Sebaceous adenoma in the setting of immunosuppression for kidney transplantation

Jacob Reinhart, MD,[a] and William D. James, MD[b]
San Diego, California and Philadelphia, Pennsylvania

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INTRODUCTION

Although immunosuppressed transplant recipients are known to have an increased risk of nonmelanoma skin cancers, a causal relationship between immunosuppression and sebaceous neoplasms has not yet been described. However, accumulating evidence suggests that immunosuppressed individuals are at an increased risk of developing sebaceous neoplasms.[1] In this case, we present an atypical, rapidly growing sebaceous adenoma in an immunosuppressed kidney transplant recipient, supporting this suggestion.

CASE REPORT

A 60-year-old African American man with a history of kidney transplantation 11 years prior presented to the dermatology clinic for evaluation of a new lesion on his left lower abdomen. The patient endorsed rapid growth of the lesion over a 6-month period. Medications for posttransplantation immunosuppression included prednisone, cyclosporine, and azathioprine. There was also a history of a perioral basal cell carcinoma, successfully excised via Mohs micrographic surgery 1 year before presentation.

Physical examination showed a solitary 2-cm exophytic nodule of yellow and pink color on the lower portion of the left abdomen (Fig 1). The lesion was pedunculated with a filiform appearance. Shave biopsy was performed. Features consistent with sebaceous adenoma were identified: multiple lobules of sebaceous differentiation with increased layering of germinative cells and centrally located mature sebocytes (Figs 2 and 3). The patient was informed of the benign nature of his sebaceous adenoma and instructed to follow up in 6 months for his history of basal cell carcinoma.

DISCUSSION

Sebaceous adenomas are rare cutaneous neoplasms of sebaceous gland origin, comprising only 0.5% to 0.7% of all monomorphic adenomas[2] and accounting for an estimated 1.1% of skin biopsies.[3] They appear as small nodules or papules, typically 0.5 to 1 cm in diameter, and are yellow, tan, or flesh colored.[4] Clinical appearance may be heterogeneous, exhibiting multinodular, filiform, or verrucous morphology. Growth pattern is often insidious and asymptomatic, rarely presenting with symptoms of irritation. The head and neck region is the most common location, but lesions may arise in any area.[5] Because sebaceous adenomas are benign, treatment for most individuals is conservative management, although bothersome lesions can be removed for patient comfort.

The authors report this case to highlight the potential for kidney transplantation and immunosuppressive medications to play a role in the development of otherwise rare sebaceous adenomas. One large retrospective analysis of clinicopathologic data showed that immunosuppressed recipients of organ transplants are more likely than immunocompetent individuals to develop cutaneous appendageal tumors.[1] Furthermore, in immunocompromised patients, appendageal tumors have a greater likelihood of being sebaceous in origin

From the Department of Undersea Medicine, US Navy, San Diego[a] and Department of Dermatology, University of Pennsylvania, Philadelphia.[b]
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Correspondence to: Jacob Reinhart, MD, 1980 Kettner Blvd 614, San Diego, CA 92101. E-mail: reinhart.jacob@gmail.com.

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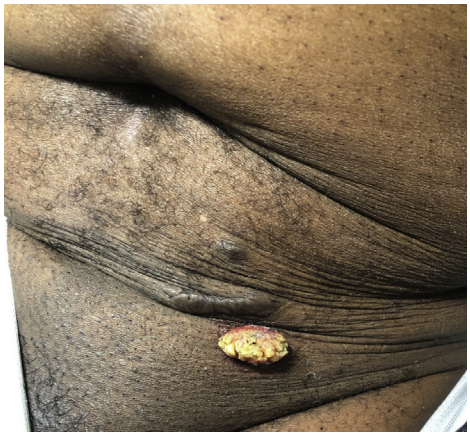

Fig 1. Clinical image showing a pink and yellow 2-cm filiform exophytic growth on the lower portion of the patient's left abdomen.

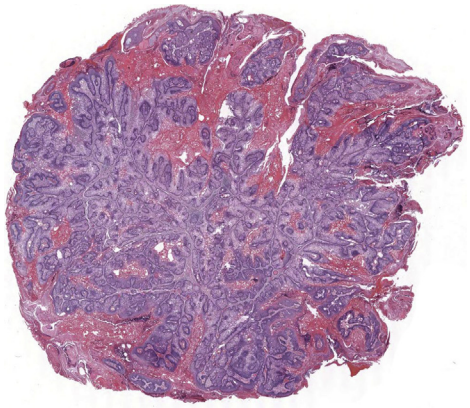

Fig 2. H&E staining of a shave biopsy specimen: multiple lobules resemble a normal sebaceous gland in the upper dermis. Original magnification, ×8.

(30% of appendageal tumors in immunocompromised patients compared with 4% in immunocompetent patients).[1]

Sebaceous neoplasms have also been reported in immunocompromised patients with AIDS[6,7] and in the context of Muir-Torre syndrome unmasked by immunosuppression for various reasons.[8-10] In addition to these reports, the case of our 60-year-old patient suggests that immunosuppression may play a role in sebaceous tumor development.

Growth rate, tumor location, and size of tumor at presentation are 3 unique factors of this case that are not fully addressed in the literature of patients who are transplant recipients. This individual's tumor grew rapidly over 6 months to a relatively large diameter of 2 cm at the time of presentation. Furthermore, the lesion occurred in the suprapubic or lower abdominal region; this is uncharacteristic for sebaceous adenomas, which typically arise in the head and neck region. Interestingly, a previous report identified a sebaceous neoplasm after solid-organ transplantation in the same suprapubic location.[11]

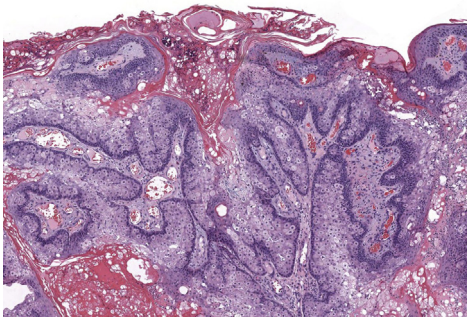

Fig 3. Higher-power magnification shows an increased layering of germinative cells at the periphery of lobules, with immature and mostly mature sebocytes in the lobule centers. Cellular atypia is not present. Original magnification, ×50.

Reports of sebaceous neoplasms with mixed adenoma and carcinoma features arising in transplant recipients suggest the possibility of a sebaceous adenoma–sebaceous carcinoma neoplastic sequence.[11,12] Histopathologic analysis of these lesions identified focal regions of infiltrative growth and cellular atypia within an otherwise mostly well-differentiated collection of sebaceous gland-forming sebocytes.[11,12] Although histopathologic analysis of our individual's lesion showed no evidence of sebaceous carcinoma, treatment with complete excision and close follow-up for recurrence is reasonable because the potential for malignant growth exists.

Additional research is indicated because sebaceous adenoma pathogenesis in the setting of organ transplant immunosuppression is likely multifactorial and remains not fully understood. Transplant recipients should be educated to pursue dermatologic evaluation for the appearance of any new cutaneous lesions or recurrence of previous ones. Dermatologists must be aware of the potential for uncharacteristic neoplastic processes in these patients and direct treatment plans accordingly.

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