Answer to Dermacase continued from page 821

4. Chondrodermatitis nodularis chronica helicis

Chondrodermatitis nodularis chronica helicis (CNCH), a common condition of the external ear, is a tender inflammatory nodule most often found on the helices of men and antihelices of women older than 40.1 It is typically found on the right ear, as this is thought to be the resting side of most people during sleep.2 The cause of this dermal inflammatory process is unknown but it is believed to result from long-term mechanical and environmental (eg, sunlight and cold) trauma of the external ear. Some research has suggested that CNCH is caused by pressure necrosis of the auricular cartilage and is not a primary skin disease.3 Due to the absence of subcutaneous fat in this area, the underlying cartilage might be more prone to ischemia following prolonged periods of pressure.2 Most patients cannot recall any precipitating events, such as local trauma, pressure, or cold injury. A variant of CNCH has recently been reported among cellular-telephone users.4 The nodules in this case were found on the tragus, which is believed to be a result of cellular telephones being held over the lower parts of the ear.4

These tender nodules can appear gradually or, occasionally, suddenly on the surface of the external ear. Typically, they measure no more than 1 cm in diameter. On clinical examination, the nodules are characteristically round, well defined, red-to-gray in colour, and dome shaped. Nodules can also have a central crust or depression containing scale. On palpation, nodules are firm, non-mobile, and slightly elevated.

On initial presentation, patients typically complain of pain on palpation and tenderness that interferes with their sleep.1 Lesions might also appear ulcerated, excoriated, or erythematous. Treatment is warranted, as recurrence is common and spontaneous remission is quite rare.5 It is important to reassure patients that these lesions are not malignant.1

Investigation

In most cases, further investigations to identify this condition are not warranted. Clinical presentation, including the characteristic location, appearance, and pain associated with CNCH, allows for proper diagnosis. Although this lesion can mimic other serious conditions, further investigations are only performed to rule out the possibility of malignancy.1 Differential diagnoses include basal cell carcinoma and squamous cell carcinoma, which are most often confused with CNCH. Also included among the differential diagnoses are actinic keratoses, keratoacanthoma, and cutaneous warts, which can present in a similar fashion. To a lesser degree, practitioners can also consider gouty tophi, rheumatoid nodules, and discoid lupus erythematosus.

Histologically, the lesions demonstrate epithelial hyperplasia, dermal inflammation, fibrosis, and collagen degeneration. Beneath the dermis, the perichondrium is often disrupted with signs of inflammation, hemorrhage, and necrosis. As a result, it has been proposed that CNCH might actually be perichondritis that has extended to involve the dermal tissue.1

Management

There are several surgical and non-surgical options available to treat CNCH. Patients must be informed of the possibility of recurrence if not treated optimally.1 The treatments available include topical or injectable corticosteroids (triamcinolone acetonide), intralesional collagen injection, antibiotic ointments, cryotherapy, carbon dioxide laser ablation, and surgical excision.6 Traditionally, surgical treatments are most often recommended, either by wide excision of skin and cartilage, deep shave with treatment of the underlying cartilage tissue, curettage and electrocautery, or, more recently, carbon dioxide laser ablation.6 Long-term studies have shown that cartilage excision alone produces cure rates up to 84% for helix lesions and 75% for antihelix lesions; this is far superior to any other known treatment.7 The best surgical techniques combine removal of as little skin as possible with adequate cartilage resection. This decreases the need for elaborate surgery and results in therapeutically and cosmetically appealing outcomes.6

A more recent study showed that a more conservative approach to treating CNCH might be even more effective than surgical intervention as first-line therapy.2 The study showed that placing protective padding around the external ear during sleep resulted in resolution of nodules in 87% of the patients tested. From this, it might be appropriate to recommend conservative therapy for a period of at least 1 month before other measures are taken. If the nodule still persists on follow-up, a trial of intralesional cortisone or cryotherapy can be tried, although surgical intervention is ultimately required in these cases.

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References