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Central Retinal Vein Occlusion as a Rare Ocular Complication of Ulcerative Colitis: A Case Report

✉ Filip Ernoić,¹ ✉ Marinko Marušić,^{1,2} ✉ Krešimir Luetić,^{1,3} ✉ Benedict Rak,⁴
✉ Marin Međugorac,⁵ ✉ Marina Ikić Matijašević^{3,6}

¹Department of Gastroenterology and Hepatology, University Hospital Sveti Duh, Zagreb, Croatia

²Faculty of Health Studies, University of Rijeka, Rijeka, Croatia

³Department of Internal Medicine, School of Medicine, University of Zagreb, Zagreb, Croatia

⁴Department of Ophthalmology, University Hospital Sveti Duh, Zagreb, Croatia

⁵Department of Hematology, University Hospital Sveti Duh, Zagreb, Croatia

⁶Department of Clinical Immunology, Rheumatology and Pulmonology, University Hospital Sveti Duh, Zagreb, Croatia

ABSTRACT

Inflammatory bowel diseases (IBDs) have numerous extraintestinal manifestations, and ocular manifestations are one of the most common. Central retinal vein occlusion (CRVO) is a rare and serious extraintestinal manifestation. This case report presents a 53-year-old female patient with steroid-dependent ulcerative colitis who arrived at the emergency eye clinic with a 1-month history of blurred vision in her left eye. An initial fundus examination revealed a massive CRVO. Treatment with an intravitreal application of antivascular endothelial growth factor therapy with bevacizumab was started 7 months after the diagnosis. After 5 years of follow-up, no satisfactory treatment success was achieved. CRVO is a rare but very serious extraintestinal manifestation of IBD. An interdisciplinary approach is crucial for early diagnosis and the early start of treatment for a better outcome.

Keywords: Bevacizumab, central retinal vein occlusion, inflammatory bowel disease, ulcerative colitis



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Address for correspondence:

Dr. Filip Ernoić. Department of Gastroenterology and Hepatology, University Hospital Sveti Duh, Zagreb, Croatia

Phone: +385915020008

E-mail: filip.ernoic@gmail.com

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INTRODUCTION

Inflammatory bowel disease (IBD) is a condition that affects the small and large intestines.^[1] Crohn's disease and ulcerative colitis (UC) are the two most common forms. IBD has numerous extraintestinal manifestations. Ophthalmological manifestations are present in about 2–5% of patients with IBD. This report presents a central retinal vein occlusion (CRVO) case as a rare and serious extraintestinal manifestation of UC.

CASE REPORT

A 53-year-old female patient was examined in the emergency eye clinic with a 1-month history of blurred vision in her left eye. A year and a half prior she was diagnosed with UC when she presented with bloody diarrhea, abdominal cramps, and tenesmus. At the initial colonoscopy, inflammatory changes were found from a cutaneous transition to the proximal part of the ascending colon. Apart from mild microcytic anemia, laboratory work-up was unremarkable. Truelove and Witts Classification of the Severity of UC classified the disease as moderate. Clinical remission was achieved using topical and systemic salicylates. A year later, the first

exacerbation of the disease occurred, which was treated with corticosteroid therapy for 2 months. After the end of the corticosteroid therapy, a second exacerbation occurred so corticosteroid therapy was reintroduced for 2 months in addition to azathioprine. When initial ophthalmologic findings were presented, the patient was in her third exacerbation despite immunosuppressive therapy, soon after steroid cessation. The patient attended a complete ophthalmological examination after a month of progressive eyesight worsening in her left eye. The best corrected visual acuity (BCVA) at the time of examination of her right eye was 6/6 in Snellen notation, and the left eye was 6/15. Anterior segment and ocular pressure findings were within normal ranges. Fundus examination of the right eye was normal, while the left eye showed a massive complete CRVO with optic disc edema, macular edema, and many splinter hemorrhages in the peripapillary and macular regions. The therapy was not started until 7 months later when the patient was referred to the university clinic, where except for the earlier findings, the cystoid macular edema was additionally found. The therapy with intravitreal application of anti-vascular endothelial growth factor (anti-VEGF) therapy with bevacizumab was started. At 5-year follow-ups, BCVA of the left eye was at 6/120 in the Snellen chart. Intraocular pressure and anterior segment findings were still within normal ranges. Fundus examination and ocular coherence tomography of the right eye showed a dry type of age-related macular dystrophy (Fig. 1) and on the left eye still



Figure 1. Ocular coherence tomography of the right eye: A dry type of age-related macular dystrophy.

present diffuse macular edema (Fig. 2). Fluorescein angiography showed few suspected ischemic areas and areas with retinal neovascularization. Further therapy with intravitreal aflibercept was planned. A diagnostic work-up for thrombophilia was performed which was negative. Since the patient had a corticosteroid-dependent UC and was treated with tumor necrosis factor inhibitors without any success, she underwent a total proctocolectomy.

DISCUSSION

IBD prothrombotic tendency for patients is noted. IBD is associated with deep vein thrombosis and pulmonary emboli, but the retinal vein is an uncommon site of thrombosis.^[2] Considering that we have excluded hereditary thrombophilia, we assume that CRVO is the result of a hypercoagulable state as a result of active IBD. The tendency to thrombosis is most likely enhanced by corticosteroids used to treat the patient's UC.^[3]

In the population-based study, the prevalence of venous thromboembolism among hospitalized UC patients undergoing elective and emergent colectomies was much higher than in medically-responsive patients.^[4] Considering that in our case, the patient underwent a colectomy, the question arises whether the occurrence of CRVO correlates with the severity of the primary disease.

The prolonged time to start the treatment, in the case of our patient, likely contributed to the resulting macular edema.

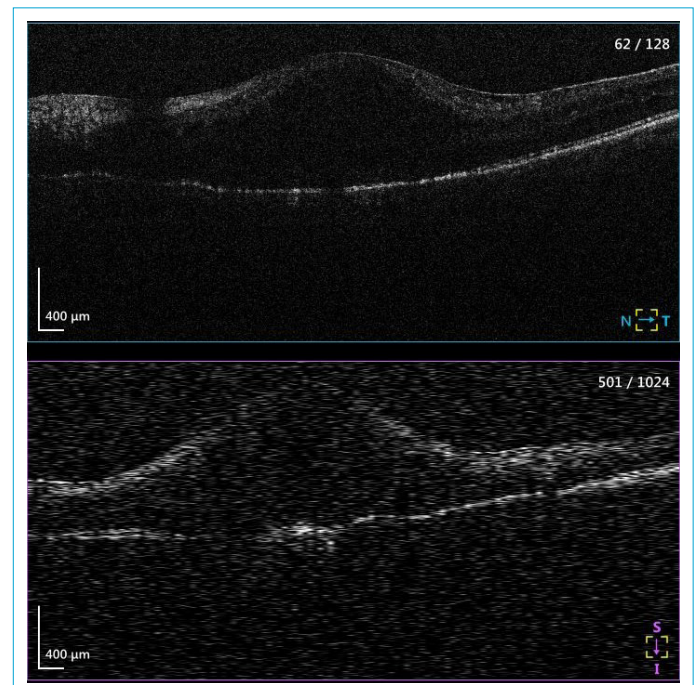


Figure 2. Ocular coherence tomography of the left eye: Diffuse macular edema.

ma not successfully resolving with intravitreal anti-VEGF injection therapy.^[5]

CONCLUSION

CRVO can be defined as a rare but very serious extraintestinal manifestation of IBD.^[6-8] Early diagnosis of CRVO and initiation of treatment are crucial for preventing or at least delaying serious eye and vision-related late complications and more rapid and better management of macular edema. Awareness of extraintestinal manifestations and interdisciplinary approach is essential for good care of patients with IBD.

Disclosures

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report.

Conflict of Interest: The author declares that there is no conflict of interest.

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