A Case of Angiolymphoid Hyperplasia With Eosinophilia Treated With Intralesional Interferon Alfa-2a

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The Cutting Edge: Challenges in Medical and Surgical Therapeutics

REPORT OF A CASE

A 52-year-old white woman presented with a 1-year history of pruritic, erythematous nodules on her right ear and preauricular area (Figure 1). The lesions had a tendency to bleed after minor trauma and had been gradually increasing in size and number. A biopsy was performed, and the findings were consistent with the diagnosis of angiolymphoid hyperplasia with eosinophilia (ALHE).

The patient was initially treated with a combination of intralesional triamcinolone acetonide and cryosurgery, at 1- to 4-month intervals. The triamcinolone acetonide therapy was started with 1 to 2 mL intraleisonally at 5 mg/mL, and the concentration was gradually increased to 20 mg/mL. The patient’s response was variable, with improvement seen at some visits and worsening noted at others. After 11/2 years, and continued progression of lesions, new therapeutic options needed to be considered.

THERAPEUTIC CHALLENGE

Multiple treatment modalities have been proposed in the management of ALHE; however, none has been uniformly effective. A course of conservative treatment with cryosurgery and intralesional steroids was unsuccessful in our patient. She was hesitant to undergo radiation treatment, and surgical excision would be difficult because of the location of the lesions.

SOLUTION

After a discussion of the possible adverse effects, the patient agreed to a trial of intralesional interferon alfa-2a. An initial dose of 3 million units of interferon alfa-2a (0.5 mL of a 6-million U/mL solution) was administered intraleisonally after premedication with 1 g of acetaminophen and 25 mg of diphenhydramine hydrochloride. This treatment was repeated twice a week. By the fourth treatment, some overall improvement was noted, with decreased lesion thickness, decreased erythema, and a slight gray appearance on the surface of the lesions. The patient noted some chills and fatigue after each treatment, but these symptoms became milder as the treatment progressed. The dosage of interferon was gradually increased to 12 million units, and the patient continued to receive biweekly injections for the next 5 months. At that point, there was a marked improvement in her lesions, so her treatment was decreased to once a week. She continued to receive weekly injections for another 5 months. Because of the overall improvement in the patient’s condition, her treatment was finally discontinued after 11 months (Figure 2). She was then seen every 1 to 2 months throughout the next year. Her disease appeared to remain under control, with occasional cryosurgery on small lesions.

Unfortunately, because of an insurance change, she was no longer able to follow up with us. Almost 1 year after her last interferon injection, she was noted to have a recurrence of her lesions. She received interferon injections once a month from another physician; how-
ever, she reported that there was no improvement. It is likely that she did not respond to this second course of interferon because the injections were not given with adequate frequency. We would recommend interferon injections twice a week rather than once a month. She went on to receive radiation therapy, which was unsuccessful. Currently, she is undergoing laser treatments, which have shown promising results so far.

**Angiolymphoid hyperplasia with eosinophilia** is a rare vascular disorder of unknown pathogenesis. It is characterized by intradermal or subcutaneous, reddish brown papules and/or nodules, typically occurring in the head and neck region. The disease has a slight predilection for middle-aged to elderly women and most commonly occurs on the ears and preauricular areas. Histologically, it is composed of a proliferation of vascular channels with a surrounding infiltrate of lymphocytes and eosinophils. Associated skin findings include pain with compression of the lesion, pulsations, pruritus, and spontaneous bleeding after minor trauma. While most patients have only a single lesion, approximately 20% of affected patients have multiple lesions. Patients may also have local lymph node enlargement and peripheral eosinophilia. The exact cause of ALHE is unknown; however, there have been several proposed theories, including environmental factors, such as insect bites or parasites, trauma, hyperestrogen states, and immunologic mechanisms. Some authors have also suggested that it may be secondary to an inflammatory vascular reaction, a neoplastic process, or a neovascular formation from preexisting blood vessels.

Although ALHE is considered a benign disease, it can be resistant to multiple therapies, and can become disfiguring to the patient. Several treatment modalities have been described in the literature, including excision, electrodesiccation and curettage, radiotherapy, carbon dioxide laser, pulsed dye lasers, intralesional and systemic corticosteroid therapy, cryosurgery, pentoxifylline, cessation of estrogen therapy, systemic vinblastine sulfate, oral retinoids, and indomethacin.

Interferon alfa is a naturally occurring cytokine that has antiviral, antibacterial, antitumor, anti-inflammatory, and immunomodulatory effects. It has been used in the treatment of both viral diseases and malignancies, including human papilloma virus, hepatitis C virus, melanoma, and cutaneous T-cell lymphoma. It has also been used successfully in vascular disorders such as Kaposi sarcoma and hemangiomas because of its angiostatic effects. In vitro studies have demonstrated a direct anti-proliferative effect of interferon alfa on human dermal microvascular endothelial cells.

The most common adverse effects of interferon treatments are transient influenza-like symptoms, such as fever, chills, myalgia, headache, and arthralgia. Patients are usually able to develop a tolerance to these symptoms. There may also be local inflammation, pain, burning, or ulceration at injection sites. Dose-limiting adverse effects with long-term treatment include fatigue, lethargy, and anorexia. Less common adverse effects include myelosuppression, elevation of aspartate aminotransferase levels, depression, encephalopathy, alopecia, and hypotension.

Our patient had progressive lesions of AHLE for more than 2 years. Her lesions were unresponsive to multiple treatments with liquid nitrogen and intralesional triamcinolone. After 11 months of treatment with intralesional interferon alfa-2a, she had almost complete resolution of lesions. Unfortunately, the remission was only temporary, with a recurrence of lesions noted approximately 1 year after her last interferon injection. She did not respond to a second course of interferon, which was given by another physician. This failure, however, was probably attributable to an inadequate frequency of injections. Further studies are needed to determine the efficacy of interferon alfa therapy for ALHE.

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**REFERENCES**


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