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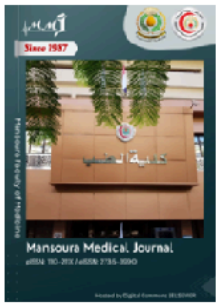

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Pasyechnikova N

The Filatov institute of Eye Diseases and Tissue Therapy, Odessa, Ukraine.

Korol A

The Filatov institute of Eye Diseases and Tissue Therapy, Odessa, Ukraine.

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By

Pasyechnikova N., Professor, MD, PhD; Korol A, MD.

From

The Filatov Institute of Eye Diseases and Tissue Therapy, Odessa, Ukraine.

Correspondence to: Pasyechnikova N., The Filatov Institute of Eye Diseases and Tissue Therapy, Frantcuzskiy bulv. 49/51, Odessa 65061, Ukraine.

andrikkorol@operamail.com, sole@priocom.com.ua

ABSTRACT

Key words : Valsalva retinopathy, premacular hemorrhage, Nd:YAG laser posterior hyaloidotomy

Premacular hemorrhage frequently accompanies Valsalva hemorrhagic retinopathy. It may exist several months. This entire time patient has no binocular vision.[1] Our case shows possibility of decreasing of term for treatment of premacular hemorrhage.

Case report

A 19-year-old young man after a physical training noticed in his left eye dark red opaque spot. This patient came to our clinic after two weeks of unsuccessful conservative treatment. The vision acuity of the affected eye was 20/200 with the best correction. The perimetery found out central positive absolute scotoma in it. Intraocular pressure did not increase. B-mode echography showed dense formation with prominence into the vitreous of about 1,5 mm. There was revealed dense circumscribed premacular hemorrhage on the eye fundus. The patient did not suffer from diabetes mellitus. The blood biochemical examination did not show any pathology in his coagulate and anticoagulant system.

Nd: YAG laser posterior hyaloidotomy was performed in the left eye of the patient. Laser radiation focused on his posterior hyaloid membrane of the lower part of the hemorrhage. Immediately after the formation of the hole in the posterior hyaloid mem-

brane the blood started dramatically draining in the lower vitreous. In general there was performed only one hole in the posterior hyaloid membrane.

The vision acuity of the patient increased to 20/20 within a week after the operation. The central positive absolute scotoma disappeared. In the central part of the vitreous there was observed a small amount of diffused elements of blood, in the lower part there was accumulation of the drained blood. In the macular part there were no pathologic changes. Around the macula there were light reflexes of detachment border of the posterior hyaloid membrane. Intraocular pressure did not increase. During following examinations the vision acuity of the patient was 20/20, the perimetery was without pathologic changes. The blood in the vitreous was gradually resolving. At first it resolved in the central vitreous – after a month, then resolved in the lower vitreous – after 2 months from the operation. A year later during the follow up examination the vision acuity was 20/20 (Fig. 1). The vision field was without scotomas. The blood in the vitreous resolved completely. The macula was clean and without macular oedema. Around the macular part there still were light reflexes of the detachment border of the posterior hyaloid membrane.

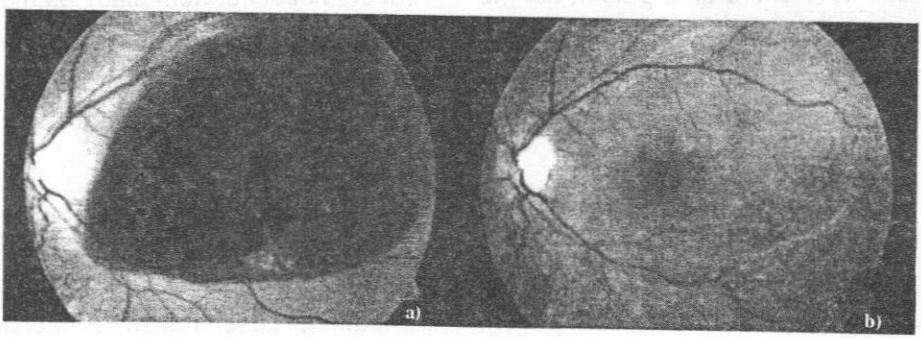

Figure 1. Premacular hemorrhage during Valsalva hemorrhagic retinopathy: a) before treatment; b) 1 year after Nd:YAG laser posterior hyaloidotomy

COMMENT

In 1973 Duane described hemorrhages on the eye fundus after general trauma and excessive physical training. He explained the mechanism of hemorrhage formation by increasing of abdominal or thoracic pressure and further retrograde increasing blood pressure in retinal vessels with destructions of them. Prognosis of premacular hemorrhage in Valsalva hemorrhagic retinopathy is favorable. It may resolve by itself within several months without any complications. But the vision is poor until macular part contains blood.[1]

In all parts of the world the Nd:YAG laser posterior hyaloiditomy for accelerating drainage and resolving of premacular hemorrhage is used.[2] At first it was applied by J. Faulborn in 1988 for drainage of premacular hemorrhage in diabetic retinopathy.[3] This laser operation allows to decrease the terms of premacular hemorrhage treatment. As our case report shows the vision improves to normal stage during within a week after the operation.

We would like to attract attention to the fact that the randomized clinical trials of Nd:YAG laser posterior hyaloiditomy for premacular hemorrhages was not conducted in any country of the world. However Lawrence A. Raymond in 1995 noted the necessity of the randomized clinical trials for determination of treatment tactics in premacular hemorrhages.[4]

Our case report shows dramatic drainage of premacular hemorrhage in Valsalva hemorrhagic retinopathy after Nd:YAG laser posterior hyaloiditomy and accelerated improvement of the vision acuity after blood evacuation from macular part.

REFERENCES

1. **Duane TD. (1972) :** Valsalva hemorrhagic retinopathy. Trans Am Ophthalmol Soc.;70:298-313.

2. **Ulbig MW, Mangouritsas G, Rothbacher HH, et al. (1998) :** Long-term results after drainage of premacular subhyaloid hemorrhage into the vitreous with a pulsed Nd:YAG laser. Arch Ophthalmol. Nov; 116(11):1465-9.

3. **Faulborn J. (1988) :** Behandlung einer diabetischen praema-

culaeren Blutung mit dem Q-switched Neodym : YAG laser. Spektrum Augenheilkd.; 2:33-35.

4. **Raymond LA. Neodymium (1995) :** YAG laser treatment for hemorrhages under the internal limiting membrane and posterior hyaloid face in the macula. Ophthalmology. Mar;102(3):406-11.