Topical estrogen drops for glaucoma?
A long way to go

Dear Editor,

I read "topical estrogen drops may be a new alternative in the treatment of glaucoma" published in your magazine, and I disagree the author partly because of the following reasons.

No definite evidence to prove the lowering IOP effect of Estrogen. Some of the existent studies showed a lowering effect of estrogen on IOP, but other studies made a conclusion to the contrary, that is estrogen had no effect on IOP [1,2]. The differences may due to the lack of randomized controlled study of high quality. In addition, the changes of central corneal thickness with the changes of estrogen level [3] made doctors to under- or over- estimate the IOP values.

Local administration of estrogen may cost much. Uncu G. indicated that estrogen could decrease IOP while increase potential risk of dry eye syndrome [4]. Altintas O. got the same results in his study [5].

The bioavailability of topical estrogen drops may be low. The absorption of eye drops is severely limited by the relatively impermeable cornea. Estrogen with high lipid solubility will find much resistance crossing the corneal stroma. So pharmaceutical scientists will face many difficulties to produce effective estrogen eye drops.

The population benefit from topical estrogen drops may be limited. Estrogen in topical drops may go to other organs with blood circulation and play its role, including stimulating the female reproductive organs and the development of secondary female sex characteristics. Undoubtedly, men without enough courage will not have a try. And it seems right to apply estrogen eye drops to postmenopausal women, but is it also right to healthy women?

Taking all above into consideration, we think that there is a long way to go before topical estrogen drops becomes a new alternative in the treatment of glaucoma.

References


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