Case Report

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Central Retinal Vein Occlusion in a Woman Receiving Bromocriptine

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Key Words

Central retinal vein occlusion

Bromocriptine mesylate

Abstract

We evaluated a unilateral retinal vascular abnormality in a 34-year-old woman receiving bromocriptine mesylate for the suppression of postpartum lactation. After using bromocriptine, 2.5 mg twice daily for 1 week, the patient complained of metamorphopsia in the left eye. A central retinal vein occlusion was found. We believe that central retinal vein occlusion in patients receiving bromocriptine, as demonstrated in our patient, is rare.

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Introduction

Bromocriptine mesylate, a dopamine receptor agonist, is the hydrogenated form of the vasoconstrictor ergot that has been used for prolactine inhibition and suppression of postpartum lactation [1, 2]. Several side effects of bromocriptine, such as acute myocardial infarction, hypertension, seizures, and cerebrovascular disorders, have been reported [3-7]. To our knowledge, however, no adverse effects of the eye have been reported previously. We examined a patient receiving bromocriptine who had a fundus lesion.

Case Report

A 34-year-old woman received bromocriptine mesylate, 2.5 mg twice daily, for the suppression of postpartum lactation. One week later, she complained of sudden onset of nausea, vertigo, and metamorphopsia in her left eye. Thereafter, bromocriptine was discontinued. One week after the onset, she was first seen at our hospital. The patient's past medical history showed postpartum pregnancy-induced hypertension.

Ophthalmic examination disclosed visual acuity of RE 20/20 and LE 20/20. Her intraocular pressures were 16 mm Hg in both eyes. The corneas, anterior chambers, lenses, and anterior vitreous appeared normal bilaterally. Ophthalmoscopically the right fundus appeared normal. Dilated tortuous retinal veins and scattered retinal hemorrhage were found in the left fundus. Fluorescein angiography demon-

Fig. 1. Fluorescein angiography of the left fundus shows patchy, blocked hypofluorescence, perfused capillary bed, and leakage of dye from the optic disk.

strated patchy, blocked hypofluorescence, perfused capillary bed, leakage of dye from the optic disk, but good retinal capillary perfusion in the left fundus (fig. 1). These findings were compatible with non-ischemic type of central retinal vein occlusion.

Routine laboratory test results, including blood pressure, erythro-cyte counts, leukocyte counts, platelet counts, hematocrit, blood

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chemistry, fasting plasma glucose level, thrombo test, prothrombin time, activated partial thromboplastin time, bleeding time, lipid profile, rheumatoid factor, antinuclear antibody, antiphospholipid antibody, Treponemapallidum hemagglutinin, and urinalysis, were negative or within normal range. No deterioration of the fundus lesion in the left eye was noted during the follow-up period of 6 months.

Discussion

Bromocriptine, a semisynthetic ergot derivative, has been used for prolactine inhibition and suppression of post-partum lactation [1, 2]. Hydrogenation of the ergot alkaloid changes its pharmacologic effect from vasoconstriction to vasodilation. However, a small number of patients have reportedly had paradoxical responses (vasoconstriction) to bromocriptine, resulting in cardiovascular and cerebrovas-cular diseases [3-8]. The exact mechanism of vasoconstriction of bromocriptine remains uncertain. Iffy et al. [5] suggested that a genetically determined error of metabolism in some individuals may lead to their inability to distinguish between hydrogenated and nonhydrogenated ergot alkaloid. Gutman [9] reported that 90% of patients with central retinal vein occlusion were older than 50 years of age. Our patient was 34 years old and had had postpartum pregnancy-induced hypertension. Her blood pressure, however, was normal 1 week after the sudden onset of ocular symptoms, 2 weeks after starting bromocriptine therapy. Quinlan et al. [10] reported that collagen vascular disorders were a risk factor for central retinal vein occlusion in young patients. Our patient, however, had neither collagen vascular disorders nor coagulation disorders on her laboratory test results. Although the exact mechanism remains unclear, it is possible that bromocriptine may have

triggered central retinal vein occlusion in our patient. Ophthalmologists should be aware that central retinal vein occlusion may occur in patients receiving bromocriptine.

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