A pigmented disc in glaucoma!

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Key words: Glaucoma, pigmented optic disc, optic disc anamoly

An 81-year-old male was referred for glaucoma evaluation. He gave a history of cataract and trabeculectomy surgery performed for the right eye (RE) 2 years ago and was using topical brimonidine tartrate 0.15% and timolol maleate 0.5% combination in the left eye (LE).

On examination, his best corrected visual acuity was 20 / 20 in both the eyes (BE). Right eye showed diffuse, cystic bleb, BE were pseudophakic and there was no evidence of nevi or any other pigmented lesion on the conjunctiva, sclera, or iris. Intraocular pressure was 10 mmHg in RE and14 mmHg in the LE. Optic disc showed small disc, 0.7:1 cup disc ratio (CDR) diffuse, uniform pigmentation of the optic nerve head with no elevation or extension of pigment into the surrounding retina and inferior neuroretinal rim notch [Fig. 1a]. The demarcation between the pigmented margin of the cup and disc margin was distinct. LE optic disc showed a small disc, 0.9:1 CDR and bipolar notch [Fig. 1b]. The surrounding retina had drusen and retinal pigment epithelial atrophy in BE. Humphrey visual field 24-2, SITA standard showed superior arcuate scotoma in the RE [Fig. 2], and biarcuate scotoma in the LE.

Optic disc pigmentation is a rare finding and can be primary or secondary. Patients in the primary group often have associated ocular abnormalities.[1,2]

Discussion

A report has described a family of three siblings with partial trisomy l0 q and documented an unusual enlarged optic disks with a gray cast and elevated, poorly defined margins of the optic disc in one of the siblings.[2] Another report describes a case of a 48-year-old white woman who was found to have an entirely pigmented optic disc in an otherwise normal eye.[3] A study reported prevalence of the optic disc anomalies in the adult South Indian population and optic disc pigmentation was noted in 0.03% of the population.[4] Secondary optic disc pigmentation can be due to melanocytoma, hemolysis from hemorrhage within the optic nerve or extensive siderosis.[5]

On review of the literature, we could not find photographic documentation of benign pigmentation of the entire optic disc in association with primary open angle glaucoma (POAG). Although the origin of pigment within the optic disc remains speculative in our patient without histologic confirmation, it represents an unusual presentation of a benign optic disc pigmentation, possibly a congenital anomaly (melanin deposition of optic nerve) associated with POAG.

The coexistence of these two clinical entities requires appropriate long-term monitoring to detect progression of

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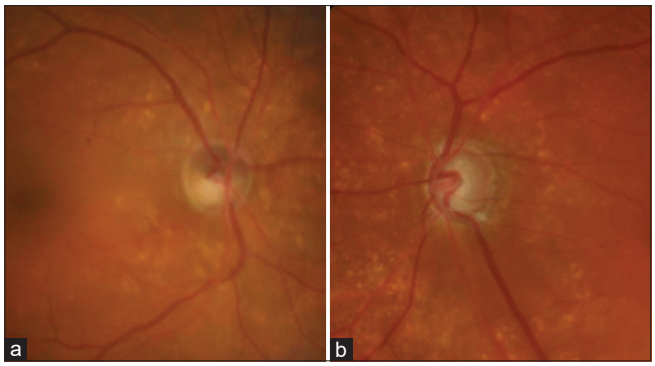

Figure 1: Fundus photograph showing a diffusely pigmented, small size, optic disc (a), and inferior notch in the right eye. The left optic disc (b) shows small-sized disc and bipolar notch

either conditions. Serial fundus photographs would be helpful in monitoring the optic disc appearance.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

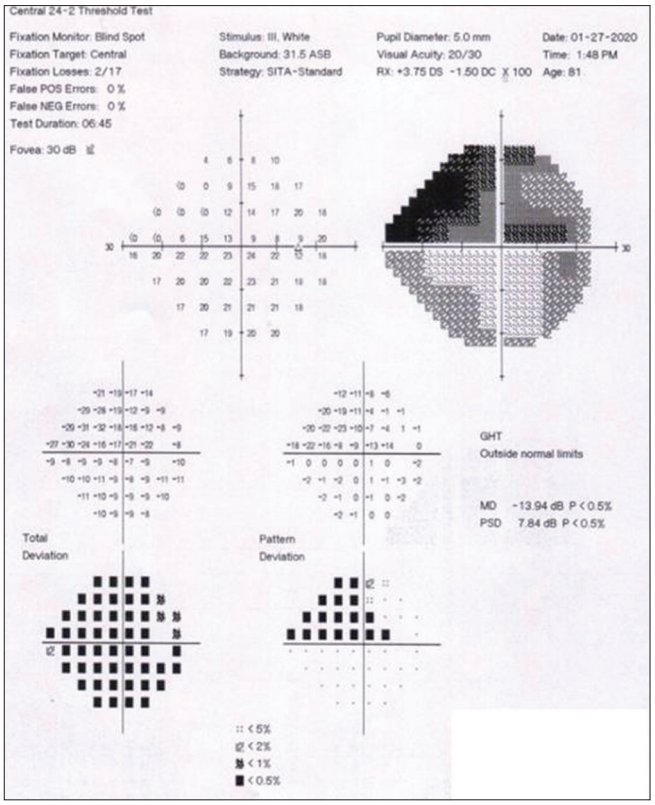

Figure 2: Humphrey visual field 24-2 showing superior arcuate scotoma in the right eye

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