



Figure 1. CT demonstrated a small rounded air bubble below the eyelid and possibly a lateral slight thickening of the right retina.

Discussion

The third edition of the International Classification of Headache Disorders consists of almost 400 headache types and subtypes [5]. Diagnosing and treating the most common headache disorders are not so difficult but recognizing unusual types of headache, either primary or secondary, may be challenging for many physicians [6]. Atypical headache syndromes do not appear to be as rare in clinical practice as has been generally believed [7]. The etiology of most headaches can be elucidated by careful history and examination [8]. In our case, there was no evidence in the natural history which could be explained by an eyestrain headache, migraine, tension-type headache, or other primary headache disorder. The normal ESR and a normal TMJ-status ruled out temporalis arteritis and TMJ headache. The blood pressure monitoring showed a maximum of the systolic level to 150 mm Hg, and in combination with the clinical symptoms, a debut of a hypertension headache was unlike. The lateralized character of the headache in combination with the periorbital manifestation and the undoubted help of radiological investigation led to identifying the cause of the problem. With complement imaging of orbital MRI was verified the ocular tumor diagnosis. MRI transcended CT in tumor detection, demonstrating 100% of tumors studied, compared with 88% seen with CT [9].

Intraocular metastases are relatively uncommon and typically present with ptosis, proptosis, pain or headache, diplopia, decreased vision, or red eye pressure effects [10]. Retinal metastases represent less than 1% of intraocular metastatic cases [11]. Only 29 cases of metastatic disease to the retina have been reported in the literature and cutaneous melanoma was the most common malignancy to demonstrate retinal metastasis [11–13].

In our case, the patient suffered from retinal metastasis because of primary lung carcinoid. To the best of our knowledge, this is the first time to report a retinal metastasis of such a tumor. The diagnosis of a metastatic lesion in the eye can be challenging, especially when the patient searches with a headache as a primary symptom. This case highlights the difficulties in the assessing one of the most common presenting symptoms in general practice, neurology and emergency clinics and underlies the importance of neuroimaging in cases where symptoms persist and other causes of headache are excluded.

Acknowledgment

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List of abbreviations

CRP	C-reactive protein	148
CT	Computed tomography	149
ER	Emergency department	150
ESR	Erythrocyte sedimentation rate	151

Further investigation with ophthalmoscopy revealed macular degenerative changes and physiological excavation of the optic disk. A spool-shaped grayish tumor, measuring 8.7 × 7.2 mm², was also revealed temporarily from the macular area with max protrusion 3.2 mm. The finding was not macroscopically typical of malign melanoma.

Chest X-ray demonstrated a 21–22 mm hypodense, lumbar nodule on the right lower lobe which provided radiologically suspicion of the tumor. A chest CT with contrast revealed a lobular 23–24 mm tumor, within the posterior segment of the right lower lobe. Moreover, a 1 cm large lymph node noticed within the lower right of the hila in connection with the underlying bronchus and the left thyroid lobe was relatively enlarged.

Fluorodeoxyglucose-positron emission tomography (PET) scan demonstrated a suspect tumor/metastasis in the right middle lobe and to the left of the abdomen, a focal uptake in a seemingly wall-thickened sigma loop. Ultrasound of the liver and abdomen was normal.

Colonoscopy and gastroscopy were normal.

Endobronchial ultrasound in combination with PET/CT and with ⁶⁸Gallium-labeled somatostatin analogs and finally, a retinal biopsy has shown that the patient suffered from a carcinoid tumor with ocular retinal metastasis. The patient was referred to the oncology department for further therapy.

152 MRI Magnetic resonance imaging
 153 PET Positron emission tomography
 154 T1WI T1-weighted images
 155 TMJ Temporomandibular joint

156 **Consent for publication**

157 The author has the consent to publish this case from the patient
 158 who is still in life.

159 **Ethical approval**

160 There is no need for ethics approval.

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217 **Summary of the case**

218	Patient (gender, age)	1	Female, 78
219	Final diagnosis	2	Carcinoid tumor with ocular retinal metastasis
220	Symptoms	3	Headache and transient blurred vision
221	Medications	4	Oncological treatment
222	Clinical Procedure	5	Stabile
223	Specialty	6	Neurology-ophthalmology