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Editorial

Association of sex hormone with age related macular degeneration

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Age related macular degeneration (AMD) is the major cause of irreversible loss of vision in the elderly people (≥55 years) in developed countries. According to WHO 10% of blindness is due AMD.[1] About 50 million ederly are affected by AMD worldwide.[2] AMD is broadly divided into non-exudative (dry) and exudative (wet) form. Dry AMD is most prevalent form of AMD. Its etio-pathogenesis is still poorly defined. AMD is multifactorial disease, major risk factors are ageing, smoking, obesity, hypertension, hyperlipidemia atherosclerosis and antioxidant status.[3–5] Oxidative stress plays important role in pathogenesis of AMD.[6,7] It has been reported that exudative AMD is more common in elderly women than man, possibly due to estrogen withdrawal effect at menopause which possess anti-oxidative property.[8,9] Increased risk of AMD has been reported in women having early surgical menopause (oophorectomy).[10] Snow et al. suggested that exposure to exogenous estrogens as postmenopausal hormone terapy (HRT) may reduce the risk of development of advanced AMD.[11] Feskanich et al. found that use of oral contraceptives associated with lower risk of developing wet AMD.[12] Dehydroepiandrosterone sulphate (DHEAS) has shown protective effects against oxidative damage of retinal pigment epithelium (RPE).[13] Relatively low level of Dehydroepiandrosterone sulphate (DHEAS) have been measured in patients suffering from AMD suggesting hormonal imbalance in AMD patients.

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Conflict of Interest

None.

References

1. Vision 2020 Right to sight. Blindness and visual impairment: Global facts; 2014. Available from: https://www.iapb.org/about/vision-2020/global-facts.
2. Gordois A, Cutler H, Pezzullo L, Gordon K, Cruess A, Winyard S, et al. An estimation of worldwide economic and health burden of visual impairment. *Glob Public Health*. 2012;7(5):465–81.
3. Chakravarthy U, Wong TY, Fletcher A, Piault E, Evans C, Zlateva G, et al. Clinical risk factors for age-related macular degeneration: a systematic review and meta-analysis. *BMC Ophthalmol*. 2010;13:10–31.
4. Evans JR. Risk factors for age-related macular degeneration. *Prog Retin Eye Res*. 2001;20(2):227–53.
5. Mitchell P, Wang JJ, Foran S, Smith W. Five-year incidence of age-related maculopathy lesions; the Blue Mountains Eye Study. *Ophthalmology*. 2002;109(6):1092–7.
6. Blasiak JL, Petrovski G, Vereb Z, Facsko A, Kaarniranta K. Oxidative stress, hypoxia and autophagy in the neovascular processes of age-related macular degeneration. *Biomed Res Int*. 2014;2014:768026.
7. Kaarmirantta K, Machalinska A, Vereb Z, Salminen A, Petrovski G, Kauppinen A. Estrogen signaling in the pathogenesis of age-realted macular degeneration. *Curr Eye Res*. 2015;40(2):226–33.
8. Mitchell P, Smith W, Attebo K, Wang JJ. Prevalence of age-related maculopathy in Australia. The Blue Mountains Eye Study. *Ophthalmology*. 1995;102(10):1450–60.
9. Vingerling JR, Dielemans I, Hofman A, Grobbee DE, Hijmering M, Kramer CF, et al. The prevalence of age-related maculopathy in the Rotterdam Study. *Ophthalmology*. 1995;102(2):205–10.
10. Vingerling JR, Dielemans I, Witteman JC, Hofman A, Grobbee DE, DeJong PT. Macular degeneration and menopause: a case-control

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study. *BMJ*. 1995;310(6994):1570–1.
11. Snow KK, Cote SJ, Yang W, Davis NJ, Seddon JM. Association between reproductive and hormonal factors and age-related maculopathy in post menopausal women. *Am J Ophthalmol*. 2002;134(6):842–8.
12. Feskanich D, Cho E, Schaumberg DA, Colditz GA, Hankinson SE. Menopausal and reproductive factors and risk of age-related macular degeneration. *Arch Ophthalmol*. 2008;126(4):519–24.
13. Rocha EM, Wickham LA, DaSilverira LA, Krenzer KL, Yu FS, Toda I, et al. Identification of androgen receptor protein and 5 alfa-reductase mRNA in human ocular tissues. *Br J Ophthalmol*. 2000;84(1):76–84.

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