

CASE REPORT

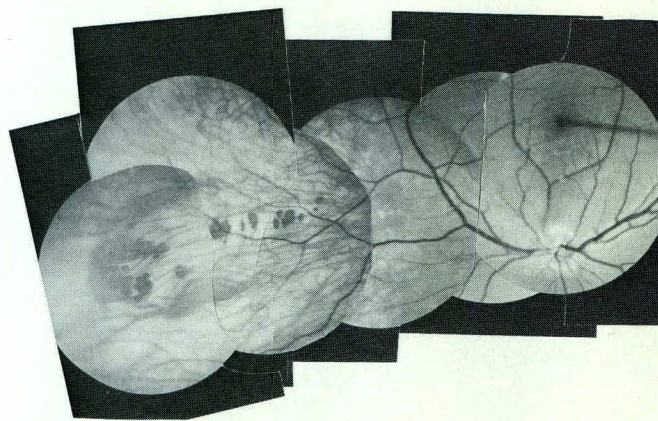
Grouped Pigmentation in the Peripheral Retina

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Pigment spots are frequently found during ophthalmoscopic examination. Differential diagnoses to be considered include: retinal pigment epithelium (RPE) hypertrophy, choroidal nevus, choroidal melanoma, melanocytoma, true hyperplasia of RPE, inflammatory pigmented fundus lesions, and pigmented colobomas. Table 1 summarizes methods for deciding on the possible cause for the pigmented area and its possible course.

Case Report

While scanning the peripheral retina on a routine eye examination, a colleague observed an innocent-looking pigment spot in a young male. For this patient, the pigment spot represented the "tip of the



iceberg". The extent of the pigmentary irregularity was revealed during dilated direct and indirect ophthalmoscopic examination. Serial photographs

Table 1

Characteristics	Occurrence	Potential For Malignancy	Cell Primarily Involved	Colour	Uniform Pigmentation	Distinct Margin	Elevation	Visual Field Loss	Progression
Retina pigment Epithelium (RPE) Hypertrophy	1:1000 ⁴	-	RPE	Dark, Black	++	+++	-	-/+	-*
Choroidal Nevus	1:3 ⁵	+	Choroidal Melanocytes	Slate gray, greenish, bluish	+	--	-/+	-/+	-**
Choroidal Melanoma	21 per million per year (whites over 50) ⁵	++	Choroidal Melanocytes	Variable	-	--	++	+	++
Melanocytoma	rare	-	Choroidal Melanocytes (Usually at ONH)	Black	+	+	+++	+	-/+
Hyperplasia of RPE (primary)	rare	-	RPE	Black	-/+	-	+	+	++
Inflammatory pigmented fundus lesions	3 per 100,000 per year ⁶	-	RPE	Black	-	~ age	~	+	-/+t
Pigmented Colobomas	Common ⁴	-	RPE	Black	-	+	~	+	-

* There are some reports of a gradual enlargement (1000 μ in 10 years)¹

** Choroidal Nevi rarely show growth² after the prepubertal years

t depending on control of disease

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across the inferior retina have been combined to show how extensive this 'grouped' or 'Bear Track' pigmentation is. The largest group lay approximately 10-12 disc diameters inferiorly to the posterior pole. The rest of the exam was unremarkable.

This type of retinal disturbance is a benign pigment epithelial hypertrophy, is well circumscribed, flat and has black uniform pigmentation. These features distinguish it from other types of pigmented areas in the retina (Table 1). Histologically, areas of grouped pigmentation are found to contain unusually large (hypertrophic) RPE cells with many pigment granules.

The disposition for this patient is to describe, sketch and/or photograph the pigment disturbance in enough detail to monitor and assist in differential diagnosis.

Patients of this kind continue to reward and encourage all of us who pick up an ophthalmoscope to explore the peripheral retina.

References

1. Norris, J.L., Cleasby, G.W., An Unusual Case of Congenital Hypertrophy of the Retinal Pigment Epithelium. *Arch Ophthalmol* 94 (11):1910-1911, Nov. 1976.
2. Gass, J. Donald M., Differential Diagnosis of Intraocular Tumors, A Stereoscopic Presentation, The C.V. Mosby Co. St. Louis, 1974.
3. Buettner, Helmut, Congenital Hypertrophy of the Retinal Pigment Epithelium, *Amer J Ophthalmol* 79 (2):177-189, Feb. 1975.
4. Duke-Elder, Sir Stewart, System of Ophthalmology, Vol. 3, Normal and Abnormal Development Part 2 Congenital Deformities, London, Henry Kimpton 1964, p. 801.
5. Yanoff, M. and Fine, B.S., Ocular Pathology, a text and atlas, 2nd ed. Harper & Row, Philadelphia, 1982.
6. Schlaegel, T.F., Essentials of Uveitis, Little, Brown & Co., Boston, 1969.

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4. Woo G, Long WF. Use of contrast sensitivity to measure visual function following a demyelinating disease. *Australian Journal of Optometry*. 62: 293 - 295, 1979.
5. Woo G, Hess R. Contrast sensitivity function and soft contact lenses. *International Contact Lense Clinic*. 16 (4): 171 - 189, 1979.
6. Regan D, Silver R, Murray TJ. Visual acuity and contrast sensitivity in multiple sclerosis — hidden visual loss: an auxiliary diagnostic test. *Brain*. 100: 563 - 579, 1977.
7. Arden GB, Jacobson JJ. A simple grating test for contrast sensitivity: preliminary results indicate value in screening for glaucoma. *Investigative Ophthalmology and Visual Science*. 17 (1): 23 - 32, 1978.
8. Hess R, Woo G. Vision through cataracts. *Investigative Ophthalmology and Visual Science*. 17 (5): 428-435, 1978.
9. Woo GC. The effect of CAM treatment and occlusion therapy on contrast sensitivity function in amblyopia. *The South African Optometrist*. 71 - 75, 1983.
10. Hess RF, Howell ER. The threshold contrast sensitivity function in strabismic amblyopia: evidence for a two type classification. *Vision Research*. 17 (9): 1049 - 1055, 1977.
11. Arden GB, Gucu koglu AG. Grating of contrast sensitivity in patients with retrobulbar neuritis. *Archives of Ophthalmology*. 96 (9): 1626 - 1629.
12. Bodis-Wollner I. Visual acuity and contrast sensitivity in patients with cerebral lesions. *Science*. 178: 769 - 771, 1972.
13. Regan D, Neima D. Low contrast letter charts as a test of visual function. *Ophthalmology*. 90 (10): 1192 - 1200, 1983.
14. Woo G. Contrast sensitivity function as a diagnostic tool in low vision. *American Journal of Optometry and Physiological Optics*. 69 (9): 648 - 651, 1985.
15. Arden GB. Measuring contrast sensitivity with gratings: a new, simple technique for the early diagnosis of retinal and neurological disease. *Journal of the American Optometric Association*. 50: 35 - 39, 1979.
16. Vistest LH-5. *Low Vision International*. 1985.
17. Higgins KE. Spatial contrast sensitivity: importance of controlling the patient's visibility criterion. *Archives of Ophthalmology*. 102: 1035 - 1041, 1984.

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Dawson WW, Trick GL, Litzkow CA. Improved electrode for electroretinography. *Invest Ophthalmol Vis Sci* 1979;18:988-91.
Trick GL, Trick LR. An evaluation of variation in pattern reversal retinal potential characteristics. *Docum Ophthalmol Proc Ser* 1984;40:57-67.

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