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Interferon-Alpha Therapy of Recurrent Conjunctival Papillomas

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The treatment of conjunctival papillomas in children and young adults remains difficult because of the high incidence of tumor recurrence. Numerous nonsurgical therapeutic modalities have been described, most of which have involved the destruction of adjacent normal conjunctiva as well as the tumor. conjunctival scarring and tumor recurrence frequently ensue after these treatments, which include liquid nitrogen cryotherapy, cautery, diathermy, irradiation, keratolytics, and carbon dioxide laser. Immunotherapy with dinitrochlorobenzene, which acts as a contact sensitizing agent, has been successful in a limited number of reported cases. This therapy, however, depends upon multiple injections of dinitrochlorobenzene into the tumor to provoke a delayed hypersensitivity reaction of sufficient magnitude and duration to eliminate the tumor.

There is evidence that the human papillomavirus is the causative agent in some conjunctival papillomas, including the tendency to recur, the occurrence in siblings, the demonstration of papillomavirus structural antigens in these tumors, and the detection of human papillomavirus type 11 DNA sequences in one of two cases, type 6 DNA sequences in one case and a nonspecific type in another case. The use of an antiviral agent would therefore be a rational approach for the treatment of recurrent cases of conjunctival papillomas.

The majority of recurrent laryngeal papillomas are caused by human papillomavirus infections. Therapy with systemic alpha interferon, an agent with both antiviral and antiproliferative properties, has been successfully used in the treatment of the laryngeal tumor.

To our knowledge, this is the first description of the use of systemic interferon alpha-N1 in the treatment of recurrent conjunctival papillomas. A correlation of tumor response to the tumor's pathology, immunopathology, and presence of viral DNA sequences is also made.

Five patients with multiple, recurrent conjunctival papillomas underwent surgical excision of their tumor and then received interferon alpha-N1, 5×10^6 units/m² (5 Mu/ m²), intramuscularly daily for one month. A similar dose was given two to three times per week for the next six months and tapered off or discontinued thereafter. The follow-up period varied from one to four years. Two patients have had no recurrence of tumor. The other three patients have had recurrences of lesser severity upon tapering or

discontinuing the interferon, and repeat surgical or laser excision of these lesions has been performed. The presence of koilocytosis and human papillomavirus type 11a DNA sequences was noted in all specimens large enough to examine, whereas papillomavirus structural antigens were detected in only two of five specimens. A regimen of interferon therapy appears to be tumor suppressive, but not curative.