

Valsalva and Vision: An Unexpected Retinal Complication Following Gastrointestinal Endoscopy

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Abstract

Case Report

Valsalva retinopathy is a rare ophthalmological complication resulting from a sudden increase in intrathoracic pressure leading to preretinal hemorrhage. We report a case of a 23-year-old patient who developed a premacular retrohyaloid hemorrhage after esophagogastroduodenal fibroscopy under general anesthesia, presenting with sudden visual loss in one eye. Initial observation was followed by unsuccessful Nd:YAG laser treatment, leading to vitrectomy with subsequent visual recovery to 10/10. Valsalva retinopathy typically affects young individuals, often with spontaneous resolution. Management is individualized, considering hemorrhage location and potential retinal toxicity risks.

Keywords: Valsalva retinopathy, Preretinal hemorrhage, Retrohyaloid, hemorrhage, Vitrectomy, Gastrointestinal endoscopy, Macular hemorrhage, Ophthalmological complication, Nd, YAG laser.

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INTRODUCTION

Valsalva retinopathy is a preretinal hemorrhage caused by a sudden increase in intrathoracic pressure during a Valsalva maneuver (forced expiration against a closed glottis), leading to rupture of superficial retinal capillaries initial [1,2]. It is a rare but significant ophthalmological complication. First described by Thomas Duane in 1972, this pathology can occur in various clinical contexts, notably after intense physical exertion, vomiting, difficult childbirth, or following medical procedures such as esophagogastroduodenal fibroscopy.

OBSERVATION

This is a 23-year-old patient, followed in gastroenterology for gastroesophageal reflux refractory to treatment. The patient presented with a sudden decrease in visual acuity in the left eye after esophagogastroduodenal fibroscopy performed under general anesthesia. Visual acuity was 10/10 in the right eye and 4/10 in the left eye; examination of the anterior segment was unremarkable in both eyes. Fundus examination revealed a premacular retrohyaloid hemorrhage in the left eye (Figure 1). Examination of the contralateral eye was normal. Before confirming Valsalva retinopathy, a general clinical examination and biological workup were performed. Initially, close monitoring was proposed for the patient, but after 3

weeks of follow-up, visual acuity remained unimproved in the left eye. Treatment with Nd:YAG laser at the inferior border of the blood collection was performed to drain the hematoma without success. Given the lack of clinical improvement and non-resorption of the hemorrhage, and to avoid macular toxicity, vitrectomy was proposed for the patient. The outcome was favorable with visual recovery to 10/10 one month post-vitrectomy (Figure 2), and remained stable after 6 months of follow-up.

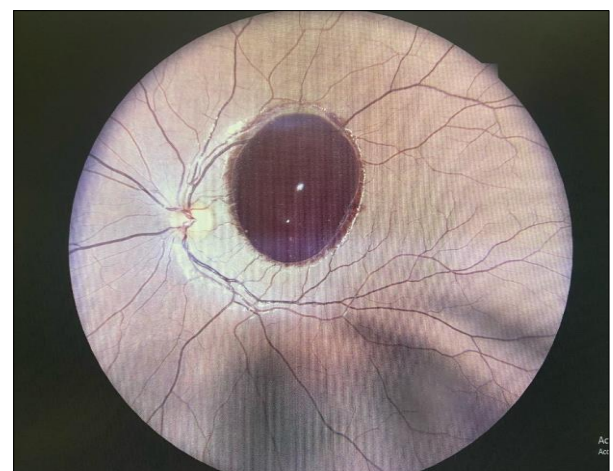


Figure 1: Retinophotograph of the left eye showing a premacular retrohyaloid hemorrhage

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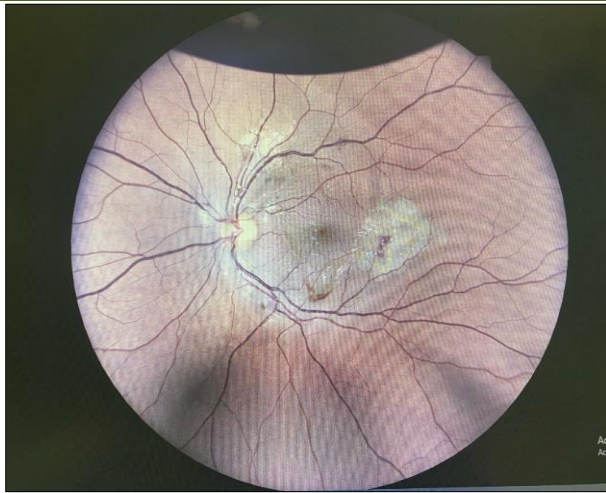


Figure 2: Retinophotograph of the left eye at 1 month post-vitrectomy

DISCUSSION

Hemorrhages following a Valsalva effort are superficial retinal hemorrhages with a particular affinity for the macula; however, subretinal, intraretinal, and intravitreal hemorrhages have also been reported. Their location remains a subject of controversy: beneath the internal limiting membrane or under the posterior hyaloid [3]. It is a rare condition but affects young and active individuals, generally without underlying ophthalmological or systemic pathology. Initial therapeutic abstention and observation are classically recommended for three weeks after the initial diagnosis [4]. Treatment is not standardized and must be decided on a case-by-case basis according to the location, patient factors, and short-term evolution of the hemorrhage. The

evolution of Valsalva retinopathy is most often spontaneously favorable. Nd-YAG laser or vitrectomy are only performed in cases of persistent hematoma due to the risk of retinal toxicity.

CONCLUSION

Valsalva retinopathy, a rare but significant complication, often affects young active individuals following a Valsalva maneuver (physical exertion, medical procedures). It manifests as a preretinal hemorrhage, generally with a favorable visual prognosis and spontaneous resorption [1-6]. OCT and angiography aid in diagnosis [2-7].

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