Dictyoma

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Badal and Lagrange (1892) were the first to describe a tumour of the ciliary body which they considered to be carcinoma. Other early reports of similar tumours of the ciliary body were given by Emanuel (1900), Verhoeff (1904), Kuthe and Ginsberg (1905), and Fuchs (1908). The latter suggested that the tumour be named “diktyoma” (derived from the Greek word “diktyon” for net) since it was composed of cells forming a net-like structure.

This case is presented because of the rarity of occurrence of the tumour. According to a detailed review of dictyomata by Andersen (1962) only 22 cases could be classified as such. Recent reports of cases of dictyoma have been given by Iwamoto, Witmer, and Landolt (1967), and Shivde, Asha Kher, and Junnarkar (1969).

Case report

A 4-year-old boy was seen in the Eye Clinic of the University of Missouri for evaluation of pain of 2 months’ duration in his right eye. Within the past year, his parents had noticed a change in the colour of the iris of the right eye. There was no family history of ocular malignancies.

Examination

The visual acuity without correction was right eye 6/18 and left eye 6/6. Both pupils were round, but the right was larger than the left and was eccentrically located towards the 4 o’clock position. A greyish mass was seen through the pupil pushing the inferior nasal quadrant of the iris forward and penetrating the iris tissue. Slit-lamp examination revealed a moderate amount of rubeosis of the whole iris and peripheral anterior synechiae from 3 to 6 o’clock position. The ocular tension was 50-6 mm. Hg (Schiötz) with the 10 g. weight in the right eye and 17-3 mm. Hg (Schiötz) with the 5-5 g. weight in the left eye. Ophthalmoscopy with dilated pupil showed a large, elevated, white mass in the ciliary body at the 4 o’clock position. The clinical diagnosis of probable dictyoma was made.

Surgery

The right eye was enucleated.

Pathological findings

Macroscopic examination

Upon sectioning of the right globe a firm whitish tumour mass is noted in the region of the ciliary body (Fig. 1, overleaf). It measures approximately 1 cm. in its greatest dimension.
**FIG. 1** Section through globe, showing white mass involving ciliary body and iris

**FIG. 2** Tumour arising from area of ciliary body. \( \times 16 \)

**Microscopic examination**

The tumour replaces the ciliary body and protrudes mainly into the posterior chamber (Fig. 2). Extension into the anterior chamber is also evident. Marked peripheral anterior synechiae are found. The tumour consists of tall columnar cells arranged in gland-like structures (Fig. 3).

These cells have elongated, hyperchromatic nuclei (Fig. 4, overleaf). Very little stroma is seen. Several cells contain a dark granular pigment. A considerable amount
of cupping of the optic disc and atrophy of the ganglion cell layer of the retina are noted. The diagnosis of dictyoma with secondary glaucoma is confirmed histologically.

**Discussion**

Dictyomata are potentially malignant tumours originating from the pars ciliaris retinae. They have a tendency to grow as embryonic retinae. Little or no stromal tissue is found. Although the malignant behaviour of the tumour is noted by its infiltrating and destructive properties, no instance of metastasis has been seen (Reese, 1963).

**Summary**

A case of dictyoma with secondary glaucoma is reported. The tumour was detected clinically and the diagnosis verified by microscopical examination.

**References**


BADAL, J., and LAGRANGE, P. (1892) *Arch. Ophthal.*, **13**, 143


