Paraneoplastic non-caseating granulomatous inflammation of the eyelid

EDITOR—Periocular granulomatous inflammation is most commonly due to a chalazion or sarcoidosis, and more rarely to allergic granulomatosis (Churg-Strauss), Erdheim-Chester disease, Wegener's granulomatosis, and necrobiotic xanthogranuloma. When no cause for this inflammation can be found, it may be called idiopathic non-infectious granulomatous inflammation or orbital sarcoidosis due to overprojection. Systemic steroids or corticosteroids and non-steroidal anti-inflammatory drugs had no significant effect on the inflammation in the eyelid. Some more tissue was removed for cosmetic reasons, and the histopathology was similar to the first specimen.

CASE REPORT
A 77-year-old man presented with a 2 1/2-year history of non-tender inflammation of the left upper eyelid (Fig 1). There was no history of injury to the eyelid. A chest x-ray showed an abnormality that was thought to be due to overprojection. Systemic steroids reduced the inflammation temporarily. After referral to our hospital, extensive clinical and laboratory investigations were performed. Computed tomography scanning showed the lacrimal gland to be of normal size. Tests for tuberculosis, other infectious diseases, and systemic inflammatory disease were negative. An incisional biopsy of the eyelid revealed a non-caseating, granulomatous inflammation without foreign body material or acid fast bacilli. In a few granulomas some macrophages could be demonstrated immunohistochemically (Fig 2). A new chest x-ray revealed a coin lesion of the right upper lobe and a lobectomy was performed. Histopathological examination of the specimen showed a poorly differentiated squamous cell carcinoma of the lung with signs of lymph node metastasis or sarcoidosis.

Systemic corticosteroids and non-steroidal anti-inflammatory drugs had no significant effect on the inflammation in the eyelid. More tissue was removed for cosmetic reasons, and the histopathology was similar to the first specimen.

Figure 1 Frontal view of the patient. Note left upper lid swelling.

Figure 2 Immunohistochemical stain (L26) showing admixture of B cells in granulomas (>200).

COMMENT
The association of granulomatous inflammation (especially in lymph nodes) and malignancy has been noted before. The pathogenesis of this malignancy associated inflammation may be diverse (sarcoid-like reaction to tumour derived components, sarcoidosis, infection, granulomatous lesions of unknown significance or GLUS. Sarcoid-like reactions to pulmonary neoplasms were described to occur in regional lymph nodes in the form of non-caseating granulomas. Granulomas in lymph nodes may be divided into two categories on the basis of the presence or absence of B cells in these lesions (B cell positive: toxoplasmosis, tumour related sarcoïd reactions, and GLUS; B cell negative: sarcoidosis, mycobacterial infections). In our case, a few granulomas showed some admixture of B cells.

To our knowledge, the association of a non-caseating granulomatous inflammation of the eyelid and a squamous cell carcinoma of the lung has not been described before. This case suggests that screening for malignancy might be useful in patients with non-caseating granulomatous inflammation of unknown origin.

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