ABSTRACT

Case report: We present case reports of two young patients suffering from full thickness traumatic macular holes resulting in visual impairment of more than 60%. Both showed anatomical and visual improvement whilst waiting for surgical treatment.

Discussion: Spontaneous closure of a traumatic macular hole is an unusual outcome. OCT and clinical follow up enabled monitoring of this resolution during a period of a few weeks. Complex surgery was thus avoided by a short observational period (Arch Soc Esp Oftalmol 2008; 83: 325-327).

Key words: Macular hole, optical coherence tomography, retinal edema, retinal perforations, eye injuries.

INTRODUCTION

Ocular contusion traumatisms are associated with numerous retinal complications such as Berlin edema, peripheral fractures and retinal dialysis, vitreal or sub retinal hemorrhages, choroidal ruptures and macular holes.

RESUMEN

Caso clínico: Se presentan dos casos de pacientes jóvenes que sufrieron sendos agujeros maculares traumáticos de espesor completo con deterioro visual de más de un 60%. Ambos mejoraron clínica y anatómicamente mientras esperaban un tratamiento quirúrgico.

Discusión: El cierre espontáneo de agujeros maculares traumáticos es un hallazgo infrecuente. El seguimiento clínico y mediante OCT permite apreciar la mejoría en las primeras semanas. Un período corto de observación nos puede evitar una intervención quirúrgica compleja y laboriosa.

Palabras clave: Agujero macular, tomografía de coherencia óptica, edema retiniano, perforación retiniana, lesión ocular.
10%, Tomii et al. of 66.6% and Yamashita et al of 44.4% but with very few samples (10, 6, and 18 patients respectively) (1). The time between diagnosis and anatomical resolution of TMA is also variable, between 1 week and six months according to publications.

The cases of two patients with TMA after ocular concussion are presented, well documented by means of Optical Coherence Tomography (OCT), where a spontaneous closure in less than 6 weeks with a significant visual improvement is produced.

**CASE REPORT**

**Case 1**

A 36 year old male who came to our service in February 2006 six days after having suffered a concussion with a nail in the left eye (LE). He referred immediate visual deterioration with central scotoma of the same eye. On examination a visual acuity (VA) in the RE of 0.4 was observed. By means of the Amsler’s grid a central alteration and metamorphosis in the RE was detected. With the biomicroscope a moderate iritis and in the back of the eye, inferior hemovitreous, peripapillary hemorrhage and a full thickness macular hole could be seen (fig. 1). The Watkze-Allen Test was positive. The OCT confirmed the presence of a macular hole of complete thickness (fig. 2) in the RE and surgery was programmed (pars plana vitrectomy and the extraction of internal limiting membrane) and the treatment was with oral Prednisone at doses of 1 mg/kg/day in a descending guideline, along with gastric protection. The day before surgery (35 days after the traumatism) the patient was examined again and an evident improvement of the visual acuity of the RE was seen and a complete closure of the lesion demonstrated by OCT (fig. 3).

**Case 2**

A 16 year old male that came to our ophthalmology service in April 2006 due to loss of visual acuity and central scotoma after ocular impact in LE with a football. The VA was finger counting at 2m in LE and of 1 in the contralateral eye. On examination of the eye fundus a Berlin’s edema of suprareoveal predominance and image of full macular hole was detected (fig. 4) and later confirmed by the OCT (fig. 5). The Amsler girdle and the Watzke-Allen test gave coherent results. The treatment was...
identical to the case previously described. Two weeks later the patient came for a check-up and an improvement of LE was seen, with visual acuity of 0.3 and self-sealing of the lesion shown by OCT (fig. 6).

**DISCUSSION**

The cases of self-sealing TMA published to date agree on two points: firstly all the patients are younger than 20 years and, secondly in all the cases the lesion is a consequence of a contuse traumatism. One of our patients was a lot older at 36 years.

The deterioration of visual acuity can be both immediate and delayed for which Yamashita proposed two formation mechanisms: the dehiscence of the immediate fovea to the traumatism, and the persistence of a vitreous traction that originates the macular hole days later (1). In our two patients the clinical diagnosis was immediate and no vitreous tractions were observed in the OCT.

The time elapsed from the traumatism to the spontaneous closure is variable according to different publications. The case published by Yeshurun et al. lasted 5 months (2), the three of Kusaka et al. between 3 and 4 months (3), those of Yamada et al. between 4 and 6 (4). In 2002, Yamashita et al. presented eight cases that took between 1 week and 4 months to close, citing Mizusawa (9 months), Tomii (14 days to 5 months), Nunode (15 days), Murakami (3 months) and Parmar (2 months) (1). In 2006, Lai et al. published the case of TMA with secondary retina detachment that took three weeks to self-seal (5).

In our two cases the closure was early (42 and 20 days respectively) while surgery was being considered. Despite the good results obtained by present surgical techniques, we consider it important to wait some weeks before indicating surgery in young patients with traumatic MA because of the possibility of spontaneous closure in this subgroup of patients.

**REFERENCES**