MYOPIC TRACTION MACULOPATHY?
¿MACULOPATÍA MIÓPICA TRACCIONAL?

FERNÁNDEZ-VEGA A

The development of optical coherence tomography (OCT) in recent years has been a tremendous advance in the exploration of the posterior pole, to the extent that it has become one of the most useful tools in the daily practice of the retina specialist. It is important not only for diagnosis, or as a research tool for enhancing the knowledge of the retinal anatomy, but also a previous study by means of OCT is nowadays essential to determine the surgical approach of a great part of retinal pathologies.

Lately, OCT has also served to discover the existence of an entire range of diseases which heretofore could only be suspected with the resolution level of biomicroscopy, thus opening a new pathway for the possible surgical treatment of these affections by means of vitrectomy. One of these diseases is tractional myopic maculopathy (TMM).

Many severe myopic patients who exhibited central visual reduction without choroidal neovascularization or any other cause that explained it were “diagnosed” with idiopathic myopic choroidosis. Today we know that many of these visual reductions correspond to this macular pathology, in many cases tractional, which have a high prevalence (1).

In 1999, Tacano (2) made the first description of retinoschisis and foveal retina detachment as a frequent pathology in severe myopic patients with posterior staphiloma. Panozzo (3) utilized for the first time the term “tractional myopic maculopathy” (TM), to refer to these pathologies in a retrospective study on 218 eyes in which epiretinal traction was found in 46% and retinal damages in 34%. He also found that the tractional myopic pathology, particularly with staphiloma, comprised the following diseases, in order of frequency:

Macular retinoschisis (other authors speak of foveoschisis).
Macular retinal thickening.
Lamellar macular hole.
Macular retina detachment without macular hole (other authors speak of foveal detachment). The term TMM was not adopted by Japanese investigators, who authored most of the recent publications on the subject. In contrast, the term was readily accepted by retina specialists in our country. The possible reason is that we found some of these pathologies without being able to verify the visible presence of macular tractions; that is to say, we can find foveal retinoschisis, foveoschisis or detachments without apparent vitreoretinal traction.

E-mail: avega@cyberastur.es
this way, recent publications must be searched under the key word of retinoschisis, foveoschisis or foveal detachments because they haven’t been included under the TMM acronym.

As a possible explanation for the nontractional cases, Tano et al (4,5) recently published the presence of retinal microfolds that produce reliefs in the retina, in patients operated for foveoschisis by means of vitrectomy. Said microfolds, which correspond to the retinal arterioles, would be generated by the insufficient elasticity of the retinal arterioles during the elongation of myopic staphyloma when increasing the axial length and due to the fact that the arterioles are rigid. Tano concludes that the forces which arise with the growth of the ocular globe and the retina would account for specific myopic pathologies, such as the myopic foveoschisis or paravascular retinal holes.

The first papers (6) considered that the pathologies included in the MMT acronym were very stable pathologies. We know that in many occasions they are nonsymptomatic or that they produce very slight symptoms. Nevertheless lately some authors (7) consider that its benignancy can be only apparent because it becomes a progressive disease, with frequent complications. Both groups of authors conclude that the most severe complications in the evolution of retinoschisis (macular hole and retina detachment due to macular hole) are clearly related to vitreous-macular traction.

Any vitreous-retina surgeon familiar with operating maculae in myopic patients will know that it is far from being an easy surgery. The hyaloid does not come out as a whole but torn and it often becomes necessary to extract it with a clamp. In addition, the pathological adhesions in the posterior pole are tremendous. These adhesions, mainly at the level of the blood vessels, are so strong that iatrogenic ruptures are very frequent and in many occasions, even after releasing the tractions of the posterior pole, we must finalize the surgery without carrying out a complete vitrectomy, with the risk that this entails. If in addition we studied current publications on retinoschisis, foveoschisis, foveal and retina detachment without macular hole, the number of complications is relatively high and the techniques are very diverse, although visual improvements can be obtained (8-11).

Should these patients be operated? We still don’t have the answer to this question. At discussed above, some authors think that retinoschisis is stable, whereas the work of Shimada presents retinoschisis as a progressive disease on the basis of following up a very small number of eyes (8 eyes).

It is fundamental to know the natural history of the disease and to be cautious at the time of considering surgery, even though it can be tempting when we see the clear traction at the level of the macula or when we review recent publications of expert Japanese surgeons on the treatment of this pathology.

It is likely that the cases of progressive reduction of visual acuity will end up being surgical. On the contrary, stable cases will simply have to be observed.

Probably, the pathogeny of the macular diseases described above, as well as others such as the true...
macular hole of myopic magnus patients, retina detachment due to macular hole and to linear para-vascular or posterior pole holes, are closely related to each other.

In the near future, it will be our job to find out how said diseases are related to each other and unravel the cause thereof and the contribution of vitreo-retinal traction to this pathogenicity, the contribution of the forces intrinsic to the retina itself due to the rigidity of its vascularization or of the forces arising in the edges of the staphilomae.

At any rate, I believe that the term “tractional myopic maculopathy” should not be discarded because it would include all these pathologies in which traction (either vitreous-retinal or intrinsic) plays a fundamental role.

In addition to the exciting adventure of addressing a recently diagnosed pathology, with all the new perspectives that this opens in the scope of research, we also are faced with the possibility of applying surgical treatment for a range of diseases which, to date, caused visual acuity reductions of unknown origin in myopic magnus patients.

REFERENCES