PIGMENTED LESIONS OF THE CONJUNCTIVA - I

Pigmented lesions of the conjunctiva derived from melanocytes may be classified clinically into four main groups, depending upon whether they are localized or widespread in extent, and whether they are flat or raised:

(1) Localized flat lesions	(a) Epithelial melanosis
	(b) Junctional naevus
	(c) Localized intra-epithelial melanoma
(2) Widespread flat lesions	(a) Racial pigmentation
	(b) Subepithelial melanosis
	(c) Widespread intra-epithelial melanoma (pre-cancerous melanosis)
(3) Localized raised lesions	(a) All naevi, except junctional naevi
	(b) Localized malignant melanoma
(4) Widespread raised lesions	(a) Widespread malignant melanoma (cancerous melanosis)

LOCALIZED FLAT LESIONS

Epithelial melanoses and junctional naevi are pigmented—or occasionally non-pigmented—lesions occurring most commonly in childhood or adolescence. Epithelial melanoses tend to be static or slow-growing, while junctional naevi tend to be progressive, transforming most commonly into raised compound naevi.

Localized intra-epithelial melanomata are acquired lesions of middle or old age, but may occasionally occur in young adults. Although their natural history is unpredictable, they have distinct potentialities for transforming into malignant melanomata.

These three lesions have an identical clinical appearance (Fig. 1); they are localized and flat, and on slit-lamp microscopy the pigment is seen to be within the epithelium rather than in the sub-epithelial tissue.

FIG. 1.—Localized flat pigmented lesion of the conjunctiva

Pathology

Epithelial Melanosis (Fig. 2)

There is increased production of melanin by melanocytes of the basal layer of the epithelium. The melanocytes may be normal in number or may be increased, but there is *no tumour formation*. Epithelial melanosis may be a static lesion, but it may possibly result in the formation of a junctional naevus or of an intra-epithelial melanoma in some cases.

FIG. 2.—Epithelial melanosis. Haematoxylin and eosin. $\times 167$.

Junctional Naevus (Fig. 3)

This lesion is characterized by *circumscribed nests* of naevus cells within the epithelium or at the junctional zone between epithelium and sub-epithelial tissue. The nests are sharply demarcated from the surrounding epithelial cells and, except occasionally in children, there is little tendency for naevus cells to migrate towards the surface of the epithelium. The natural history of these lesions is for the nests of naevus cells to drop down into the sub-epithelial tissue to form a compound naevus; they may very occasionally give rise to a malignant melanoma.

FIG. 3.—Junctional naevus. Haematoxylin and eosin. $\times 167$.

Localized Intra-epithelial Melanoma (Fig. 4)

There is a *diffuse disturbance* of the basal layer of the epithelium in the affected area. Tumour cells, which are usually pigmented, tend to migrate towards the surface of the epithelium. These tumour cells exhibit pleomorphism and there is little or no attempt to produce nests of cells. This lesion is particularly liable to become transformed into a malignant melanoma; this occurs when tumour cells invade the sub-epithelial tissue.

FIG. 4.—Localized intra-epithelial melanoma. Haematoxylin and eosin. $\times 167$.

(To be continued)

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