Invasive porocarcinoma masquerading as a basal cell carcinoma: highlighting this rare but aggressive clinical and histological mimickers

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Background

Porocarcinoma is a rare form of skin cancer arising from the eccrine or apocrine glands. It comprises roughly 0.005% of epithelial cutaneous neoplasms.[2,3] Some contend that it develops from a pre-existing poroma while others hypothesize that long-term sun exposure, exposure to chemicals, and immunosuppression may play a role in progression.[1] The clinical presentation of this entity can be variable and may include red papules/nodules or fleshy skin-colored to brown papules/nodules that typically ulcerate.[1] Most present asymptomatically in the seventh and eighth decades of life and the lesion may be present for years before becoming symptomatic. Porocarcinoma can be aggressive and commonly recur and may metastasize. In their review article, Salih et al. found metastasis present in 31% of cases, most commonly to the regional lymph nodes.[1] There exists a wide variety of histopathologic subtypes of porocarcinoma including the basaloid type and the clear-cell type, which may be misdiagnosed as basal cell carcinoma or squamous cell carcinoma, respectively.[1,2]

Case

An 82-year-old female with a history of basal cell carcinoma, squamous cell carcinoma, and melanoma in-situ presented to her dermatologist with a 7-mm telangiectatic papule on her right infraorbital cheek that was asymptomatic and had been present for several years (Figure 1). A shave biopsy of this lesion was performed and the histopathology was rendered to be consistent with a nodular basal cell carcinoma involving the specimen base. Mohs micrographic surgery was recommended for definitive treatment.

On presentation to Mohs micro graphic surgery clinic, the patient was noted to have a 0.5 x 0.5-cm non-healing lesion in the area of prior biopsy. The patient was consented for Mohs surgery and the lesion was removed. Interestingly, the diagnosis of basal cell carcinoma was brought into question on evaluation of frozen section histology during the Mohs procedure. The specimen was then sent for permanent sectioning and further evaluation. Analysis of the hematoxylin and eosin-stained specimen revealed a predominantly dermal malignant adnexal neoplasm with nests of basaloid cells as well as areas of central necrosis, ductal differentiation, and squamoid foci (Figure 2). Immunostains were positive for epithelial membrane antigen (EMA), CD117 (partial), SOX-10 and Ber-EP4. Ultimately, the patient was diagnosed with an invasive porocarcinoma. The diagnosis and possible adjuvant treatment options were discussed with the patient. Given the fact that margin control had already been obtained via Mohs surgery, the patient opted for close observation. At the time of publication, the patient has remained stable and free of recurrence for two years.

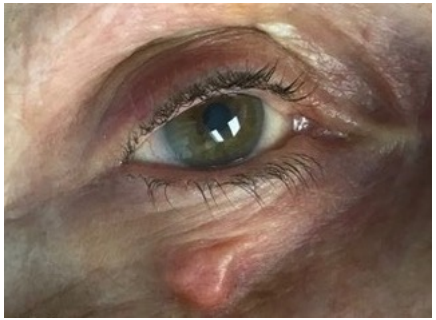

Figure 1: An 82-year-old female with a history of melanoma in-situ and non-melanoma skin cancer presented with an asymptomatic 7-mm translucent papule on her right infraorbital cheek that had been present for several years. Shave biopsy was performed and a diagnosis of nodular basal cell carcinoma was rendered.

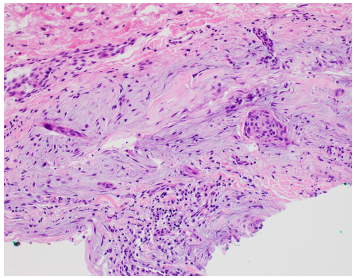

Figure 2: Analysis of the hematoxylin and eosin-stained specimen revealed dermal nests of basaloid cells with cytologic atypia infiltrating the stroma (hematoxylin-eosin, original magnification X400)

Discussion

This case highlights the importance of considering porocarcinoma on the differential of non-melanoma mimickers. In particular, there are reports of the basaloid and clear-cell histopathologic variants of porocarcinoma being misdiagnosed as basal cell carcinoma and squamous cell carcinoma, respectively.[1,2] Given the generally aggressive nature of this rare entity and potential risk of locoregional and distant metastasis, patients should be treated promptly and thus accurate diagnosis is essential. In a series of eight cases of porocarcinoma, 50% were initially misdiagnosed or received an incomplete diagnosis and the mean time until definitive treatment was 36 months.[2] Misdiagnosis or delays in tumor diagnosis may impact patient outcomes.

Currently, the gold standard of treatment involves complete surgical resection that may be accompanied by adjuvant chemotherapy, radiation, and/or lymph node dissection.[4] Given the fact that there is a nearly 20% local recurrence rate and over 10-30% incidence of distant metastasis, it is imperative to obtain clear margins with surgical excision.[4] Thus, Mohs micrographic surgery is often advocated in order to reduce risk of recurrence and morbidity.[5]

References

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