rare nonspecific atypical cells. He is currently being followed closely by medical oncology, otolaryngology, our ophthalmic plastic surgery clinic, and the familial oncology clinic. The latter clinic ruled out Muir-Torre syndrome and hereditary nonpolyposis colorectal cancer syndrome. Sixteen months after his initial presentation to our institution, he remains recurrence-free.

Sebaceous cell carcinomas can be locally invasive and can metastasize to lymph nodes and distant organs. There are a few reports in the literature of eyelid sebaceous cell carcinomas producing lymph node metastases after the original tumour was excised.<sup>3-5</sup> Where reported, the time span between excision and metastasis detection ranged from 17 months to 7 years.<sup>3,4</sup> In Shields et al.'s<sup>3</sup> article, it is unclear whether their one case of caruncular sebaceous cell carcinoma had a metastasis. Therefore, to our knowledge, this is the first reported case of a caruncular sebaceous cell carcinoma presenting with lymph node metastasis after surgical excision of the original lesion. Moreover, there were only six months between the initial excision of the caruncular mass and the appearance of the lymph node metastasis, which is a significantly shorter period than what is reported in the literature. This can be partially explained by the fact that sebaceous cell carcinomas are known to masquerade as more benign lesions, thus evading timely diagnosis and excision.

Sebaceous cell carcinoma is primarily a disease of older adults. Shields et al.<sup>3</sup> reported a median age at presentation of 72 years. When sebaceous cell carcinoma occurs in much younger patients, there is typically a history of irradiation for a childhood malignancy, especially retinoblastoma.<sup>6</sup> However, our patient has no such history, making his case even more unique.

Given that sebaceous cell carcinoma can invade the surrounding conjunctiva and even cornea via pagetoid spread, some authors recommend map biopsies of

# Transient homonymous hemianopia caused by cerebral venous sinus thrombosis: Case report

Homonymous hemianopia (HH) is caused by various lesions in the retrochiasmal visual pathways involving the optic tract, lateral geniculate body, optic radiation, and striate cortex.<sup>1</sup> The main causes of such lesions are stroke, head injury, and intracranial tumours.<sup>2</sup> Well-known risk factors of venous thromboembolism in females of reproductive age are obesity (3-fold risk for body mass index [BMI] > 30), varicose veins (1.5-fold risk), coagulation disorders (such as activated protein C resistance or factor V Leiden mutation), immobilization, pregnancy, smoking, medication with corticoids, family disposition, and combined oral contraceptives (COCs).<sup>3</sup> Venous thromboembolism is still

the surrounding conjunctiva even if obvious invasion is not visible.<sup>3</sup> We offered this to our patient at the last visit and are waiting to hear back from him about whether he is interested in pursuing this option.

Because there is a 5-year mortality rate of 50% to 67% for patients with lymph node metastases,<sup>7</sup> this patient will be followed closely into the foreseeable future.

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a major health problem worldwide, although it is often clinically silent and undiagnosed, especially in younger females. Underlying conditions that may cause cerebral venous sinus thrombosis (CVST) vary, and the etiology is unknown in such cases. There are only a few case series of HH with CVST reported in the literature. Oral anticoagulation for approximately 3 to 6 months is recommended for treatment if it is related to oral contraceptive usage.<sup>4</sup>

Our aim was to describe a rare initial presentation of right HH caused by CVST associated with oral contraceptive use in a 24-year-old female. Her symptoms improved rapidly and the visual field defect was much improved with oral anticoagulation treatment in 1 week. Our case highlights the importance of imaging techniques to resolve unexpected clinical findings.

## CASE REPORT

A 24-year-old female was admitted to our Neurology Department with right-sided headache and neck pain for 4 weeks and with sudden onset of blurred vision in her right visual field. On clinical examination, she was alert and healthy. The neurologic examination (including mental, memory, motor, and sensory function, as well as coordination) found normal results. She was referred to our Ophthalmology Department for the visual evaluation. Visual acuities of 0.6 = 20/32 (OD) and 0.8 = 20/25(OS) were observed. There was no papilledema, and the fundus examination was normal. Anterior segment examination found normal results, and the angles were open. Intraocular pressure was 16 mm Hg OU. The dilated fundus examination found normal results. Visual field to confrontation suggested a right HH. This was confirmed on automatic perimetry showing a complete HH. Automated perimetry was performed using the Humphrey Visual Field Analyzer model 750 (Carl Zeiss Meditec Inc, Dublin, Calif.), and the Swedish Interactive Threshold Algorithm program (30-2 mode, STATPAC for trend analysis) was used to measure the visual field (Fig. 1). Laboratory examinations found all subtotals of the complete blood cell count to be within the reference limits. Her history revealed only COC usage (an antiandrogenic COC containing 0.0035 mg ethinyl estradiol and 2 mg cyproterone acetate per day for 5 months) and no other medications.

The hematologic panel results, including the coagulation profile tests, serum prothrombin time, and prothrombin time/international normalized ratio values, were within the reference limits. On Doppler ultrasonography, no other venous thrombosis in the lower extremities was determined. She was referred to the cardiology department to evaluate the cardiac risk factors. Her electrocardiogram showed no abnormality. Echocardiography found no cardiac abnormality (such as atrial fibrillation, hypertrophic cardiomyopathy, or patent foramen ovale).



Fig. 1-Automated perimetry found a complete right homonymous hemianopia.

Magnetic resonance imaging (MRI) of the brain with intravenous contrast media was performed 1 day after onset of the patient's complaints. An ischemic lesion was determined in the right occipital lobe on diffusion (Fig. 2A, B) and brain (Fig. 2C, D) MRI. Pathologies of vascular origin were considered because of the ischemic lesion in the right occipital lobe. Magnetic resonance angiography and magnetic resonance venography (MRV) were performed. A rare form of stroke due to thrombosis of the right transverse sinus and jugular vein was diagnosed by MRV (Fig. 3A, B). She was prescribed 300 mg acetylsalicylic acid (Aspirin) once daily, 40 mg enoxaparin (Clexane) twice daily, and 5 mg warfarin (Coumadin) once daily as anticoagulation therapy. With this treatment, her symptoms improved rapidly, and the visual field was much improved but not completely resolved in 1 week (Fig. 4).

## DISCUSSION

We present a patient admitted with sudden-onset HH in the setting of CVST. To our knowledge, only a few case series of HH with CVST have been reported in the literature.<sup>5,6</sup> Well-known risk factors of venous thromboembolism in females of reproductive age are obesity (3-fold risk for BMI > 30), varicose veins (1.5-fold risk),



Fig. 2—A-D, Diffusion-weighted magnetic resonance image (A) b-1000 and (B) apparent diffusion coefficient (ADC) map show the ischemic lesion in the right occipital lobe (white arrows). Axial (C) FLAIR image (TR/TE, 6000/100; TI, 2000) and axial (D) T2weighted TSE image (TR/TE, 4500/100) show an increased signal intensity in the subcortical white matter in the right occipital lobe (white arrows) owing to a rare form of stroke by thrombosis of the right transverse sinus. The infarct area is not dark on the ADC map (B) owing to pseudonormalization or T2-shinethrough effect. (FLAIR, fluid-attenuated inversion recovery; TR, repetition time; TE, echo time; TI, inversion time; TSE, turbo-spin echo).



Fig. 3–A, B, Maximum (pixel) intensity projection images from magnetic resonance venography show normal flow on the left transverse sinus (white arrows) and internal jugular vein (black arrow), but no flow on the right side owing to thrombosis of the right transverse and sigmoid sinuses and internal jugular vein.



Fig. 4-Automated perimetry found significant improvement in the visual field defect.

coagulation disorders (such as activated protein C resistance or factor V Leiden mutation), immobilization, pregnancy, smoking, medication with corticoids, family disposition, and COCs.<sup>3</sup> Underlying conditions that may cause CVST vary, and the etiology is unknown in such cases. Several studies have indicated that COCs and thrombophilia greatly increased the risk of CVST.<sup>7</sup> Combined estrogen-progestin oral contraceptives have been associated with an increased risk of venous thromboembolic events. This thrombotic risk was attributed to the estrogen content, which prompted the development of oral contraceptives containing less estrogen. Use of formulations containing lower-dose estrogen still confer about 2fold to 4-fold increased risk of venous thromboembolic events compared with non-use.8 As the most common causes of HH are infarctions, meningiomas, gliomas, and metastatic lesions, these must be kept in mind. However, only a few patients with HH presenting with neurosyphilis, migraine, demyelinating disease, arteriovenous malformation, or neurosarcoidosis have been reported.9

MRI and MRV are the best tools for both the diagnosis and the follow-up of CVST.<sup>10</sup> In our case, MRI found right acute occipital lobe infarction (see Fig. 2A-D). MRV showed thrombosis of the right transverse sinus and left internal jugular vein (see Fig. 3A, B).

Venous thrombosis has traditionally involved the superficial cerebral venous system,<sup>11</sup> as described in our case. To our knowledge, this is the first published case with HH due to CVST associated with COC usage.

Available treatment data from the literature offer the use of anticoagulation in patients with CVST.<sup>12</sup> Oral anticoagulation is recommended for 3 months in patients with idiopathic CVST and for 3 to 6 months if it is related to pregnancy or oral contraceptives. In patients with hereditary thrombophilia, it is used for 6 to 12 months or longer.<sup>4</sup> Anticoagulant therapy was started after the diagnosis of CVST in our patient and continued. Her symptoms improved rapidly, and the visual field defect was much improved in 1 week.

# CONCLUSION

Homonymous hemianopia is an uncommon vision problem, and our case highlights the importance of imaging techniques to explain unexpected clinical findings. All females must be informed about the increased risk of venous thromboembolism during COC usage. The other possible diseases should be excluded with detailed clinical history, laboratory findings, and imaging techniques. The most important aspect of this case is the early diagnosis and treatment. Therefore, an accurate and timely diagnosis is important in such cases, and accurate techniques are required for appropriate treatment.

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# Proton beam radiotherapy of progressive pediatric choroidal osteoma: First experience

Choroidal osteoma is a rare intraocular tumour predominantly appearing in healthy females in the second or third decade of life.<sup>1</sup> Usually, the tumour emerges unilaterally; only in 20% to 25% of cases is choroidal osteoma bilateral.<sup>1</sup> It is typically located in the juxtapapillary or peripapillary region.<sup>1</sup> Funduscopically, choroidal osteoma presents as a yellow-white to orange-red lesion.<sup>1</sup> Ultrasonography reveals an elevated choroidal lesion with high reflectivity and a typical acoustic shadowing.<sup>1</sup> Visual