EOPS Meeting 2022

Date of meeting	Valencia, May 25 – May28
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Case number:	21-492
Material distributed:	glass slildes

Presumed left upper eyelid chalazion

Clinical History

A 71 year old female presented with a five month history of a painless nodule on her left upper eyelid suspicious for a chronic lipogranulomatous lesion (Fig. a).There was a subtarsal conjunctival congestion and bluish-brownish pigment inclusions (Fig. b). The medical history was uneventful and the patient was healthy apart from arterial hypertension and hypothyreosis. Since the lesion was unresponsive to therapy the patient was scheduled for chalazion removal. Intraoperatively, no chalazion-typical material could be removed. The excision of small fragments of the lesion was quite painful for the patient but yielded enough material for a first histopathological evaluation which made complete removal of the lesion necessary.

Ocular Pathology

Gross inspection
Upper left eyelid specimen, 11 x 6 x 4 mm.

Light microscopy
Lesion composed of pleomorphic small blue cells invading the tarsal plate and the adjacent muscle (Fig. c, d). Invasion of lymphatic vessels present (no angioinvasion). Proliferation rate up to 25-30%.

Immunohistochemistry
Positive: chromogranin, synaptophysin (Fig. e), cytokeratin 7 (focal)
Negative: TTF-1 (Fig. f), CK20

Diagnosis neuroendocrine tumor (NET, G3)

Follow-up

Although TTF-1 was negative indicating a primary lesion and not a metastasis of a lung tumor which is typically TTF-1 positive, our tumor board advised to conduct a FDF-PET/CT, cMRI, and a DOTATOC PET/CT. These investigations revealed lesions in the lung (left bronchus), skin, axilla and paraaortal. Thus, our tumor is likely to represent a metastasis of the lung tumor.

Discussion

This case highlights the necessity to analyze tissue from clinically benign appearing lesions. In addition, the pathological diagnosis should not be based on one immunohistochemical marker alone since this may lead to false results (first interpretation was primary eyelid tumor based on TTF-1 negativity).
Additional clinical imaging features were helpful to reach the final diagnosis and may be considered in all neuroendocrine tumors which are CK20 negative and thus not Merkel cell tumors.

References

Lange C, Auw-Haedrich C et al. Neuroendocrine Tumor of the Eyelid: A Clinicopathological Case Report. *JAMA Ophthalmol.* 2014;132:652-4
Oronsky B, Carter CA et al. Nothing But NET: A Review of Neuroendocrine Tumors and Carcinomas. *Neoplasia.* 2017;19:991-1002

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Differenzialdiagnose Chalazion: Metastase eines neuroendokrinen Tumors

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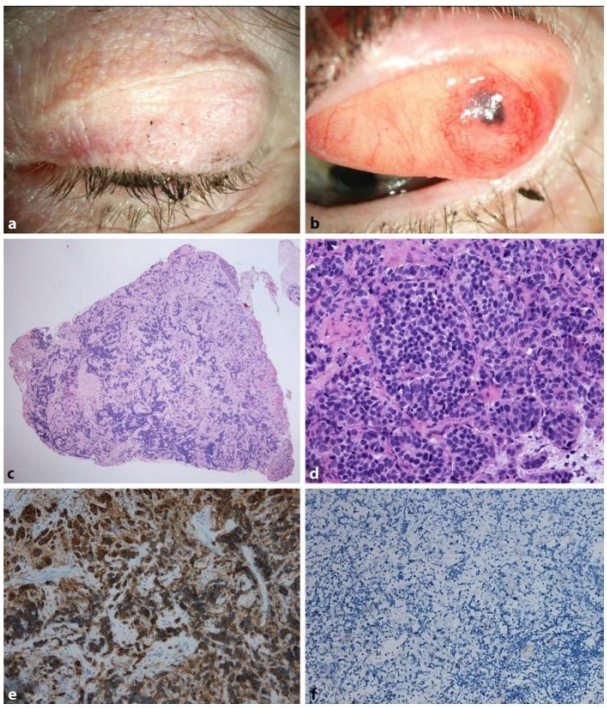

Abb. 1 ◀ Eine 71-jährige Frau ohne Allgemeinsymptome stellte sich mit einem seit 6 Monate bestehenden therapieresistenten Chalazion am linken Oberlid vor (**a**, **b** Befund nach Ektropionieren). Bei der Exzision ab interno konnte das Material nur partiell mit der spitzen Schere entfernt werden. Die histologische Aufarbeitung der exzidierten Gewebestücke (**c**, HE-Färbung, Vergr. 40:1) ergab viele kleinzellige basophile Zellen (**d**, HE-Färbung, Vergr. 200:1). Die immunhistochemischen Färbungen waren positiv für Synaptophysin (**e**, Vergr. 100:1), Chromogranin A und den Somatostatinrezeptor. TTF1, meist bei Metastasen neuroendokriner Lungentumoren nachweisbar, wurde nicht exprimiert (**f**, Vergr. 100:1). Die Läsion wurde nachreseziert, allerdings ergab das Staging mittels FDG- und DOTATOC-PET/CT einen Lungentumor (per Biopsie als neuroendokriner Primärtumor der Lunge klassifiziert), positive Lymphknoten und Hautläsionen. Zusammenfassend stellt der Oberlidbefund trotz Negativität für TTF1 eine Metastase eines neuroendokrinen Lungentumors dar. *CT* Computertomographie; *DOTATOC* Somatostatinanalogon Tyr^3-Octreotid (TOC), gekoppelt an das Chelatormolekül DOTA; *FDG* Fluordesoxyglucose; *HE-Färbung* Hämatoxylin-Eosin-Färbung; *PET* Positronenemissionstomographie; *TTF-1* „thyroid transcription factor-1"

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