Lichen Simplex Chronicus of the Eyelid

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Lichen simplex chronicus is a common dermatosis that rarely affects the eyelids. We report the clinical and pathologic features in the case of a middle-aged man who had lichen simplex chronicus of both lower eyelids. The clinical features suggested the presence of basal cell carcinoma.

REPORT OF A CASE

A 46-year-old white man was referred to an ophthalmic plastic surgeon for management of discrete, thickened areas of abnormality that had involved both lower eyelids for several months (Figure 1). The lesion affecting his right lower eyelid was situated in the medial quarter of the lid, extending to the inner canthus. It was firm and umbilicated centrally, and a small collection of extravasated blood was present on its surface. There was mild erythema in the region of the mass and its immediate environs. The lesion involving the left lower lid was similar to the one on the right lower lid except that it was larger, extending from the medial canthus to just beyond the midpoint of the eyelid. The clinical diagnosis was bilateral basal cell carcinoma. Both lesions were excised and sent to the ophthalmic pathology laboratory for examination.

PATHOLOGIC FINDINGS

On pathologic examination, a benign proliferation of epidermal cells was observed (Figure 2). There was prominent parakeratosis, hyperkeratosis, and acanthosis (Figure 2, Figure 3, Figure 4, and Figure 5). In some areas, the cells of the prickle cell layer exhibited increased eosinophilia. There was regular elongation of the rete ridges, some of which were arranged in a sawtooth configuration (Figure 4). Occasional areas of spongiosis (intercellular edema of the prickle cell layer) were present (Figure 5). Hypergranulosis was minimal. Mitotic activity was a prominent feature, with as many as 5 to 6 mitotic figures per high-power field observed in some areas (Figure 6).

The dermal papillae were elongated and broadened (Figure 4). An intense infiltrate of inflammatory cells was present in the dermis (Figure 2 and Figure 4). Particularly in the deeper layers, these consisted mainly of plasma cells. More superficially, lymphocytes and many eosinophils were also observed. Fibroblastic proliferation with mild collagenization was present, especially in the deeper layers of the dermis.

COMMENT

Despite the marked epidermal proliferation and the high degree of mitotic activity, it was obvious to us that this lesion was not a malignant tumor. It had the features of a pseudoepitheliomatous hyperplasia. However, we could not recall having seen a histopathologic picture of this type previously. We consulted with James W. Patterson, MD, a dermatopathologist, who advised us that the lesions from both lower eyelids were typical examples of lichen simplex chronicus, and that they were probably secondary to an allergic reaction or mechanical irritation. We subsequently sent material in consultation to Ramon L. Font, MD. He and his colleagues in the Department of Pathology at Baylor College of Medicine and at M. D. Anderson Cancer Center, Houston, Tex, concurred independently with the diagnosis of lichen simplex chronicus.

Lichen simplex chronicus is a common disorder that usually appears as a chronic, solitary, well-circumscribed plaque. Occurrence before adolescence is rare. The disorder most commonly involves the nape of the neck, lower legs, ankles, wrists, extensor surface of the fore-
arms, scalp, and external auditory canal. Lichenification is the most distinctive feature of the disease and is manifested by an accentuation of the normal skin lines. The lines crisscross, with the result that the intervening skin appears as quadrilateral papules. Mast cells are present in increased numbers in lichen simplex chronicus. Degranulation of mast cells and basophils, and the resultant release of histamine from the granules, causes itching, leading to scratching and excoriation. Acute dermatitis is not present, and thus there is no vesiculation and only rare weeping. Erythema is usually absent or minimal.

The primary form is a disease sui generis, originating either idiopathically or as a manifestation of an underlying neurosis, in skin that previously had appeared normal. It is likely that idiopathic primary lichen simplex chronicus begins with a brief forgotten or unrecognized primary dermatosis, such as a mosquito bite. Because there is no apparent relationship to stress, lichen simplex chronicus is the appropriate designation in these patients. Sams and Lynch add that sometimes, however, the disease occurs as a direct response to stress and that, in these occasional instances, localized neurodermatitis may be an acceptable designation.

Contact dermatitis as well as atopic dermatitis may lead to lichenification. In a retrospective study of 200 patients with atopic dermatitis seen at the Mayo Clinic, Rochester, Minn, 32 had eyelid disorders, including an unstated number affected by “lichenification or . . . eczematoid lesions.”

In the older literature, the terms lichen simplex chronicus and neurodermatitis were often casually interchanged. But, as noted above, the current concept is that neurodermatitis is seldom an appropriate term for interchangeable use in describing lichen simplex chronicus. Lever and Schaumburg-Lever echo this point about lichen simplex chronicus, remarking that, “The designation neurodermatitis for this eruption is misleading and should be avoided.”

In the clinical practice of dermatology, the following disorders should be considered in the differential diagnosis of lichen simplex chronicus: contact dermatitis, nummular dermatitis, atopic dermatitis, seborrhic dermatitis, stasis dermatitis, generalized exfoliative dermatitis, lichen planus, psoriasis, chronic Trichophyton rubrum infection, and lichen amyloidosis. Patterson lists more than 40 disorders to be considered in the histopathologic evaluation of lichenoid dermatitis.

How commonly does lichen simplex chronicus involve the eyelid? Neither of us recalls having rec-
Recognized a case during the combined total of 56 years that we have spent in clinical ophthalmology. Nor does either of us recall having seen a patient with an unusual eyelid lesion that, in retrospect, may have been lichen simplex chronicus. We certainly have never seen a case in the ophthalmic pathology laboratory, nor have we ever seen one presented at subspecialty society meetings devoted to ophthalmic pathology, such as the Verhoeff-Zimmerman Society or the Eastern Ophthalmic Pathology Society. Dr Font advised us (oral communication, September 26, 1997) that until he saw material from the case that is the subject of this report, he had never seen a bona fide example of lichen simplex chronicus affecting the eyelid. None of the standard textbooks of ophthalmic pathology even mentions this disorder. A review of 6 randomly selected standard textbooks of dermatology turned up only 1 mention of eyelid involvement. In discussing various sites of the body in which lichen simplex chronicus may occur, Arnold et al' remarked that “[a]n upper eyelid . . . may also be involved . . . .”

Undoubtedly, some cases of lichen simplex chronicus of the eyelid have been examined histopathologically and either (1) went unrecognized (being dismissed as a lesion such as pseudoepitheliomatosus hyperplasia associated with chronic dermatitis) or (2) were correctly diagnosed but were not reported. In puzzling over the apparent infrequency with which lichen simplex chronicus involves the eyelid, one’s attention is drawn to a recent article from Switzerland concerning lichen planus (a more formidable lesion than lichen simplex chronicus) of the eyelid. In describing a case of their own, the authors remarked that they had found only 10 cases of lichen planus of the eyelid reported in the literature.8

The patient we describe had eyelid lesions exhibiting an erythematous, hyperkeratotic component and an excoriated area within these erythematous areas. The lesions obviously involved the skin, not the underlying tissues or the lid margins. Two therapeutic options were considered for this patient. One was to perform a biopsy of the lesions and to perform definitive surgery, if needed, at a later date. Disadvantages of this option were the possible need for additional surgery, the inconvenience to the patient of an additional procedure, and the issue of sampling error given the variability of appearance in different areas of the lesion. The other option was to perform an excisional biopsy and submit the total specimen. After discussing these options, the surgeon and the patient agreed on excisional biopsy. The lesions were completely excised, and the surgical sites were closed easily with local skin flaps. Had a need for major, full-thickness reconstruction of the lids after excision been anticipated, preliminary biopsy would have been preferable. However, this was not the case in this patient. Careful planning spared him additional surgery, permitted acquisition of ample tissue for definitive diagnosis, and left no question about sampling error.

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REFERENCES


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Figure 5. There is prominent spongiosis (intercellular edema of the prickle cell layer), seen best in the right central region of this field (hematoxylin-eosin, original magnification ×40).

Figure 6. Many mitotic figures, 3 of which are indicated by arrows, are present in this field located at the base of one of the elongated rete ridges (hematoxylin-eosin, original magnification ×160).