Commentary

Commentary on: Prevalence of pseudoexfoliation in diabetic patients with senile cataract: A hospital-based study in Kashmir, India

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Pseudoexfoliation syndrome (PEX) has been identified as a systemic condition affecting various organs with undetermined functional impairments in various systems of the body.[1] However, its manifestation in ocular tissues is very obvious. It is not clear whether the pseudoexfoliative material deposition is due to excessive synthesis or inadequate breakdown. The spectrum of ocular complications ranges from poor pupillary dilatation to glaucoma and surgical complications during cataract surgery.

Diabetes and PEX Interaction

We know that diabetes is a global disease; whereas, PEX is a disease with variable expression based on ethnicity.[2] The environmental factors, thus, can modify the effects of LOXL1 polymorphisms in different ethnic groups. How geographical factors contribute to the expression or development of PEX is not clear. The study by Stein *et al*.[3] suggests an increased likelihood of PEX expression in places with greater sunshine exposure and lower temperatures in summer and winter. As far as diabetes and PEX are concerned, both have systemic afflictions. The interaction between PEX and diabetes is less understood. There are contradictory studies on the impact of PEX on diabetes. In a study by Sollosy,[4] a high incidence of uveal pseudoexfoliation was observed in patients with diabetes. In contrary to this, the author of the current study has mentioned a lower prevalence of PEX among diabetics than among non-diabetics.[5] Similar studies in the past also concluded that PEX is least likely to occur in diabetics with background diabetic retinopathy followed by diabetics without retinopathy and finally non-diabetics.[6] A detailed study on the ultrastructure of the anterior lens capsule showed a relatively preserved epithelium in diabetics with PEX compared to non-diabetics with PEX, where epithelial integrity is compromised.[7] Thus, diabetes and PEX together is said to have less severe ocular manifestations compared to PEX alone.

Things to explore

Although diabetes and glaucoma together can increase the risk of neurodegeneration[8]; an associated PEX with diabetes might have a protective role. *LOXL1* gene is involved in collagen and elastin cross-linking in the extracellular matrix. In diabetics, there is an increased of advanced glycated end products (AGEs), resulting in inter and intramolecular crosslinking of collagen and elastin. Probably, this non-enzymatic mechanism is responsible for the protective effect of diabetes on the expression of PXF. There is a scope of further research with a larger sample size to assess the interaction of diabetes and PEX in a population.

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