margin after one Mohs layer. Surgical repair was performed using a purse-string intermediate closure. The patient later underwent ultrasound imaging of her inguinal lymph nodes to rule out regional metastasis, which demonstrated no abnormal findings.

Discussion: Hidradenocarcinoma is a malignant neoplasm derived from the eccrine sweat glands. Sweat gland tumors have a similar incidence in men and women. In most cases, patients remain asymptomatic other than some general discomfort at the site of the lesion. If untreated, the tumor can metastasize to regional lymph nodes, bones, and skin. Due to their aggressive nature, these tumors require timely diagnosis and treatment. Though the tumor is rare, Mohs surgery could be considered as primary treatment due to the tumor's recognizability on frozen sections and lack of need for special stains. Further studies are needed to establish efficacy of Mohs in these rare cases. This case adds to the limited existing literature and supports Mohs surgery as a possible effective treatment option for hidradenocarcinoma.