Pseudoduplication of Optic Disc on Optical Coherence Tomography

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Figure. (A) Fundus photograph showing optic disc coloboma and chorioretinal coloboma inferotemporal to the optic disc. (B) Optical coherence tomography line scan showing pseudo-doubling of the optic disc; arrows show the area of the chorioretinal coloboma.

CASE REPORT

Doubling of the optic disc is a rare clinical entity.\(^1\)\(^-\)\(^5\) It can manifest as true or pseudo-doubling of the optic disc.\(^1\)\(^-\)\(^5\) A 16-year-old girl came to the outpatient department of our center for a routine eye check-up. The left eye had a best-corrected visual acuity of 20/32 and a normal anterior segment. Fundus examination revealed an optic disc coloboma. A half disc diameter (DD) pale excavation was present 1 DD inferotemporal to the optic disc (Fig. A); the margins of this chorioretinal coloboma had patchy pigmentation. The inferotemporal branches of the retinal vessels dipped into the lesion before reemerging. The peripheral retina was normal. The right eye was microphthalmic, with an inferonasal iris coloboma, a large chorioretinal coloboma involving the macula, and visual acuity of counting fingers close to the face. Line scan on optical coherence tomography through the coloboma and the optic disc showed an appearance of a double disc (Fig. B).

COMMENT

Actual doubling of the optic disc is encountered rarely. It occurs when there is separation of the optic
nerve into two pieces, along with duplication of the optic disc.\textsuperscript{1,2} Each of the optic discs is provided with a separate set of blood vessels, and the rest of the ocular structures are normal.\textsuperscript{1,2} Lesions such as optic disc coloboma, peripapillary chorioretinal coloboma, or healed inflammatory foci may result in pseudo-doubling of the optic disc.\textsuperscript{3,5} Our case had an isolated chorioretinal coloboma that was present inferotemporal to the optic disc and there were no separate blood vessels supplying the coloboma. Pseudo-doubling can be differentiated from true doubling of the optic nerve by demonstrating the presence of a separate vascular system for each disc. Occasionally, two optic nerves with two optic foramina may be present on the involved side. This can be confirmed by imaging techniques such as ultrasonography, fundus fluorescein angiography, computerized tomography, and magnetic resonance imaging.\textsuperscript{3,5} The current case shows that isolated chorioretinal coloboma can simulate optic disc duplication on optical coherence tomography.

REFERENCES