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SHORT COMMUNICATION

Complete resorption of retinal hemorrhages in idiopathic thrombocytopenic purpura

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PURPOSE. *Idiopathic thrombocytopenic purpura (ITP) is characterized by refractory thrombocytopenia, production of autoantibodies, and persistent predisposition to bleeding affecting virtually all mucocutaneous tissues and various organs.*
METHODS. *A 50-year-old man with chronic ITP and diabetic maculopathy developed massive preretinal, intraretinal, and numerous subretinal hemorrhages accompanied by impaired vision to 20/400. His platelet count was 1100/µL, hemoglobin concentration was 4.6 mg/dL, however his blood clotting and activated partial thromboplastin time (APTT) maintained a normal 26 sec.*
RESULTS. *After a splenectomy the patient was placed on high-dose oral corticosteroids (40 mg/day), immunoglobulin, and CellCept. The platelet count was restored to 25,000/µL within months. Four months later the unaffected retina received a panretinal photocoagulation and intravitreal triamcinolone injection (25 mg). Two years after the thrombolytic event the hemorrhages resolved completely and the patient's vision recovered to 20/100.*
CONCLUSIONS. *Repetitive treatments with immunoglobulins and high-dose corticosteroids may increase the platelet count, inducing a complete resorption of the retinal hemorrhages and visual recovery during a long-term follow-up. (Eur J Ophthalmol 2007; 17: 128-9)*

KEY WORDS. *Retinal disease in coagulation disorders, Hemodialysis, Retina*

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INTRODUCTION

Idiopathic thrombocytopenic purpura (ITP) is characterized by refractory thrombocytopenia, production of autoantibodies, and persistent predisposition to bleeding affecting virtually all mucocutaneous tissues and various organs. The common ocular manifestations include subcutaneous hemorrhages in the eyelids or subconjunctival hemorrhages (1). We report a case with ITP who developed numerous retinal hemorrhages, which resolved completely after the thrombocytopenia.

Case report

A 50-year-old man with chronic ITP and diabetic maculopathy developed massive preretinal, intraretinal, and numerous subretinal hemorrhages accompanied by impaired vision to 20/400 (Fig. 1A). His platelet count was 1100/µL, hemoglobin concentration was 4.6 mg/dL, however his blood clotting and activated partial thromboplastin time (APTT) maintained a normal 26 sec.
Prior to this event a splenectomy was performed. Initially he was placed on high-dose oral corticosteroids (40 mg/day), immunoglobulins, and CellCept, so that the platelet count was successfully restored to 25,000/µL. During the state of the intraretinal hemorrhages we feared a progression of the diabetic retinopathy. A vitreous hemorrhage may have obscured the view to the fundus, thus we performed a mild panretinal scatter photocoagulation between the retinal hemorrhages. A severe central macular edema with a retinal thickness of 365 µm was treated by an intravitreal injection of 25 mg triamcinolone. Two

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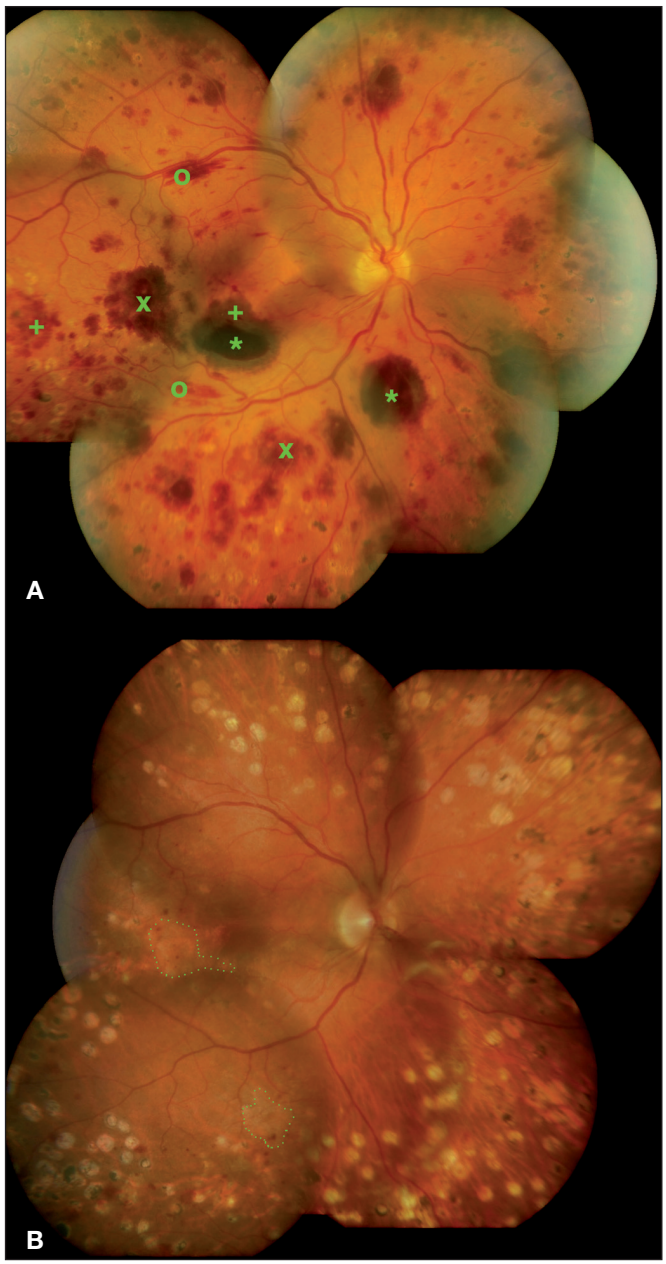

Fig. 1 - *(**A**) Digitally composed fundus image right eye (OD). Two weeks after the thrombolytic event, there are numerous subretinal (x), intraretinal (+), flame-shaped (o), and preretinal (*) hemorrhages in central and peripheral areas of the retina. (**B**) A serial photograph OD demonstrates the complete disappearance of all retinal hemorrhages 2 years after the thrombolytic event. There are numerous panretinal photocoagulation lesions in the midperiphery. Areas of previous subretinal hemorrhages may present a mild hypopigmentation (outlined in dots).*

years after the thrombocytopenia the hemorrhages resolved completely (Fig. 1B), the macular edema resolved to 195 µm, and the patient's vision improved to 20/100.

DISCUSSION

Retinal hemorrhages are unlikely to develop in IPT alone. However, if thrombocytopenia (<3000/µL) presents with severe anemia (Hb < 8 mg/dL), the frequency of retinal hemorrhages increases to 70% (2). Subretinal hemorrhages can occur in ITP patients with age-related macular degeneration, while an ITP patient with myelofibrosis develops intraretinal hemorrhages predominantly in the outer plexiform layer (3). Okuda et al speculated that vitreoretinal hemorrhages may arise secondary from persistent intraretinal hemorrhages, passing through disrupted peripapillary vessels, and cause flame-shaped or subhyaloid hemorrhages. Additional breaks in the internal limiting membrane may cause severe intravitreal hemorrhages (4).

Our patient had a severe thrombocytopenia with severe anemia when he developed multiple retinal hemorrhages in all layers of the retina. Repetitive treatments with immunoglobulins and high-dose corticosteroids may increase the platelet count within days (5) inducing a complete resorption of the retinal hemorrhages during a long-term follow-up.

Proprietary interest: None

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