Chondrodermatitis nodularis helicis.

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PATHOLOGY CLINIC

Chondrodermatitis nodularis helicis (CDNH) is a non-neoplastic inflammatory and degenerative process of the external ear. It is characterized by necrobiotic changes in the dermis that extend down to the perichondrium; associated alterations are seen in the cartilaginous plate. The dermal injury is thought to be attributable to a combination of factors: local trauma, actinic damage, and the relatively tenuous vascularity of the auricle. The necrobiotic dermal collagen—and in some cases the cartilaginous matrix—is extruded through a crater-like defect in the epidermis; thus, CDNH is considered to be one of the *transepidermal elimination* disorders.

CDNH presents as an exquisitely painful nodule, usually on the helix or antihelix. The lesion originates as a reddish, round, indurated nodule that measures several millimeters in diameter. Over a period of days to a few weeks, the nodule develops a central crater that contains crust-like material. Overall, CDNH is more common in men, although lesions of the antihelix are more common in women. Most patients present during the sixth decade of life.

Mature nodules are firm, round, and circumscribed. The central crater contains yellow to brown acellular necrotic debris, fibrin, and a variable number of inflammatory cells (figure 1). The epidermis surrounding the crater is acanthotic with hyperkeratosis. The dermal collagen underlying the crater is homogeneous and eosinophilic, and it is admixed with fibrin (figure 2). Edema is present in the surrounding viable dermis. The degenerative changes extend to the level of the perichondrium; they are associated with (1) a loss of the normal basophilia of the underlying cartilage, (2) focal fibrosis with increased cellularity, or (3) dropout of chondrocytes. CDNH can be confused clinically with actinic keratosis, basal cell carcinoma, and squamous cell carcinoma; if the depth of the biopsy is too shallow, the histologic differential diagnosis encompasses the same lesions.

Figure 1. The skin is ulcerated down to the perichondrium of the cartilage, with a rich inflammatory infiltrate and fibrinoid necrosis. Inset: Necrobiotic material is eliminated through the skin, a hint to the diagnosis in cases that do not have cartilage in the biopsy.

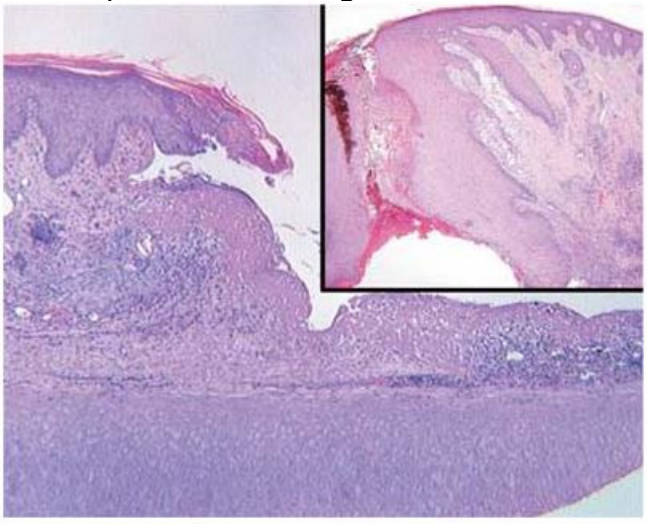
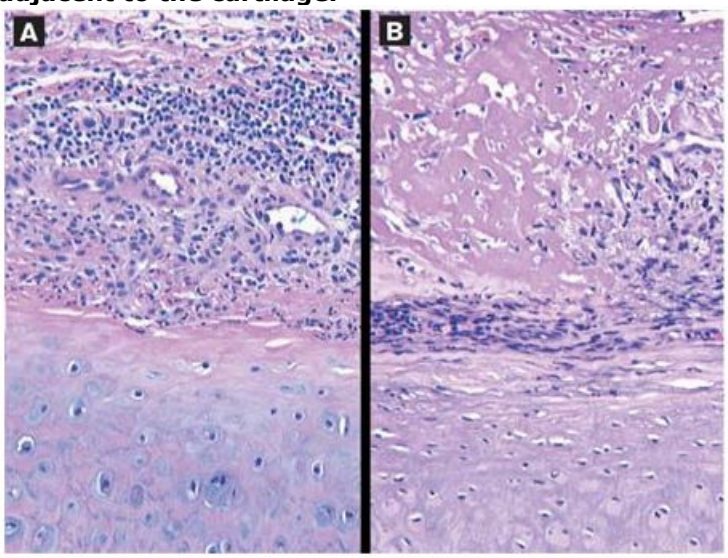


Figure 2. A: A mixed inflammatory infiltrate and granulation type tissue is present immediately adjacent to the cartilage, which still shows basophilia. B: Fibrinoid necrosis and debris are adjacent to the cartilage.



CDNH may be treated with intralesional steroid injection, conservative excisional biopsy, or deep shave excision.

Suggested reading

1. Moncrieff M, Sassoon EM. Effective treatment of chondrodermatitis nodularis chronica helicis using a conservative approach. Br J Dermatol 2004; 150 (5):892-4.
2. Zuber TJ, Jackson E. Chondrodermatitis nodularis chronica helicis. Arch Fam Med 1999; 8 (5):445-7.

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