A 13-year-old male with no previous medical history presented to an emergency department with acute-onset, painless vision loss in his right eye. On presentation, visual acuity in the involved eye was 20/200, and in the uninvolved left eye was 20/20. There was no relative afferent pupillary defect, and intraocular pressure was 15 mm Hg in each eye.

Slit-lamp examination of the anterior segment in each eye was unremarkable. Dilated funduscopic examination of the affected eye revealed a focal preretinal hemorrhage involving the fovea (Figures 1 and 2). Otherwise, examination of the right eye did not reveal any traumatic sequelae or other abnormalities, and the left retina was normal.

A thorough review of systems was negative for any potential underlying illness. For good measure, the emergency room attending had already ordered a basic laboratory workup, which included a complete blood count and coagulation studies with normal findings.

Although the clinical assessment was suggestive of Valsalva retinopathy (see sidebar), the patient and his parents denied any history of antecedent Valsalva-type VALSALVA MANEUVER AND THE RETINA

During a Valsalva maneuver, increased intrathoracic pressure against a closed glottis diminishes venous return to the heart, decreasing stroke volume, and subsequently increases systemic venous pressure. In the eye, the retinal vasculature is also subject to these downstream effects, whereby a sudden rise in intraocular venous pressure can lead to spontaneous rupture of retinal capillaries, classically in the macula, resulting in Valsalva retinopathy. Typically, the hemorrhage is located beneath the internal limiting membrane, although bleeding may occur at all layers (intraretinal, subretinal, intravitreal). Numerous associations with Valsalva retinopathy have been reported in the literature—from blowing up balloons to constipation to vigorous dancing1-3—and eliciting the underlying cause is not always straightforward, as the accompanying case demonstrates.

maneuvers or trauma. In the absence of a known precipitant that could explain the sudden occurrence of the hemorrhage, the patient was instructed to return for a follow-up examination within the next several days to assess any changes occurring during the interval.

At the return visit, the patient’s vision remained 20/200 and the hemorrhage persisted. During this encounter, the patient’s mother, who had accompanied him, stepped out of the examination room to tend to another matter. The patient, now alone, grew visibly anxious at the prospect of his visual acuity not returning. Upon questioning, he reported engaging in repeated episodes of vigorous autoerotic activity preceding the onset of his vision loss. Reassurance was provided that the old wives’ tale about masturbation was inaccurate (well, sort of). When his mother returned, close observation was advised.

By a subsequent visit 4 weeks later, the hemorrhage had nearly resolved (Figure 3), and the patient’s visual acuity had recovered to 20/20.

Case closed.

DISCUSSION

This case highlights the importance of acquiring a focused, comprehensive history from patients, including the all-too-often neglected social history. Unless a direct correlation to the patient’s presenting pathology is suspected (ie, posterior placoid syphilis), physicians are unlikely to initiate a detailed discussion of a patient’s sexual history—let alone that of an adolescent. Posing these questions can be awkward and uncomfortable for the ophthalmologist, given the relative infrequency of these types of visits to an eye clinic, but having such information earlier in this case may have obviated the need for any further laboratory investigations or workup.

The relationship between sexual activity and Valsalva retinopathy was first described in a series of six patients by Friberg et al. The authors proposed that, during orgasm, an abrupt increase in sympathetic outflow produces an acute increase in preretinal vascular tone and pressure, which, when opposed by reduced venous outflow from the accompanying Valsalva maneuver, may result in sufficiently elevated retinal intravascular pressure to lead to vessel rupture and resulting hemorrhage. Of note, none of the patients in this series disclosed the associated sexual behaviors until specifically questioned by the physician about predisposing activities that led to the event. Since the time of this publication, several additional reports detailing episodes of Valsalva retinopathy in conjunction with various sexual activities have emerged.

An additional unique barrier in this case was that the patient was an adolescent accompanied by his parents, likely influencing the amount of information he was willing to disclose to the physician. When sexual activity is considered as a potential cause of stress-induced retinal pathology in adolescents, it may be advisable to obtain sensitive portions of the history in private.

Despite its widespread prevalence, masturbation is a highly stigmatized topic that is viewed with negative connotations across many cultural settings. In research regarding sexual behavior among teenagers, masturbation is among the most sensitive topics, and underreporting is frequently found even with the use of confidential reporting techniques. Nevertheless, masturbation is believed to be a common behavior among adolescents entering puberty.

In a national probability sample of sexual behaviors in the United States, masturbation was more commonly reported than any partnered sexual behavior among adolescents 14 to 17 years old. In a retrospective study, masturbation onset was found to occur by age 13 in 53% of males and 25% of females. In a population-based cross-sectional survey with 820 respondents, masturbation occurrence increased with age among males: at age 14, 62.6% reported at least one episode, whereas 80% of 17-year-old males reported engaging in the activity. Recent masturbation also increased with age in males in the survey: 67.6% of 17-year-olds reported masturbating in the past month.
at the time of the survey, compared with 42.9% of 14-year-olds. In females, masturbation also increased with age (58% at age 17 compared with 43.3% at age 14), but recent masturbation did not.8

CONCLUSION

Sexual behaviors are a subject of social taboo. Many individuals find discussion of sexual behaviors embarrassing ...”

Hopefully, this case of masturbation maculopathy (12 times) will raise awareness of this potential association to retina specialists and other eye care providers so that, when it is encountered, an appropriate, focused history can be obtained and proper counseling offered to the patient.


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