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Corneal biomechanical parameters in pellucid marginal degeneration

Dear Editor,

We read the article by Sedaghat et al. concerning the investigation of corneal hysteresis (CH) and corneal resistance factor (CRF) in pellucid marginal degeneration (PMD)[1] with great interest.

This is a very interesting paper, but we would like to comment on some points.

Sedaghat et al.[1] compared the results in patients with PMD to normal subjects and patients with keratoconus (KC). In the results section, they reported that in the PMD group, there was no correlation between CH and CRF with age, but they did not report their findings in normal and KC eyes. This could be interesting information because in a previous paper, Rosa et al.[2] found a correlation between CH and age but not between CRF and age in normal patients. Understanding the relationship in normal and KC eyes could be very important. In fact, it could clarify if the lack of correlation between the investigated biomechanical parameters and age that the authors found is due to the presence of PMD. In this case, this could make it a hallmark of the disease. It should be noted that the patients' age ranges in the study by Rosa et al., was larger than those published by Sedaghat et al.

In the study by Rosa et al.,[2] CH and CRF increased in thicker corneas, whereas the authors found no correlation between CH and CRF with central corneal thickness (CCT), but again, this information is missing in their normal and keratoconic patients, so we do not know if this is due to the particularly thin corneas or to a difference between their study and those reported by Rosa et al.

Another interesting point in their study is that in PMD patients, there is a decrease in CH and CRF.

In eyes that underwent PRK or LASIK, apart from the problem of calculating the IOL power in cases of cataract surgery[3,4] and the influence of corneal thickness in the intraocular pressure (IOP) measurements that complicate the measurements,[5] it has also been reported that there is a decrease in CH and CRF.[6] This finding makes us wonder if this decrease simply depends on corneal thinning and not on a different behavior of the corneal structure in PMD patients.

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Maddalena De Bernardo*
Department of Medicine, Surgery and Dentistry, Scuola Medica Salernitana, University of Salerno, Salerno, Italy

Palmiro Cornetta
Giuseppe Marotta
Head and Neck Department, A.O.U. San Giovanni di Dio e Ruggi D'Aragona, Salerno, Italy

Nicola Rosa
Department of Medicine, Surgery and Dentistry, Scuola Medica Salernitana, University of Salerno, Salerno, Italy

*Corresponding author. Department of Medicine, Surgery and Dentistry, Scuola Medica Salernitana, University of Salerno, via Salvador Allende, Baronissi, 84081, Salerno, Italy.
E-mail address: mdebernardo@unisa.it (M. De Bernardo).

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