



Clinical Image

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Neuroendocrine Carcinoma Arising in a Wound after Endoscopic Sinus Surgery for Maxillary Sinusitis.

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About the Study

Sinonasal tumors with neuroendocrine differentiation are a rare group of neoplasms that account for only 5 % of all sinonasal malignancies [1,2]. Paranasal neoplasms very rarely arise postoperatively from the maxillary sinus. We encountered a case of neuroendocrine carcinoma arising in a wound after endoscopic sinus surgery for maxillary sinusitis. At the first medical examination, we tried to discriminate between maxillary tumor and postoperative recurrence of maxillary sinusitis.

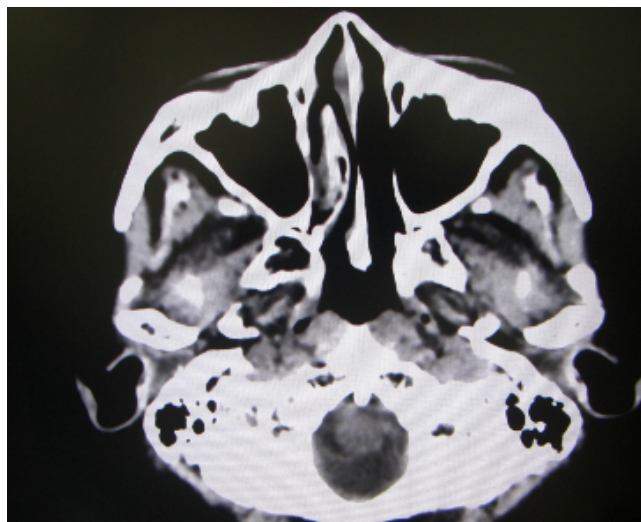


Figure 1: Left maxillary sinus wound without sinusitis or tumor findings.

A 66-year-old Japanese woman visited our hospital with one month history of swelling of the left cheek. On her past history, 6 years previously, she received only drainage operation of the left maxillary sinusitis by endoscopic sinus surgery, but without a histopathologic examination. One year before (5 years after endoscopic sinus surgery

for maxillary sinusitis, when 65-years-old), postoperative CT scan demonstrated that the left maxillary sinus wound was clear without sinusitis or tumor findings (Figure 1).



Figure 2: Bleeding mass in the left nasal cavity (*).



Figure 3: Bleeding mass in the left superior gingiva (*).

At this first medical examination, a bleeding mass was observed in the left nasal cavity (Figure 2) and left superior gingiva (Figure 3). Therefore, we suspected a neoplasm rising from the postoperative maxillary sinus in addition to the postoperative recurrence of maxillary sinusitis. T1 and T2 weight MRI, and enhanced MRI in left maxillary sinus showed tumors with uneven low and high intensities. This tumor invaded the left pterygo-palatine fossa and submucosa outside the maxillary lateral wall (Figure 4). We examined a biopsy of the maxillary tumor obtained by endoscopic surgery. On the histological examination (H&E staining), the carcinoma tissues uniformly showed the proliferation of cells with round or angular

nuclei without findings of gland tube formation or hyperkeratosis (Figure 5). Moreover, immunohistochemical studies showed positive staining for keratin, CAM5.2, and CD56, but not LCA (leukocyte common antigen). From the above results, we finally diagnosed this case as neuroendocrine carcinoma.

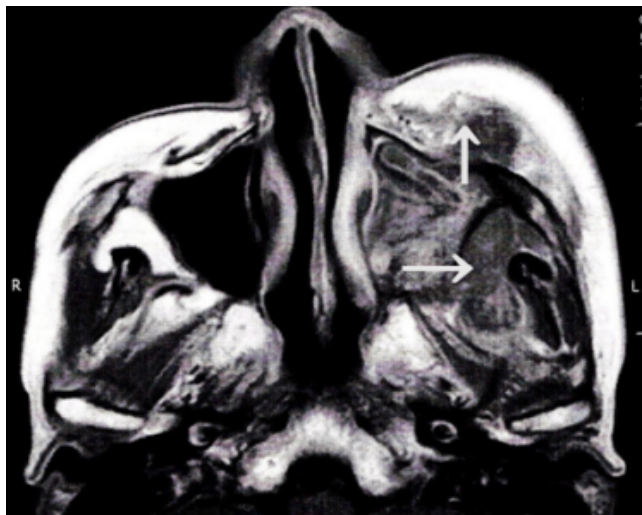


Figure 4: Tumor which invaded the left pterygo-palatine fossa and submucosa outside the maxillary lateral wall (arrows).

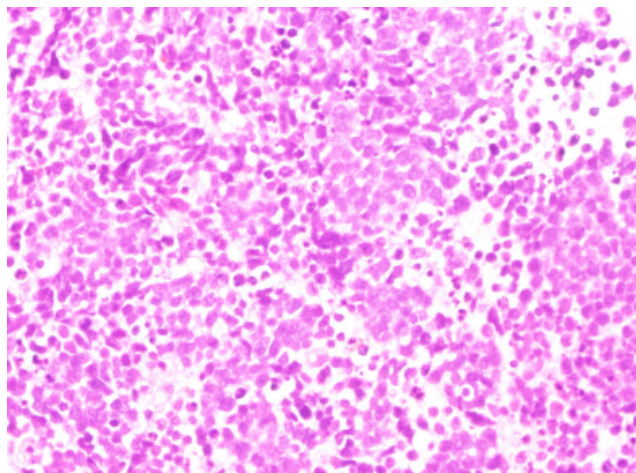


Figure 5: Carcinoma tissues uniformly showing the proliferation of cells with round or angular nuclei without findings of gland tube formation or hyperkeratosis.

References

1. Mitchell EH, Diaz A, Yilmaz T, Roberts D, Levine N, et al. (2011) Multimodality treatment for sinonasal neuroendocrine carcinoma. *Head Neck* 34: 1372-1376.
2. Van der Laan TP, Lepsma R, Witjes MJ, van der Laan BF, Plaat BE, et al. (2016) Meta-analysis of 701 published cases of sinonasal neuroendocrine carcinoma: The importance of differentiation grade in determining treatment strategy. *Oral Oncol* 63: 1-9.