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Case History

A 56-year-old woman presents with a 7 x 4 mm raised pigmented lesion that is clinically consistent with an irritated seborrheic keratosis.

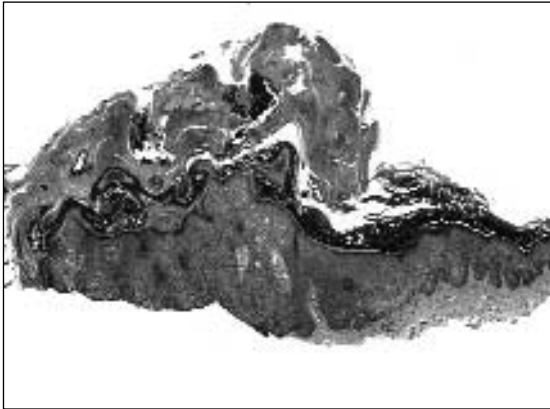


Figure 1

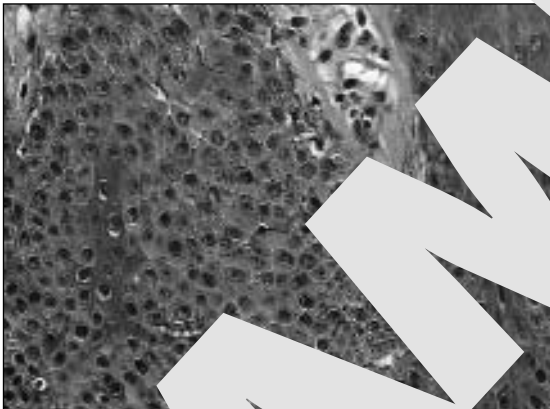


Figure 3

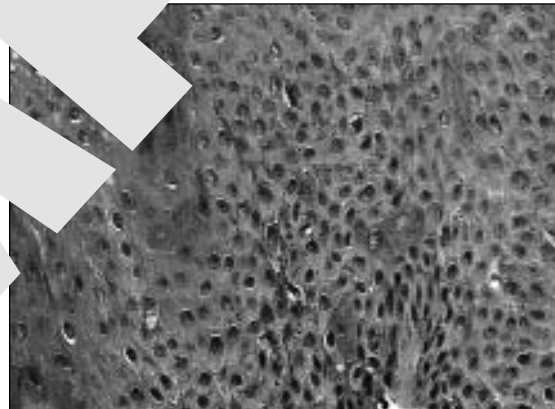


Figure 4

Figure 1: Low magnification showing a lesion characterized by epidermal hyperplasia and parakeratosis.

Figure 2: Intermediate magnification illustrating that the lesion shows benign cytological features and contains substantial amount of melanin pigment.

Figure 3: High magnification showing that there are many pigmented dendritic melanocytes interspersed between the keratinocytes. Note that the pigment is predominantly in the melanocytes.

Figure 4: High magnification showing that there are many pigmented dendritic melanocytes interspersed between the keratinocytes. Note that the pigment is predominantly in the melanocytes.

Diagnosis

Melanoacanthoma.

Commentary

Melanoacanthoma is a rare, cutaneous and mucosal benign neoplasm characterized histologically by proliferation of epidermal keratinocytes and pigment-forming dendritic melanocytes. The two types of Bloch's original benign non-nevoid melanoepithelioma¹ are now recognized as separate entities; type I melanoepithelioma as melanoacanthoma (**Figs. 1-4**) and type II melanoepithelioma as ordinary, pigmented seborrheic keratosis (**Figs. 5-7**). The clinical characteristics of melanoacanthoma are not as specific as the histologic findings. It presents clinically as an asymptomatic solitary or infrequently multiple elevated, deeply hyperpigmented nodular lesion.²⁻⁴ Therefore, the clinical differential diagnosis includes seborrheic keratosis, malignant melanoma, nevus, melanocytic nevus and pigmented basal cell carcinoma (**Figs. 8-10**). Most lesions are found among those over the age of 55-65 years. There is no preponderance in either sex, although the majority of cases were reported in whites. Most lesions have been present at least five years before histologic examination, with the head and neck region the most common anatomic location. Oral melanoacanthoma is a rare, benign mucosal lesion probably due to a reactive process resulting from local trauma rather than a neoplastic process.^{5,6} Cutaneous and mucosal melanoacanthoma differ in terms of patient age, patient race, and site.

Melanoacanthoma is histologically distinguished by the presence of numerous relatively well-defined islands of small basaloid cells and numerous large dendritic melanocytes with abundant melanin granules within an acanthotic epidermis (**Figs. 1-4**). Many melanocytes are scattered throughout the tumor lobules of a melanoacanthoma rather than localized to the basal layer. The keratinocytes contain little or no melanin. Cytologic atypia is not a feature of the melanocytes or keratinocytes in a melanoacanthoma.

There is some controversy over whether or not melanoacanthomas are actually different from irritated seborrheic keratoses. Suprabasal dendritic melanocytes may be seen in every type of seborrheic keratosis except the reticulated type. The tumor islands are not sharply defined in seborrheic keratosis. They are made up of small basaloid cells that may show a variable amount of pigmentation. Melanosome transfer from melanocytes to tumor keratinocytes is not blocked and therefore keratinocytes contain a large number of melanosomes. A study in which seborrheic keratoses were irritated by croton oil or surgical trauma failed to demonstrate any changes characteristic of melanoacanthomas.⁷

Therefore it appears that melanoacanthoma is a distinct entity that should be considered in the differential diagnosis of any rapidly growing, pigmented lesion on the skin or mucous membranes.

Secondary colonization by dendritic melanocytic cells, with dendritic melanocytic cells at all levels of the epidermis or epithelium, should be distinguished from the much more common hypertrophy and hyperplasia of these cells in which they remain at the dermal-epidermal junction. Both, however, can cause a problem in differential diagnosis of melanoma, especially since the lesion may not be colonized uniformly and since the colonized lesion may arise rapidly, a characteristic feature of acral-lentiginous melanoma. Squamous cell carcinomas, verruca vulgaris and lichen simplex chronicus can show colonization of such nonmelanocytic processes.

Blue nevus, even ordinary nevocellular nevi may, especially in the epidermis, show extensive dendritic differentiation. This is particularly likely to occur in nevi of the distal aspect of the lower extremities and in subungual nevi. A small minority, probably less than 5%, of dermatofibrosarcoma protuberans shows a proliferation within the neoplasm of dendritic, heavily pigmented cells, a phenomenon originally noted by Bednar (Figs. 11-13).

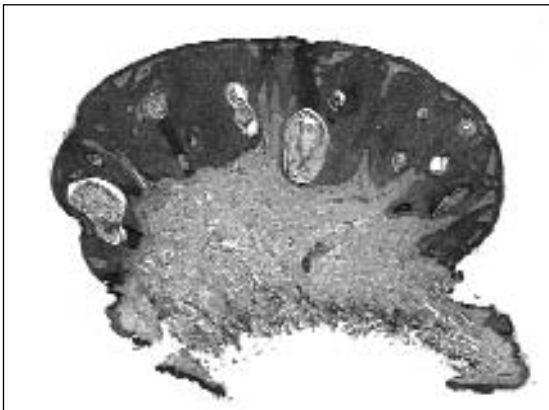


Figure 5

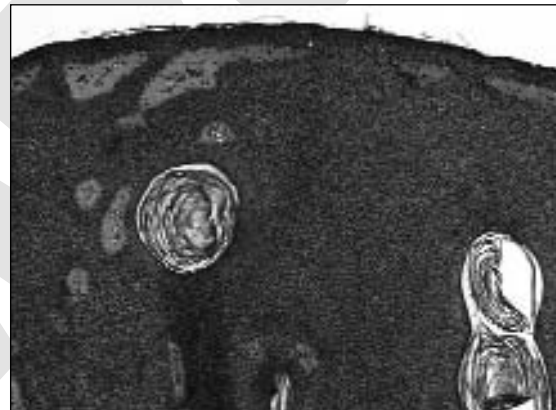


Figure 6

Figure 5: Seborrheic Keratosis. Scanning magnification illustrates an exophytic epidermal hyperplasia with pseudohorn cysts and sharp demarcation.

Figure 6: Seborrheic Keratosis. Intermediate magnification shows prominent melanin within the majority of the keratinocytes.

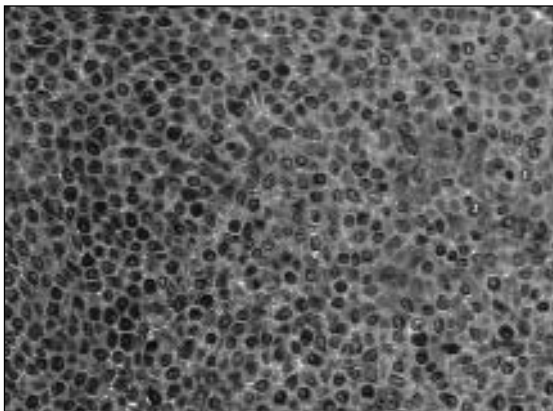


Figure 7

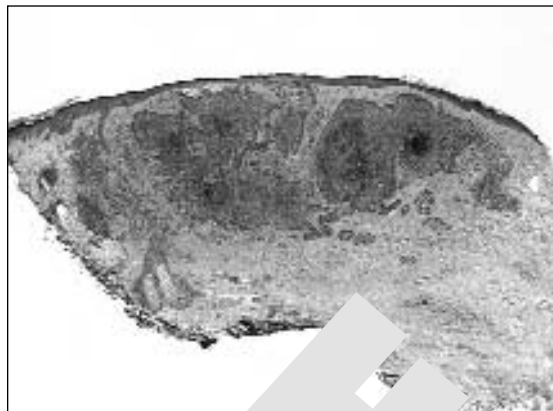


Figure 8

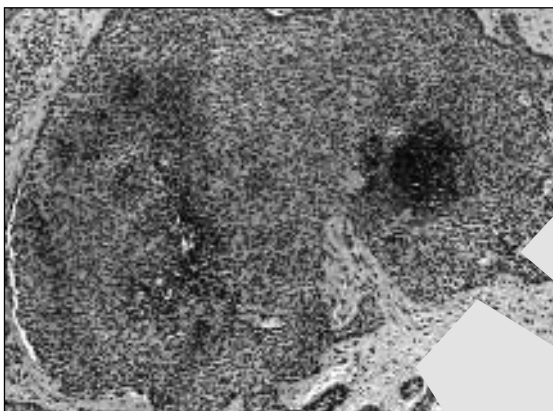


Figure 9

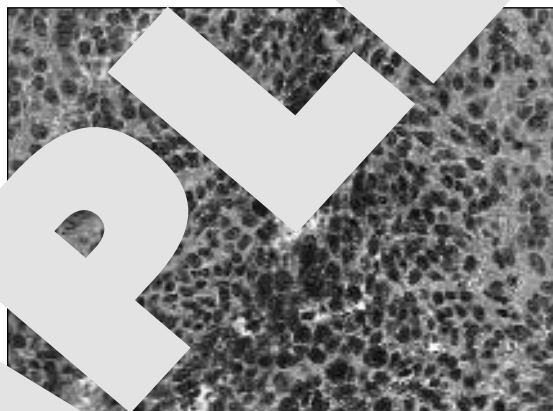


Figure 11



Figure 12

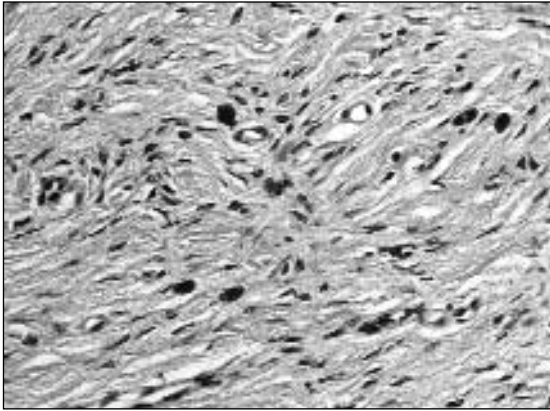


Figure 13

- Figure 7:** Seborrheic Keratosis. High magnification confirms the presence of the melanin in the keratinocytes and does not show an increased number of melanocytes nor dendritic melanocytes.
- Figure 8:** Pigmented Basal Cell Carcinoma. Scanning magnification showing islands of epithelial cells in the dermis. Note the pigment present in many areas of the tumor.
- Figure 9:** Pigmented Basal Cell Carcinoma. Intermediate magnification showing basaloid tumor cells with a peripheral palisade and brown pigment in the center of the nodule.
- Figure 10:** Pigmented Basal Cell Carcinoma. High magnification showing brown pigment consistent with melanin in many of the cells in the tumor.
- Figure 11:** Dermatofibrosarcoma protuberans with melanin pigment (Bednar tumor). Scanning magnification showing a spindle cell tumor filling the entire dermis and extending into the subcutaneous tissue.
- Figure 12:** Dermatofibrosarcoma protuberans with melanin pigment (Bednar tumor). Intermediate magnification showing the tumor composed of short intersecting fascicles of spindle cells. Note the presence of pigment in the tumor.
- Figure 13:** Dermatofibrosarcoma protuberans with melanin pigment (Bednar tumor). High magnification showing the spindle shaped tumor cells and the presence of many pigmented epithelioid cells in the tumor. The pigment is consistent with melanin.

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