An Uncommon Malignant Neoplasm of the Caruncle

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The caruncle is an uncommon site for the occurrence of neoplasm despite its diverse histological composition of conjunctival, lacrimal, and skin tissues. The following case report describes a 66-year-old man who suffered from a primary undifferentiated carcinoma of the left caruncle. He remained well with no evidence of recurrence 24 months after a complete surgical excision. To our knowledge, this could represent the first case of undifferentiated carcinoma of the caruncle to be reported in the English literature. Early detection and complete excision for this type of lesion could lead to a satisfactory clinical outcome.

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lobules of undifferentiated carcinoma cells lying beneath the stratified squamous epithelium (Figure 3). The tumor cells consisted of marked nuclear pleomorphisms, hyperchromasia, distinct nucleoli, and scanty amphophilic cytoplasms (Figure 4). Frequent mitotic activity and apoptosis were evident. No squamous or glandular differentiation was seen and no cytoplasmic vacuolation was identified. Histochemical stain (oil-red-O) for lipid material in frozen section was negative, excluding the possibility of sebaceous carcinoma. Immunohistochemical study findings for epithelial marker (API/AE3) were positive while lymphoid marker (leukocyte common antigen), melanocytic marker (S-100 protein), muscle marker (desmin), and neuroendocrine markers (neuron-specific enolase, chromogranin) were all negative. The Epstein-Barr virus–encoded RNAs, which are untranslated RNAs present in Epstein-Barr virus–infected cells, were absent in the specimen.9 The tumor was classified as an undifferentiated carcinoma.

COMMENT

The caruncle has a unique embryological origin, with contribution from the lower eyelid and its appendages admixed with the ingrowth from the lower canaliculi.10 When fully developed, the caruncle is lined by non-keratinized epithelium that is similar to conjunctival epithelium, while it harbors all the skin appendageal elements including hair follicles, sebaceous glands, and sweat glands.11 Accessory lacrimal glands can also be seen in this area. As a result, caruncle may spawn any tumor or cyst that occurs in the conjunctiva, skin, or lacrimal gland.12,13 Surprisingly, these are all rare, especially malignant neoplasm, which might be attributed to the small anatomic size of the caruncle.

To our knowledge, this is the first report of undifferentiated carcinoma of the caruncle. We regard this...
tumor as a primary carcinoma of caruncle because of the location of the tumor, the exclusion of other primary tumors in the nearby structures by the computed tomographic scan, and the lack of primary tumor found or developed in other parts of the body during the follow-up period. There is, however, at least 1 case each of undifferentiated carcinomas reported in the orbit and maxillary sinus in a 20-year review of orbital exenteration. In addition, 1 case of anaplastic tumor was reported by Pecorella and Garner in their series of caruncular tumors during a 59-year period. No further details or the exact lineage of the tumor was provided. Leung et al reported a case of sebaceous carcinoma of caruncle that recurred only 10 years after initial excision. Apart from the usual routes of metastatic spread, caruncular tumor may shed along the intracanalicular pathway.

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