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RESEARCH ARTICLE

OCULAR SURFACE AND GLAUCOMA DRUGS.

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Abstract

This is a short communication about the use of antiglaucoma drugs and their impact on the ocular surface of glaucomatous patients. The Author stressed the influence of the evolution of topical antiglaucoma drugs and their preservatives on the ocular surface in the last five years.

Introduction:-

Since 2012 Labbe' and co-workers stressed the relationship between corneal sensation and subbasal nerve morphology, evaluated by in vivo confocal microscopy (IVCM) and the contact Cochet-Bonnet esthesiometer, as the pathophysiological mechanism of ocular surface disease.

In the last five years different Authors worldwide published mostly about the effect of the preservatives used in different topical antiglaucoma drugs, such as brimonidine, latanoprost, travoprost, bimatoprost and tafluprost. Using the impression citology, Sezgin Akcay et al. 2014 found that polyquaternium (PP)-preserved travoprost is safer and better tolerated than benzalkonium chloride (BAK)-preserved travoprost. That's the reason why the compliance of patients increases (Quaranta 2015, Peace 2015). It may be an advantageous prostaglandin analog option for patients affected by open-angle glaucoma (OAG) or ocular hypertension (OHT) who are intolerant to BAK-preserved latanoprost or bimatoprost (Konstas et al. 2017). In another trial preservative-free (PF) tafluprost provided greater 24-h efficacy and improved tolerability compared with preserved latanoprost (Garcia-Feijoo et al. 2016). Ocular surface disease (OSD) was more prevalent in the medication group. The main factors influencing OSD were antiglaucoma drugs with preservatives, longer treatment duration, and older age of the glaucomatous patients (Perez-Bartolome' et al. 2017). IVCM studies showed that dendritic cells increase in the entire cornea of these patients, with a higher density at limbus. These modifications may be responsible in the induction of the glaucoma-related ocular surface disease (Mastropasqua et al. 2016).

In my experience, comparing not the hypotonising effect but the tolerability of the fixed combination bimatoprost 0.03%/ timolol 0.50%, timolol 0.50% and bimatoprost 0.01%, the glaucomatous patients, answering the Ocular Surface Disease Index (OSDI), statistically preferred the bimatoprost 0.01% drug (Giuffre' 2014).

Conclusions:-

From this short communication we can stress that that the ocular surface may be studied by impression citology, in vivo confocal microscopy, Schirmer tests, contact Cochet-Bonnet esthesiometer, metalloproteinases evaluation and

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the Ocular Surface Disease Index. All these subjective and objective clinical parameters may be useful to help the ophthalmologist, together with our patients, to choose which medical therapy is more suitable.

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