Optical coherence tomography of iris mammillations

Ahmad M Mansour,[1,2] Carol Shields[3]

[1]Department of Ophthalmology, American University of Beirut, Beirut, Lebanon
[2]Department of Ophthalmology, Rafic Hariri University Hospital, Beirut, Lebanon
[3]Department of Ocular Oncology, Thomas Jefferson University, Philadelphia, Pennsylvania, USA

Correspondence to
Professor Ahmad M Mansour, ammansourmd@gmail.com

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DESCRIPTION

A 10-year-old girl presented with blurred vision of 2 months. Uncorrected visual acuity was 20/20 in both eyes (OU). Refraction revealed 0.75 diopters of astigmatism OU. Visual blur was related to a moderate convergence insufficiency. The superior 90% of the left iris was darkly pigmented and velvety in consistency with regularly spaced protuberances (mammillations) (figure 1).

We present a novel anterior optical coherence tomography (OCT) report of iris mammillations.[1 2] Iris mammillations have predilection for darkly pigmented skin or ocular melanocytosis and present as unilateral or bilateral, sector or diffuse in distribution.[3] The differential diagnosis of multifocal superficial iris spots includes freckles, nevi, Brushfield spots, Lisch nodules, mammillations, Cogan Reese syndrome, inflammatory nodules and melanoma (tapioca variety) or metastases. Lisch nodules represent randomly scattered round tan-brown hamartomas of dendritic melanocytes, often in neurofibromatosis. Mamillations are evenly spaced tiny villiform iris aggregates of melanocytes with homogenous brown colour, often found in ocular melanocytosis; hence, the risk of pigmentary glaucoma or uveal melanoma.[1 3] Anterior OCT can help to differentiate between evenly spaced tiny iris mammillations from randomly scattered larger Lisch nodules or inflammatory nodules.

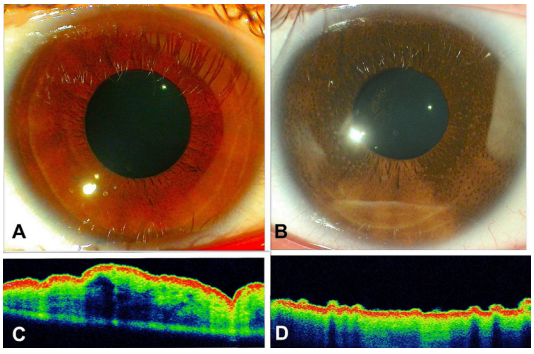

Figure 1 Slit lamp photograph of the right normal iris (A) and left dark velvety iris with mammillations (B). The inferior sector of the left iris is normal. Anterior segment optical coherence tomography (OCT) of the normal right iris demonstrates smooth surface with random crypts (C). OCT of the left eye shows numerous micronodules on the iris surface with flattening of the entire iris (D).

Learning points

- Iris mammillations represent unusual congenital iris anomalies rarely mentioned in the literature consisting of evenly spaced diffuse tiny protuberances on the anterior iris surface.
- Histopathology of iris mamillations revealed nesting of melanocytes and occasionally it represents stigmata for oculodermal melanocytosis, phacomatosis pigmentovascularis type IIB and possibly other disorders (neurofibromatosis and congenital adrenal hyperplasia).
- Anterior optical coherence tomography can help to differentiate between evenly spaced tiny iris mammillations from randomly scattered larger Lisch nodules or inflammatory nodules.

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