48th BRAVS Meeting RETINA 2024 CONNECTING SCIENCE TO REAL WORLD

Commotio Retinae After Beach Tennis Ball Trauma

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INTRODUCTION

The diagnosis of commotio retinae (CR) is generally clinical, and it is essential to perform a fundoscopic examination[1]. The characteristic sign shows the presence of the retina with a whitish area and this is due to the rupture of the external segments of the photoreceptors[2]. Spontaneous resolution occurs around seven days and most patients recover without permanent sequelae[2]. But more severe cases of commotio retinae can result in residual changes in the retinal pigment epithelium (RPE), RPE atrophy, or hyperpigmentation[3]. Damage to the central part of the retina, known as central commotio retinae or *Berlin*'s edema, may lead to subsequent degeneration and result in visual impairment[4]. CR is found in approximately 9.4% of all ocular trauma cases[5].

PURPOSE

To report two cases of patients with commotio retinae after trauma with a beach tennis ball.

CASE REPORT

Young patient, 16-years-old, attended an ophthalmological consultation after trauma with a beach tennis ball. No changes in the orbit and an extensive, whitish lesion was identified on retinal mapping in the temporal region. Visual acuity in the affected eye (left eye) was 20/20. Guided about the alarm signs and return with 4 days for new evaluation. Upon return, the funduscopic examination showed no further changes.

The second case is a 42-year-old male patient, also a victim of trauma with a beach tennis ball. There was only conjunctival hyperemia in the anterior chamber. Visual acuity of 20/20 in the affected eye. During fundoscopy evaluation, a whitish area was seen in the lower region. When he returned in 4 days, there were no more changes. Patients underwent color fundus photography exams for follow-up.

None of the patients were wearing glasses or any protection during physical exercise.

A

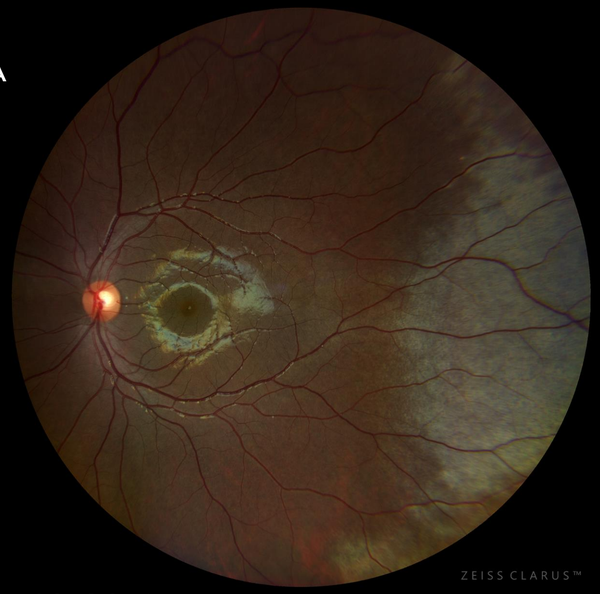


Figure A: Case 1 - Color fundus photograph showing commotio retinae in the temporal region.

B

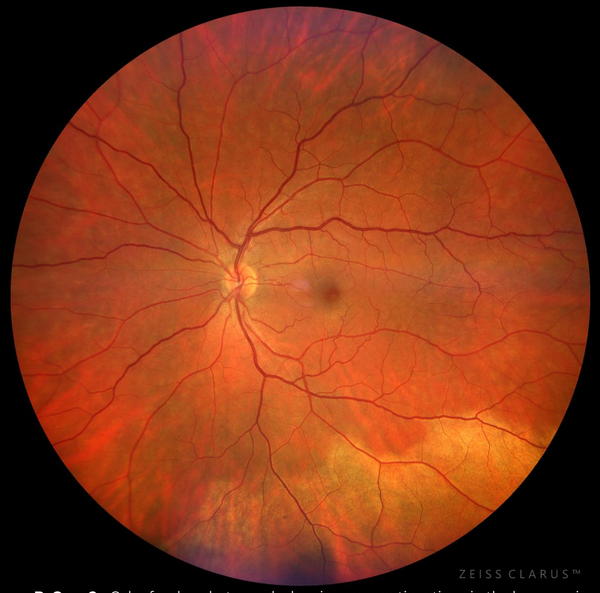
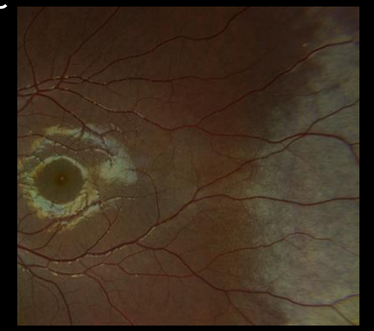


Figure B: Case 2 - Color fundus photograph showing commotio retinae in the lower region.

C



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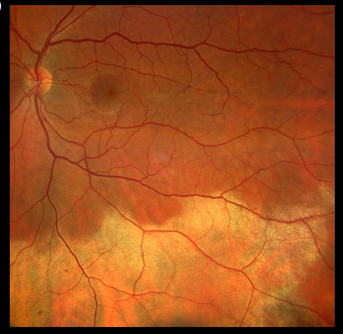

Figures C and D: Cases 1 and 2 - White area due to commotio retinae.

DISCUSSION

The prognosis for commotio retinae is generally favorable, with most patients recovering completely in a relatively short period of time without permanent visual deficits[2]. Specific treatment may not be necessary in mild cases, but in more serious situations, ophthalmological monitoring may be recommended to monitor recovery and, in some cases, specific medications or procedures may be prescribed[5]. It is important to seek medical attention immediately after any eye trauma for proper evaluation and treatment, as early diagnosis and appropriate management can positively influence visual outcome[4]. In the cases presented, expectant management was the most appropriate, with complete recovery in both cases.

With these reports, we conclude that it is important to use protective glasses when performing the sport. We have not seen cases in the literature specifically related to commotio retinae due to trauma with a beach tennis ball, but this association may be described in the future due to the sport having a higher rate of impact on death. It is observed that the practice of beach tennis has been increasing, which has led to an uptick in participation by untrained individuals, resulting in more instances of eye injuries. Consequently, it becomes necessary to encourage greater caution and training for safe play.

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