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Clinical Pathologic Conference In Dermatopathology

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SUMMARY

The following are 10 of 15 cases presented at a Clinical Pathologic Conference to the Second GCC International Conference on Dermatology and Venereology in Doha, Qatar in February 1994. This material was presented in poster form with discussion during the scientific session.

CASE 1

Case Report: A 49 year old male presented with an asymptomatic nodule on the right ear helix.

Histopathologic Findings: The growth was well circumscribed and encapsulated with a thin layer of loose, fibrous connective tissue. There were equal components of endothelial-lined blood vessels, bundles of smooth muscle, and islands of adipose tissue (Figs. 1a and b). The lipomatous areas are intimately associated with the vascular and smooth muscle components. Within the tumour, there are scattered mast cells.

Diagnosis: Angiomyolipoma. The main differential diagnosis is that of an angiolipoma, but the amount and location of smooth muscle fascicles should be recognizable on hematoxylin and Eosin stained sections and is striking in trichrome-stained sections. An angioleiomyoma rarely has such large collections of lipocytes. [1,2,3]

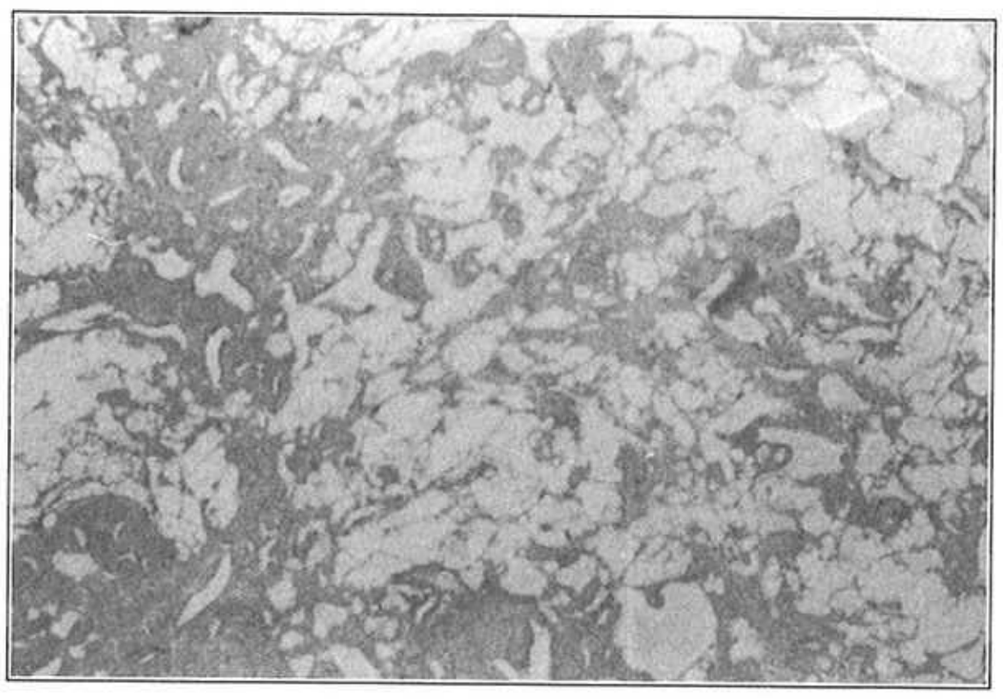

Figure 1a: The tumor shows an equal admixture of adipose tissue, proliferation of endothelial-lined blood vessels, and smooth muscle bundles. (H&E, 64X).

CASE 2

Case Report: A 70 year old female complains of several small, raised, slightly pigmented lesions developing on her left lower leg. She has a past history for an acral lentiginous melanoma 15 years prior.

Histopathologic Findings: The epidermis shows thinning with aggregates of atypical melanocytes. There is widening of the dermal papillae with inward turning of the rete ridges at the periphery of the specimen. Atypical melanocytes can be seen in some of the blood vessels in lymphatic spaces. The dermal aggregates of atypical melanocytes extend as

far if not beyond the epidermal involvement (Figs. 2a and b).

Diagnosis: Epidermotropic Metastatic Malignant Melanoma. The main differential diagnosis is that of a primary malignant melanoma versus the epidermotropic metastatic malignant melanoma. This separation can be critical since a primary versus metastatic lesions can require oncologic therapy. One of the main features is the extent of the dermal involvement beyond the epidermal spread. Other authors note that the metastatic lesions have a market nevoid differentiation and frequently presenting crops over a prolonged period and often years after the primary tumor. [4,5,6]

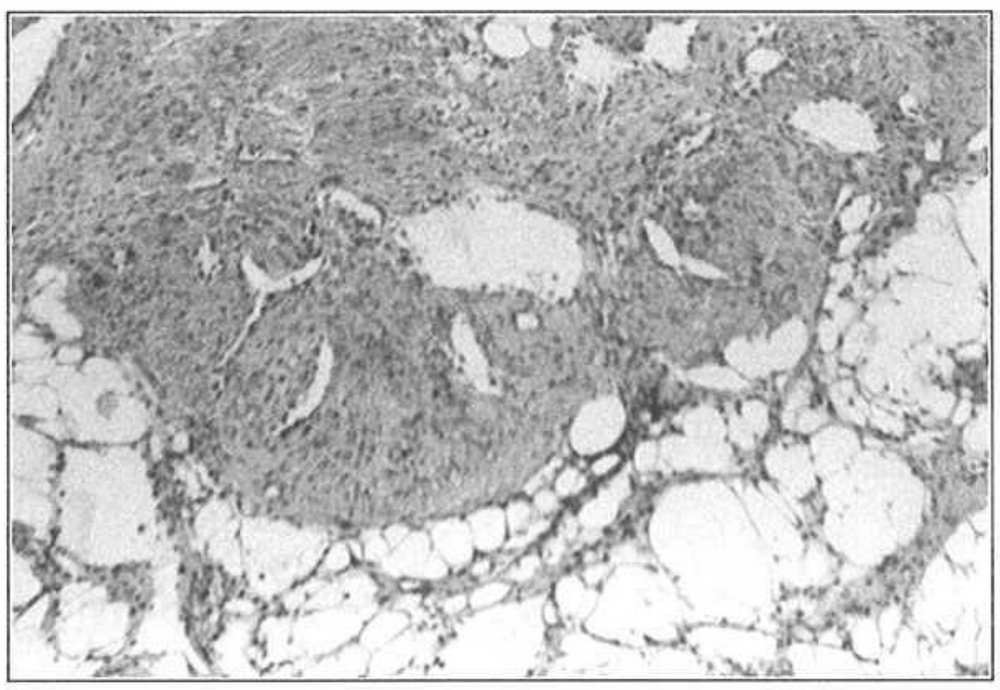

Figure 1b: Multiple endothelial-lined blood vessels surrounded by smooth muscle bundles and adipose tissue. (H&E, 125X).

CASE 3

Case Report: A 66-year-old male with a several week history of numerous, tender erythematous nodules on both shins and calves.

Histopathologic Findings: The specimen shows foci of fat necrosis with degeneration of lipocytes (ghost-like). There are areas of acute inflammation and patchy calcium deposition (Fig. 3). There are also occasional granulomas with giant cells at the periphery of the specimen.

Diagnosis: Panniculitis due to Pancreatic Carcinoma. Scleredema neonatorum shows

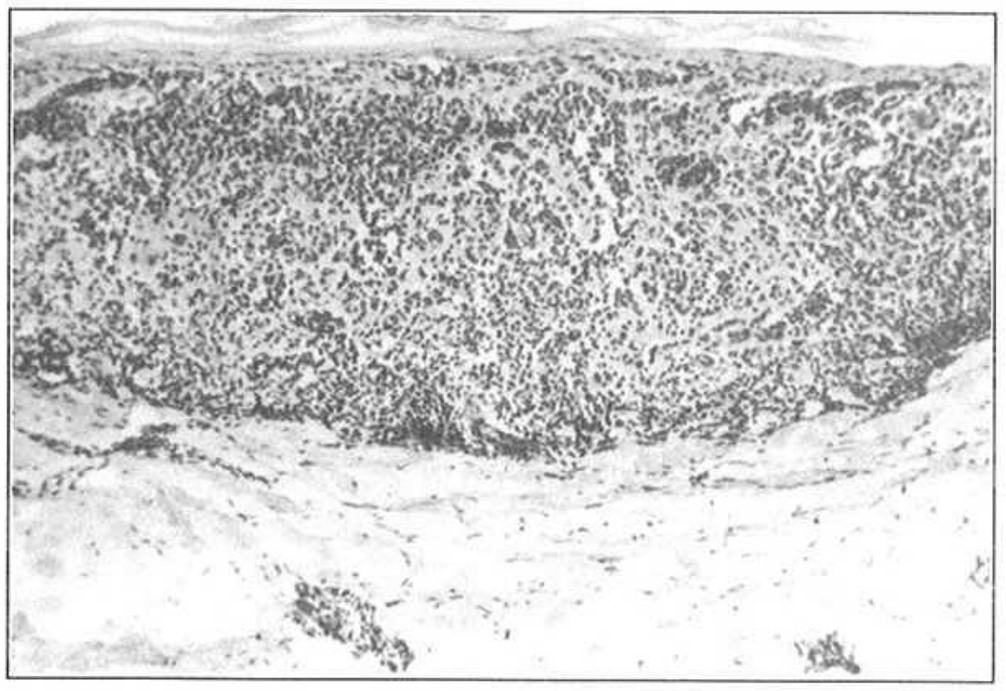

Figure 2a: Extensive melanocytic proliferation in the corium extending far beyond the dermal component and with a lymphocytic inflammatory infiltrate in the dermis. (H&E, 125X).

formation of multiple needle-shaped clefts within the fat cells. Erythema nodosum does not show necrosis of the subcutaneous fat and later shows a lymphocytic/histiocytic septal panniculitis. Erythema induratum is lobular panniculitis with extensive chronic inflammation with granuloma, vasculitis with thrombosis, and occlusion. Characteristic changes of pancreatic-induced panniculitis are the findings of lipocytes that have a ghost-like appearance. [7,8,9]

CASE 4

Case Report: A 49 year old female with

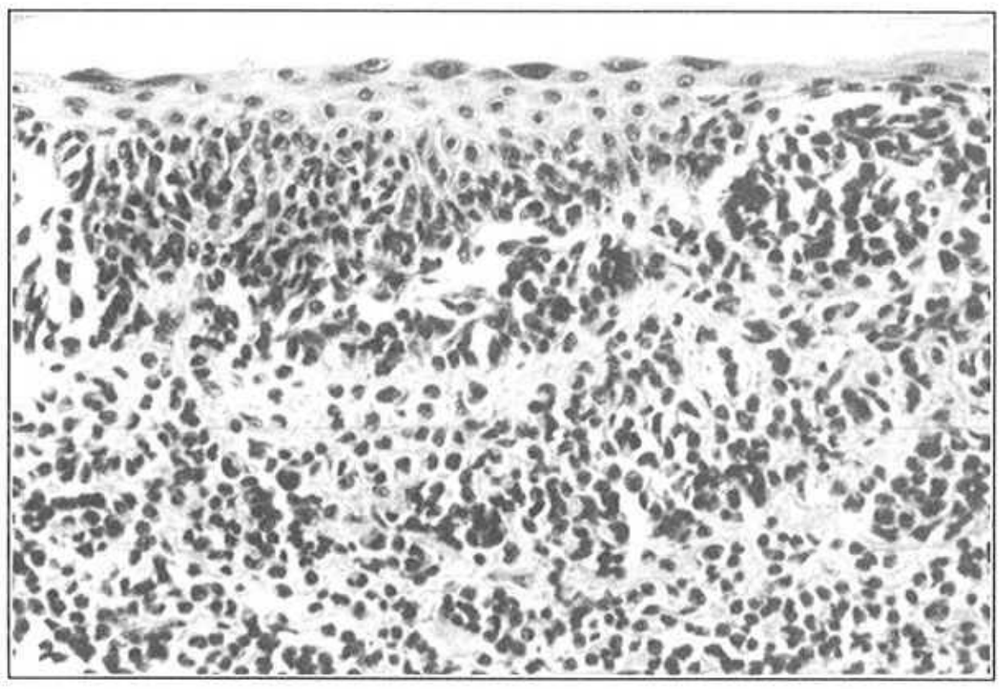

Figure 2b: Extensive atypical melanocytic proliferation in the epidermis and upper corium. (H&E, 250X).

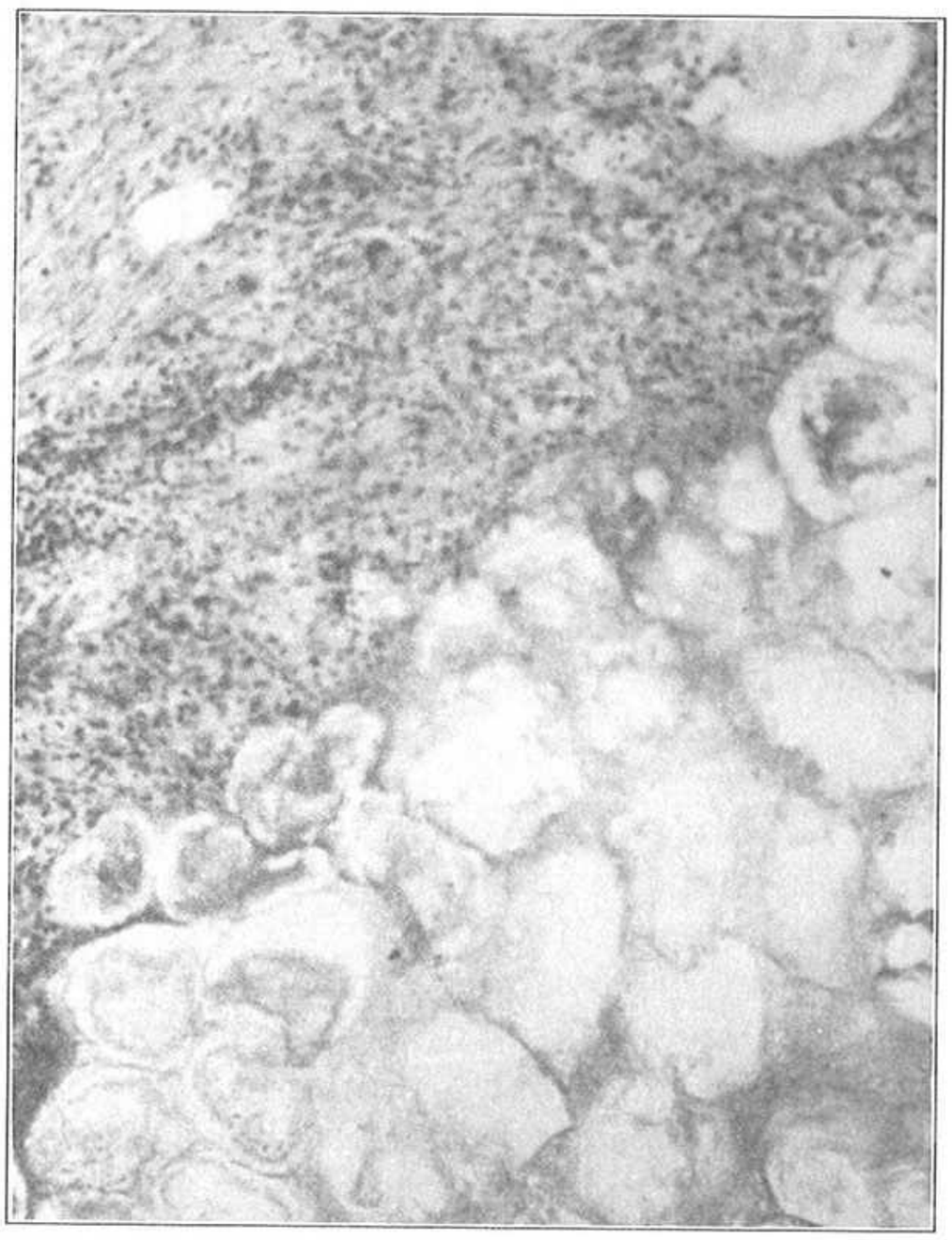

Figure 3: Chronic and slightly granulomatous inflammation of the lower dermis and numerous "ghost-like" lipocytes with some foci of early calcification. (H&E, 125X).

Sjogren's syndrome complains of several nodules developing in the scalp.

Histopathologic Findings: The epidermis is atrophic. There is amorphous eosinophilic material in large deposits that extend down to the level of the subcutaneous fat (Fig. 4). This material can also be noted deposited around sweat glands and blood vessels.

Diagnosis: Nodular Amyloidosis of The Scalp. The differential diagnosis of this rare variant of localized cutaneous amyloidosis depends basically on appreciating the amorphous eosinophilic material diffusely deposited in the dermis, and confirming the diagnosis with special stains (Congo red, Thioflavin - T, or Dylon red stain), or electron microscopy. This patient had associated Sjogren's disease that has been reported with amyloidosis. [10,11,12]

CASE 5

Case Report: A 58 year old white male complains of multiple verrucous 1.0 to 3.0 mm papules on the dorsal aspect of the fingers.

Histopathologic Findings: The specimen shows a papillomatous, hyperkeratotic and acanthotic growth. This growth has a richly vascular and markedly myxomatous fibrous connective tissue stroma (Fig. 5). There is no evidence of human papilloma virus infection.

Diagnosis: Myxoid Fibroma. Although the lesions clinically resemble verrucae, there is no histologic evidence of human papilloma virus infection. Acrokeratosis verruciformis is an autosomal dominant trait and shows hypergranulosis and papillomatosis, but shows also church spire-like elevations. Acquired digital fibrokeratomas are usually solitary and show a fibrous proliferation in the dermis with

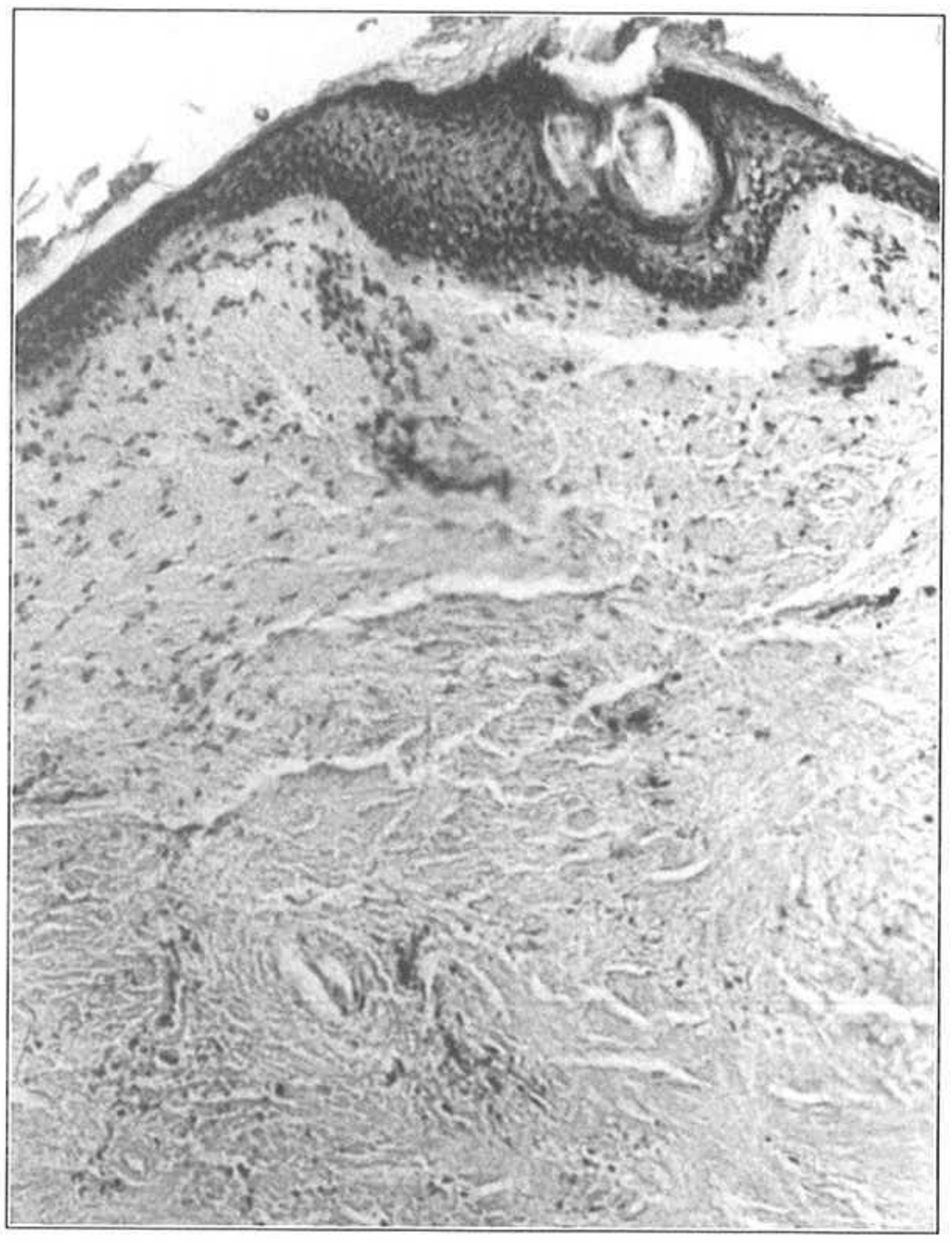

Figure 4: Massive amorphous material deposited in the dermis with obliteration of hair follicles and appendages. (H&E, 125X).

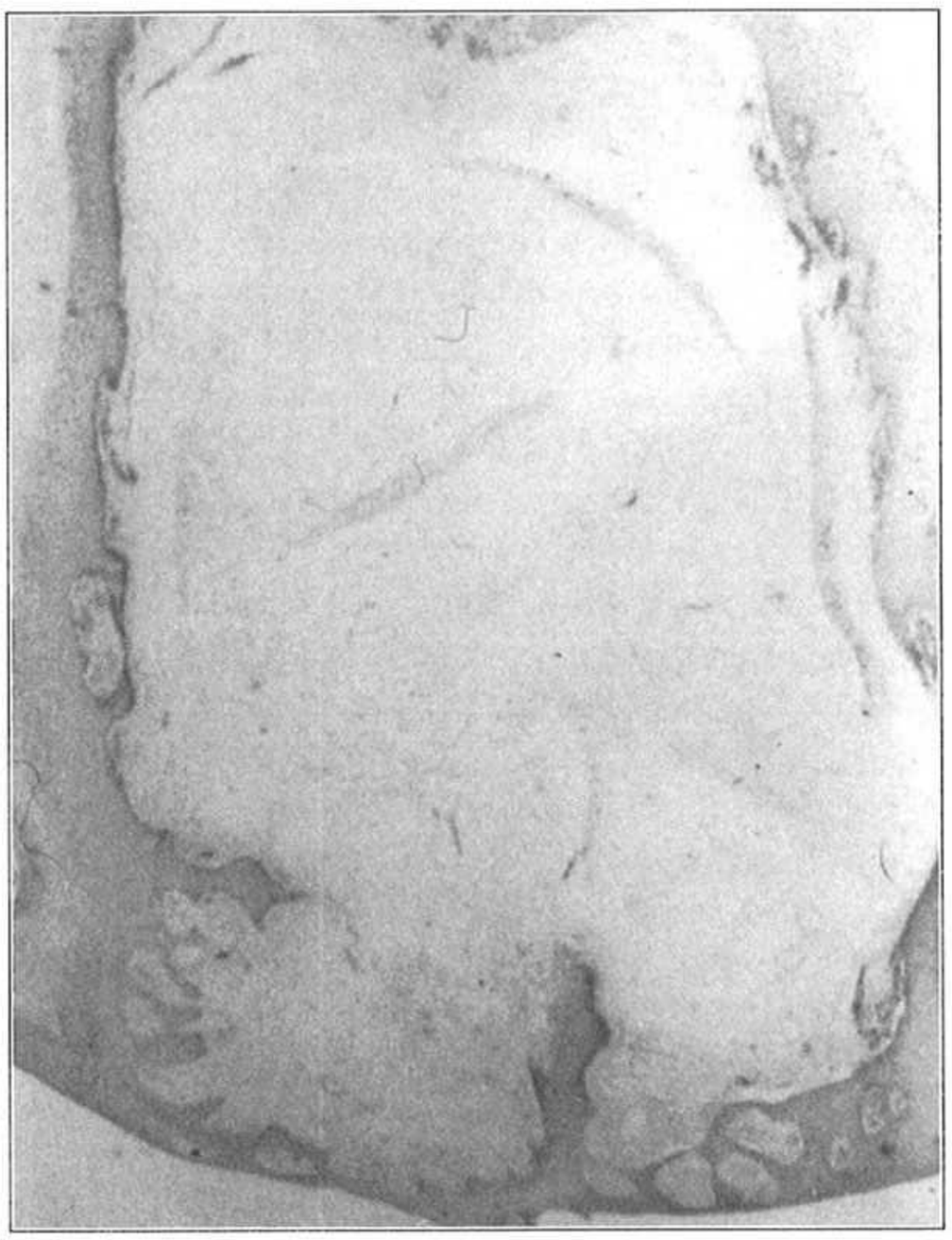

Figure 5: An elevated and papillomatous growth with overlying acanthotic epidermis and hyperkeratosis. The stroma shows loose, myxomatous connective tissue. (H&E, 64X).

an overlying hyperkeratotic and acanthotic epidermis. Cutaneous focal mucinosis is usually a solitary, smooth-surfaced, skin-colored nodule. [13,14,15]

CASE 6

Case Report: A 26 year old female complains of a deeply pigmented lesion on the cheek.

Histopathologic Findings: There is minimal junctional nest formation. The growth is deeply pigmented (Fig. 6a). The dermal nests extend to the level of the subcutaneous fat and follow blood vessels, nerves, and adnexa. Cytologic atypia is more prominent in deeper portions of the tumor with some variation in size/shape and hyperchromacity of the cell nuclei (Fig. 6 b).

Diagnosis: Deep Penetrating Nevus. The differential diagnosis includes a congenital nevus, a combined nevus, and a malignant melanoma. A congenital nevus can also show deep nevus involvement around adnexa, but usually is not deeply pigmented and shows no nuclear dysplasia. Some combined nevi may be examples of deep penetrating nevus. The main differential diagnosis is a malignant melanoma which can be ruled out by the recognition of the overall appearance of the lesion, complete absence of epidermal involvement with atypical melanocytic hyperplasia, lack of severe cellular atypia, and the absence of mitotic figures. [16,17,18]

CASE 7

Case Report: A 43 year old female complains of patchy alopecia and itchy scalp.

Histopathologic Findings: The epidermis shows minimal hydropic degeneration of the base cell layer (Fig. 7a). There is follicular involvement limited primarily to the infundibulum and isthmus with lichenoid inflammation and cytoid formation (Fig. 7b). There is minimal perivascular or periappendageal lymphocytic inflammation. Other features noted included hyperkeratosis and follicular plugging.

Diagnosis: Lichen Planopilaris. The differential diagnosis includes lupus erythematosus which usually includes more

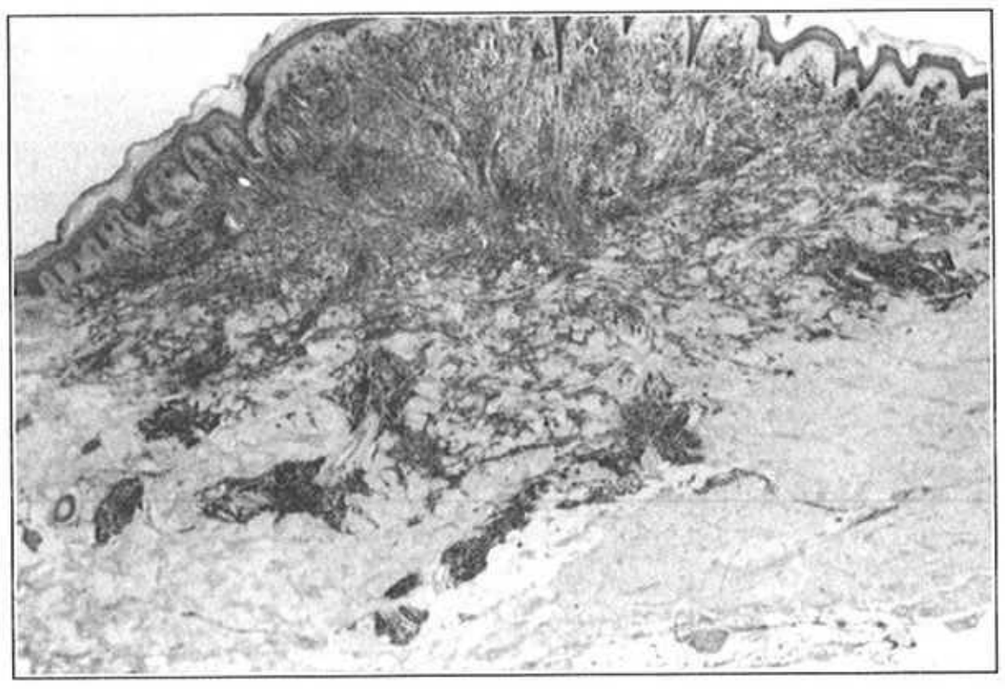

Figure 6a: An elevated and deeply pigmented melanocytic growth with a wedge-shaped architecture and minimal junctional activity. (H&E, 64X).

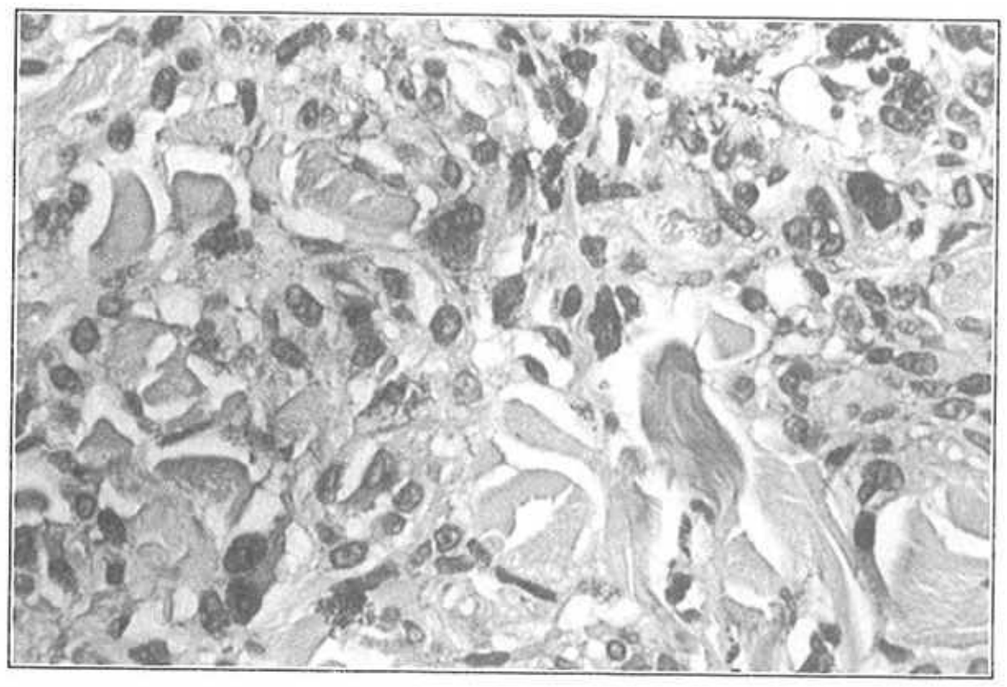

Figure 6b: The melanocytes in the corium can be seen extending between the collagen bundles having slightly pleomorphic and hyperchromatic nuclei, but no evidence for mitotic figures (H&E, 250X).

epidermal changes and intense perivascular and periappendageal inflammation. Alopecia areata involves the hair bulbs with a "hive of bees" lymphocytic inflammation. Folloculitis decalvans is an acute inflammatory process. Pseudopelade of Brocq is a non-inflammatory scarring alopecia and probably representing a "burnt-out" process not evident on the biopsy or clinically. [19,20,21]

CASE 8

Case Report: An 11 year old boy with a pigmented lesion on the chest, present for several years.

Histopathologic Findings: The main histologic features in this case include a spitzoid pattern with pseudoepitheliomatous hyperplasia of the epidermis, spindloid cell proliferation along the dermo-epidermal junction and dermal nests with some degree of maturation through the deeper portions of the dermis (Fig. 8a). However, mitotic figures can be seen within these dermal nests (Fig. 8b).

Diagnosis: Malignant Melanoma in Childhood. This patient died of metastatic lesions. The main differential diagnosis is that of a benign Spitz nevus. All the classic features of Spitz nevus can be seen in this type of spitzoid malignant melanoma but the most diagnostic feature appears to be mitotic figures

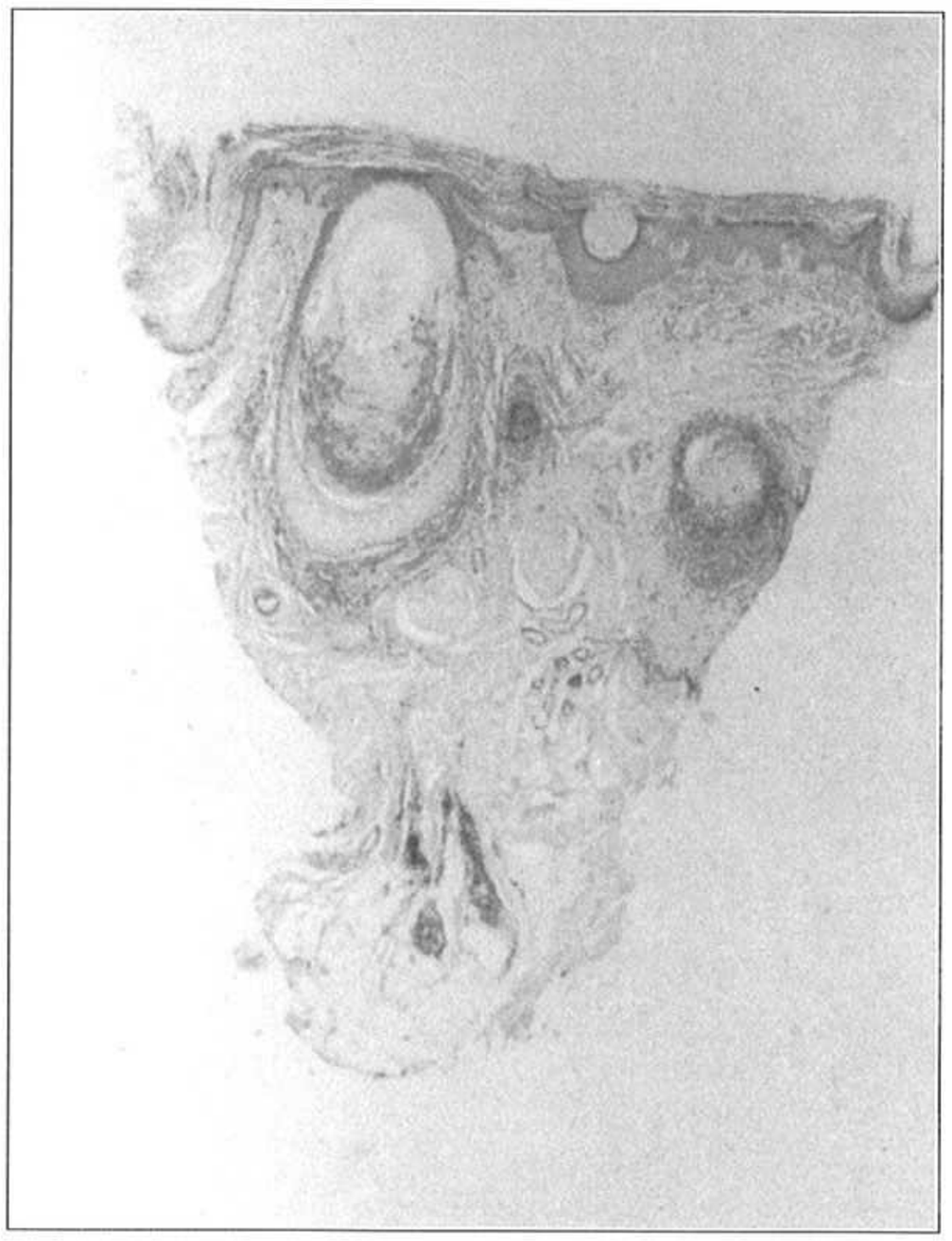

Figure 7a: Follicular plugging with perifollicular lymphocytic inflammation. Note the absence of epidermal and perivascular inflammation. (H&E, 64X).

in the dermal nests. PCNA staining may prove to be helpful as seen in this case and in recent reports in the literature. [22,23,24]

CASE 9

Case Report: A 67-year-old female presented with a raised, red, slightly scaly lesion on her lower leg present for several months.

Histopathologic Findings: This specimen shows pseudoepitheliomatous hyperplasia with multiple intraepidermal abscess formation (Fig. 9a). Within the dermis, there is deep granulomatous inflammation with clusters of round brown spores "copper penny-like" (Fig. 9b).

Diagnosis: Chromoblastomycosis. Chromoblastomycosis is caused by a dermatiaceous (dark) fungi, including *Phialophora* species, *Wangiella* species, and

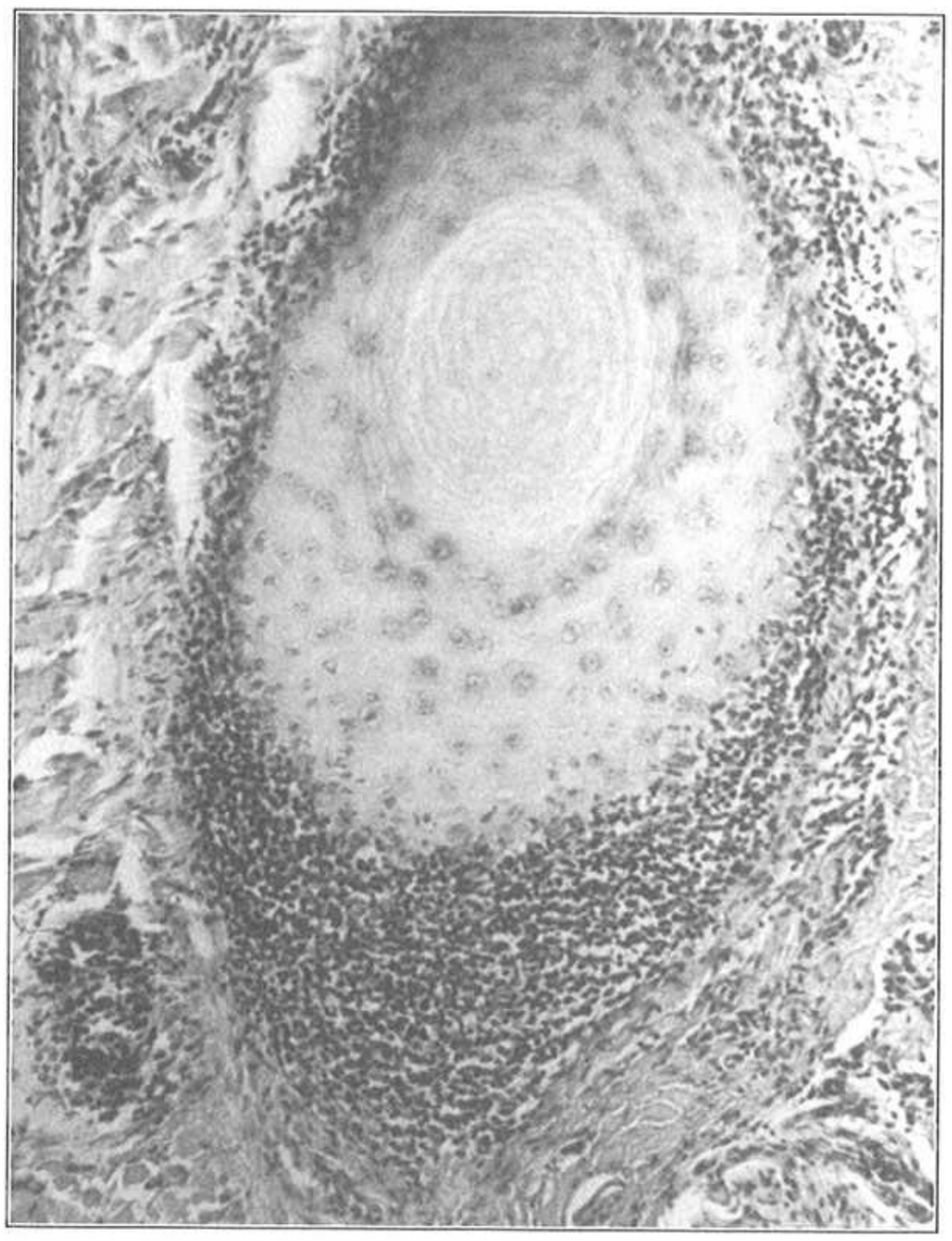

Figure 7b: Folicular lymphocytic inflammation with formation of cytoid bodies. (H&E, 125X).

Cladosporium species. These can overlap phaeohyphomycosis. [25,26,27]

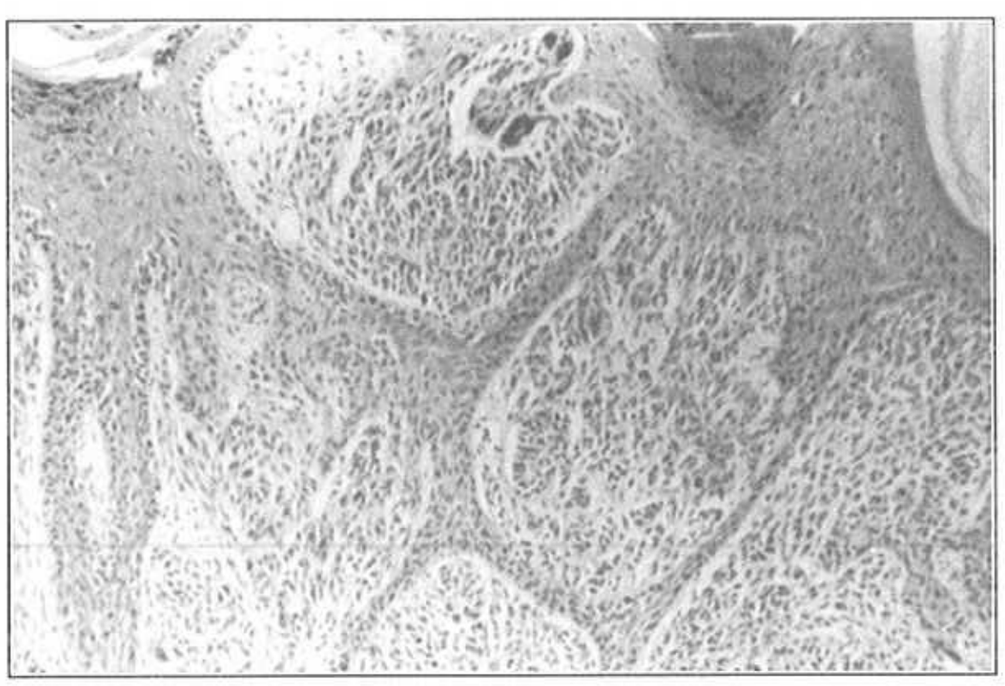

Figure 8a: The epidermis shows pseudoepitheliomatous hyperplasia with melanocytic proliferation and nests of epithelioid and spindle cells extending into the corium. (H&E, 125X).

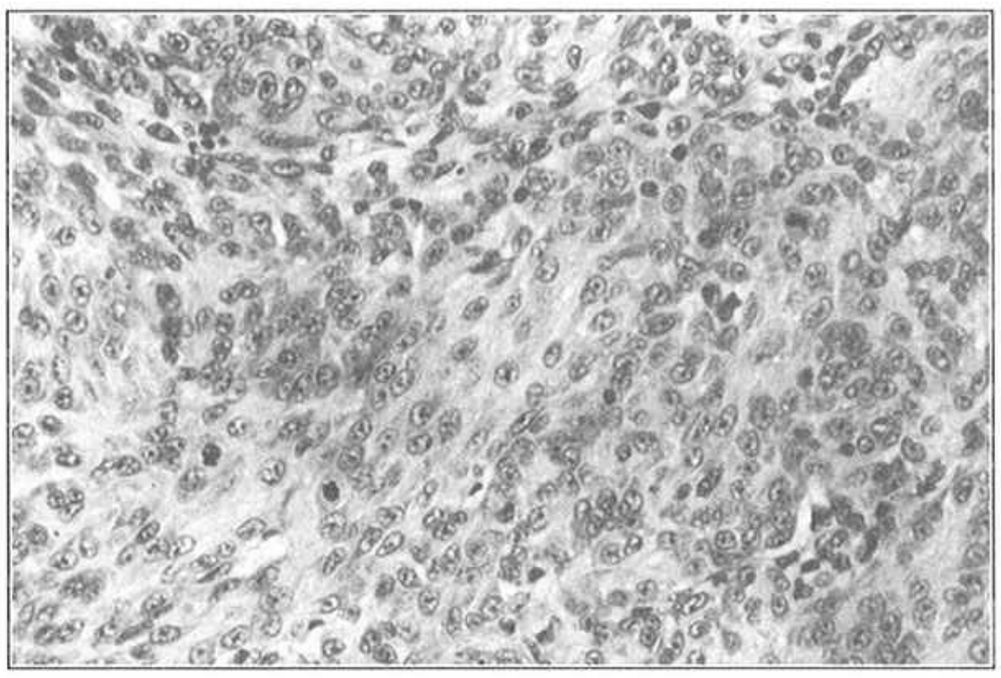

Figure 8b: Nests within the deeper dermis show several mitotic figures as well as marked cellular pleomorphism. (H&E, 250X).

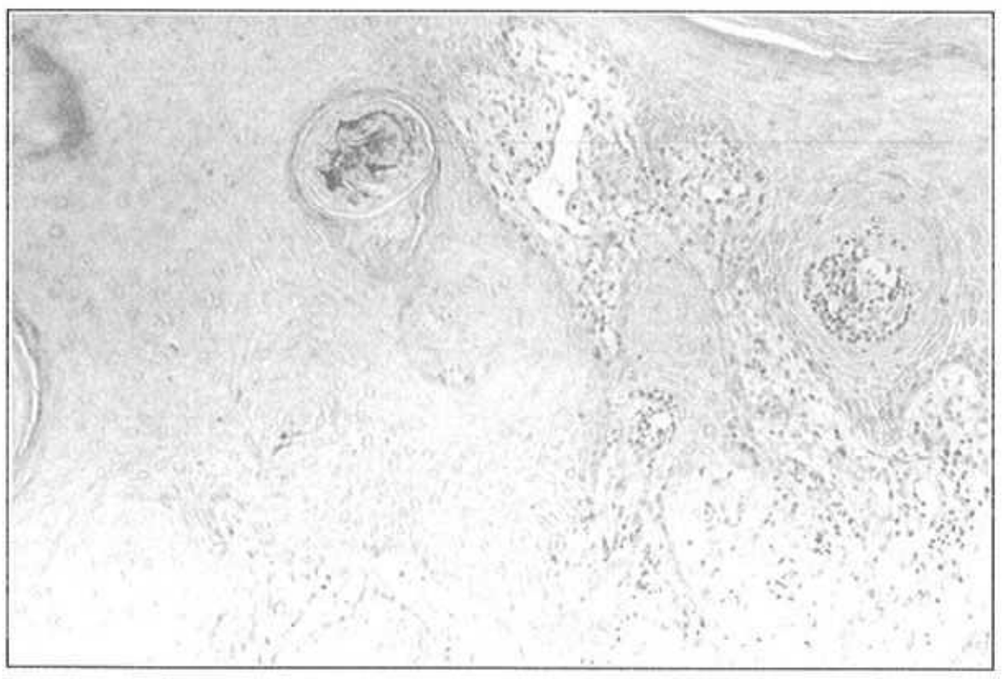

Figure 9a: The epidermis shows pseudoepitheliomatous hyperplasia with multiple intraepidermal abscess formation. (H&E, 125X).

CASE 10

Case Report: A-45-year old female was seen for an asymptomatic eruption on the lower dorsum of both hands and feet, anterior lower legs and ankles.

Histopathologic Findings: Epidermis shows light staining with dysplasia (Fig. 10). There are tortuous capillary blood vessels in the dermis with increase in elastic fibers but no dermal elastotic material to indicate solar damage.

Diagnosis: Thermal-Induced Precancerous Keratoses in Erythema Ab Igne. Recognizing the epidermal dysplasia would indicate an actinic keratosis. But in this rarely described

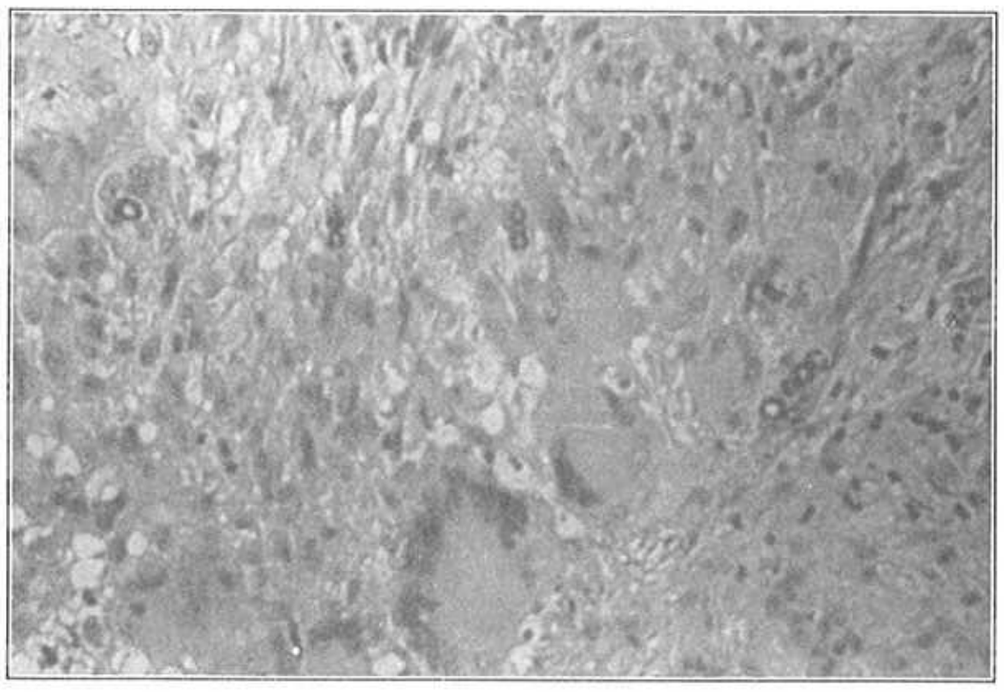

Figure 9b: Numerous, round, brown spores (copper panny-like) mixed and granulomatous inflammation. (H&E, 250X).

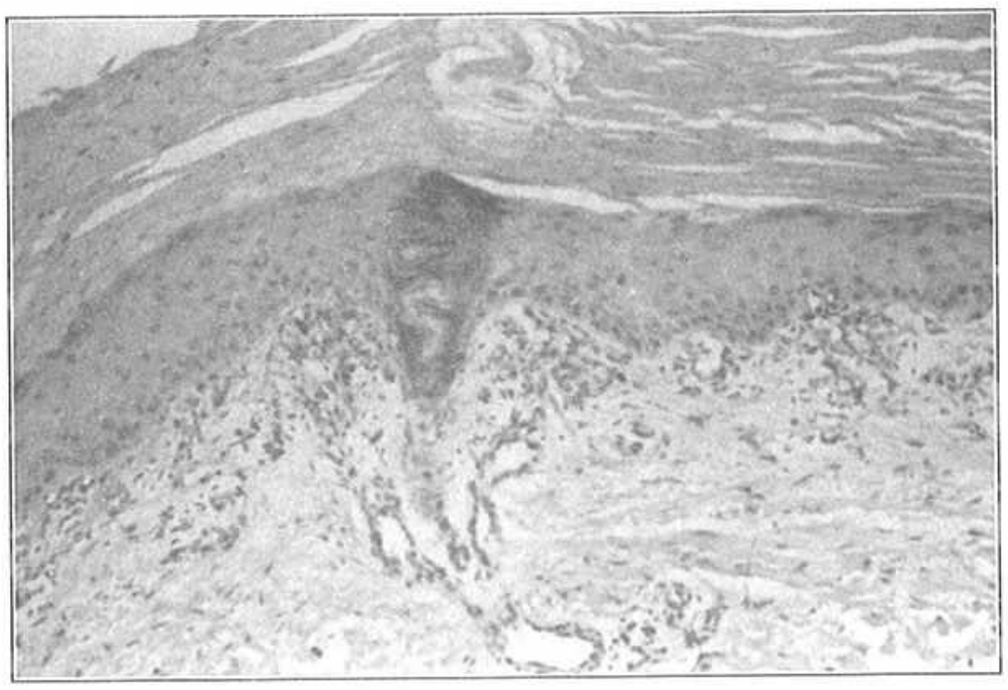

Figure 10: The epidermis shows dysplasia. There are tortuous capillary blood vessels. (H&E, 125X).

phenomenon, this is seen on the background of erythema ab igne which lacks solar elastotic material in the dermis and shows an increase in elastic fibers. [28,29,30]

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