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Primary sinonasal choriocarcinoma

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Abstract Primary choriocarcinoma of sinonasal tract has not been previously documented. The aim of the study was to report, for the first time, 2 cases of primary sinonasal choriocarcinoma. The differential diagnosis is discussed and also the theories concerning the histogenesis of this neoplasm are briefly reviewed. Two male patients of 44 and 49 years of age complained of epistaxis and nasal obstruction of 2-week duration. Computerized axial tomographic scan of the head revealed an opacity of the left nasal cavity in one patient and a destructive lesion of the maxillary sinus in the other. Histopathologically, the lesions disclosed a dual cell population composed of cytotrophoblastic cells with uniform, round nuclei, clear cytoplasm, admixed with large multinucleated syncytiotrophoblastic cells, with bizarre nuclei, and abundant eosinophilic cytoplasm. Immunohistochemically, the tumors were notable for strong keratin and β-chorionic gonadotrophin (HCG) positivity. The serum levels of HCG were 13 000 and 779 mIU/mL, respectively. One patient treated with maxillectomy, postoperative radiotherapy, and 5 courses of VIP chemotherapy (cisplatinum, etoposide, ifosfomide) died with brain metastases 10 months after diagnosis. The other patient received 4 courses of etoposide, and he is alive without tumor, 10 months after diagnosis. The serum levels of HCG are still negative. The present cases demonstrated the widespread distribution of germ cell tumors in the human body and lead to further support of the existence of primary choriocarcinomas in the sinonasal tract. Correct identification of this neoplasm is therefore important for institution of specific therapy.
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Keywords: Sinonasal; Choriocarcinoma; Germ cell tumors

1. Introduction

Malignant germ cell tumors and teratocarcinosarcomas exhibiting histologic features similar to germ cell tumors of the gonads arise on rare occasions in the sinonasal tract. Immature teratomas, teratomas with malignant transformation, and endodermal sinus tumors are neoplasm of infants and early childhood, whereas schneiderian carcinomas with endodermal sinus differentiation and teratocarcinosarcomas have only been documented in adults [1,2]. Choriocarcinoma usually arises in the uterus and gonads. However, it can also occur in extragonadal locations such as the mediastinum, sacroccocygeal region, and pineal gland [3,4]. Primary sinonasal choriocarcinoma, to the best of our knowledge, has not been previously described.

The purpose of this communication is to report the first case of primary sinonasal choriocarcinoma, provide a detailed survey of differential diagnostic considerations, and also to discuss the histogenesis of these neoplasm.

2. Case report

2.1. Case 1

A 44-year-old man referred to the Department of Ears, Nose, and Throat of the Clinica Avila, Caracas, Venezuela, in December 2007, with a 2-week history of a bleeding tumor of the left nasal cavity, which was histologically diagnosed as undifferentiated carcinoma. Computed tomographic scan of

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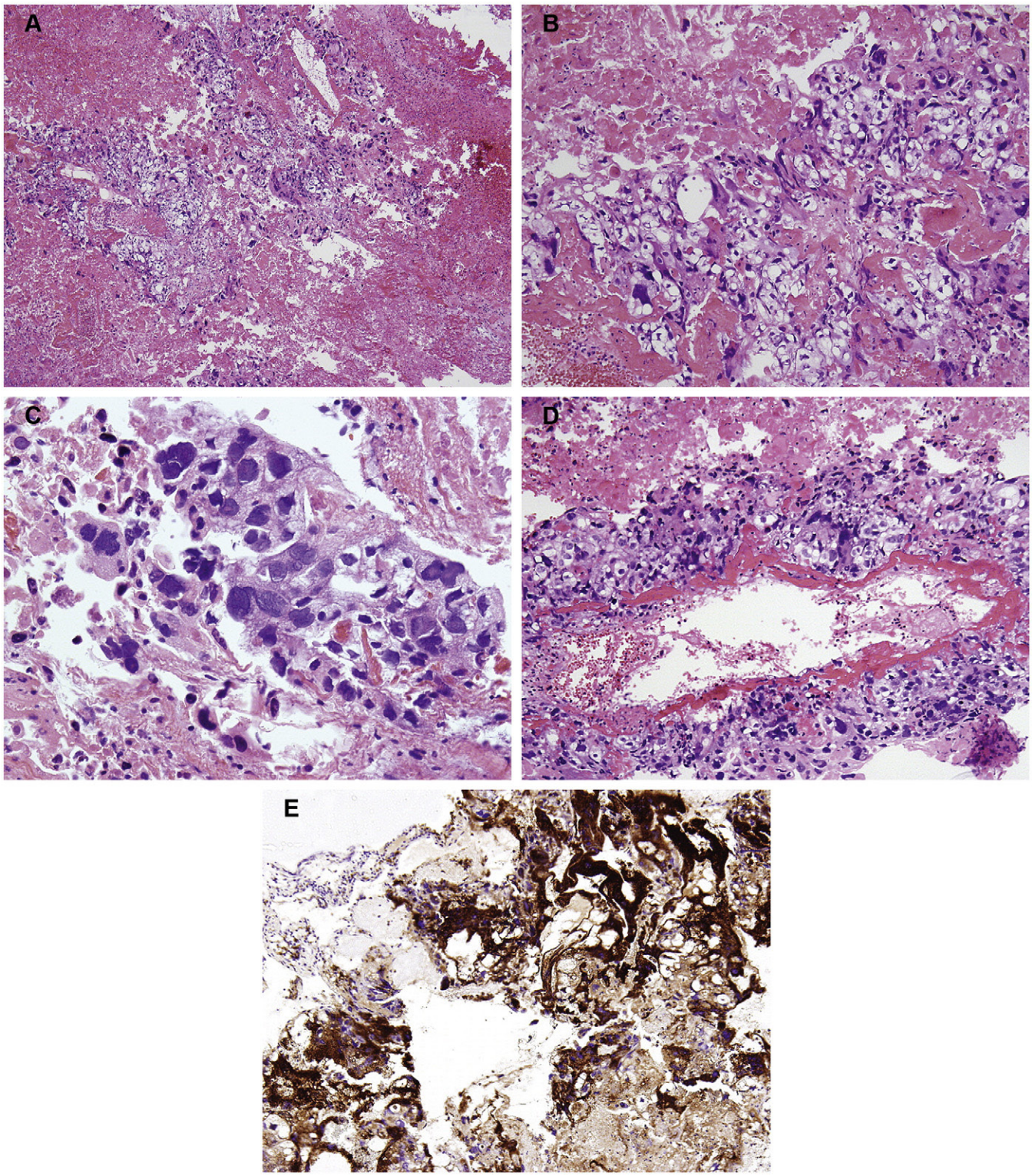

Fig. 1. (A) Choriocarcinoma with characteristic dimorphic population of smaller monomorphic cytotrophoblasts and surrounding multinucleated syncytiotrophoblasts. (B) High-power view of small mononuclear round cells with clear cytoplasm resembling cytotrophoblasts. (C) High-power view of multinucleated giant syncytiotrophoblasts. (D) Villouslike structure lined by mononuclear cytotrophoblasts. (E) Immunoperoxidase preparation showing immunoreactivity for β-HCG in syncytiotrophoblastic cells.