Optical coherence tomography of iris mammillations

Ahmad M Mansour,^{1,2} Carol Shields³

¹Department of Ophthalmology, American University of Beirut, Beirut, Lebanon

²Department of Ophthalmology, Rafic Hariri University Hospital, Beirut, Lebanon

³Department of Ocular Oncology, Thomas Jefferson University, Philadelphia, Pennsylvania, USA

Correspondence to

Professor Ahmad M Mansour, ammansourmd@gmail.com

Accepted 6 August 2018

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. Mammillations 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.

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 mammillations 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.

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).

Contributors AMM managed the case, AMM did data collection, CS did data analysis, AMM and CS wrote the paper and AMM and CS approved the paper.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Ragge NK, Acheson J, Murphree AL. Iris mammillations: significance and associations. *Eye* 1996;10 (Pt 1):86–91.
- 2 Elnahrawy O, Wilhelm H. [Iris Mammillation]. *Klin Monbl Augenheilkd* 2015;232:1259.
- 3 Gündüz K, Shields CL, Shields JA, *et al.* Iris mammillations as the only sign of ocular melanocytosis in a child with choroidal melanoma. *Arch Ophthalmol* 2000;118:716–7.

© BMJ Publishing Group Limited 2018. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Mansour AM, Shields C. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2018-226591

Copyright 2018 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow