

Ptosis Presumably Due to Intralesional Corticosteroid Injection for the Treatment of Alopecia Areata

ALOPESİ AREATANIN İNTRALEZYONEL KORTİKOSTEROİD ENJEKSİYONU İLE TEDAVİSİ SONRASINDA ORTAYA ÇIKTIĞI DÜŞÜNÜLEN PİTOZ

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Summary

Alopecia areata (AA) is a chronic, recurrent and non-scarring, inflammatory disorder of hair-bearing areas and nails. There are several treatment modalities for AA. Intralesional corticosteroids (ILCS) are the choice of therapy for limited patches. Several local and systemic side effects have been reported due to ILCS injection. Herein we report a case of aponeurotic ptosis following corticosteroid injection for the treatment of alopecia areata of the eyebrow. In our case, ptosis that is presumed to have developed after the corticosteroid injection, illustrate an additional complication of ILCS. Physicians who use this method of therapy should be aware of this unusual complication and patients should be informed before this procedure.

Key Words: Ptosis, Intralesional corticosteroids, Alopecia areata

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Özet

Alopesi areata (AA), saçlı bölgelerin ve tırnakların kronik, tekrarlayıcı, nonskatrisyel, inflamatuvar bir hastalıdır. AA için bir çok tedavi yöntemi bulunmaktadır. Sınırlı lezyonlar için intralezyonel kortikosteroidler ilk tedavi seçeneğidir. İntralezyonel kortikosteroid enjeksiyonuna bağlı bir çok lokal veya sistemik yan etki bildirilmiştir. Burada kaş bölgesindeki AA'nın tedavisi için intralezyonel kortikosteroid enjeksiyonu-nun takiben ortaya çıktığı düşünülen bir aponevrotik pitoz olgusu sunulmaktadır. Bu olguda ortaya çıkan pitoz intralezyonel kortikosteroidlerin daha önce rapor edilmemiş bir yan etkisidir. Bu tedavi yöntemini kullanan hekimler çok sık görülmeyen bu komplikasyonun bilincinde olmalı ve hastalar tedaviden önce bu konuda uyarılmalıdır.

Anahtar Kelimeler: Pitoz, İntralezyoner kortikosteroidler, Alopesi areata

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Alopecia areata (AA) is a chronic, recurrent and non-scarring, inflammatory disorder of hair-bearing areas and nails (1). AA has shown variable responsiveness to numerous therapeutic approaches including steroids (intralesional, topical, systemic), topical anthralin, sensitizers, minoxidil, inosiplex, thymopentin and PUVA (2). Since this disorder is dynamic and frequently undergoes spontaneous re-

mission, it is difficult to establish the efficacy of the treatment (3). For patients with limited patches, intralesional corticosteroids (ILCS) are the choice of therapy (4). Although ILCS injection is a relatively safe procedure, several reactions and side effects have been reported (5).

Here we present an exceptional case who have aponeurotic ptosis and cutaneous atrophy following ILCS injection for the treatment of AA of the eyebrows. To our knowledge, ptosis due to ILCS injection has not been reported previously although cutaneous atrophy is a relatively common complication.

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Figure 1. Alopecic and atrophic area on the eyebrow and ptosis of the eyelid. Note the higher eyelid crease on the right side.

Case Report

A twenty-two years old woman was referred to our department of dermatology for the atrophic and non-hairy area on her right eyebrow and ptosis on the same side. She first noticed alopecia on her right eyebrow ten years ago. She had been diagnosed as alopecia areata and received different topical medications. Three years after the diagnosis the patient was treated with intralesional injection of triamcinolone acetonide solution (4 mg/ml, q.i.d) with monthly intervals (Dosage of the solution was learned from the doctor who had performed ILCS injection). Three weeks after the third injection she had developed ptosis of the right lid and atrophy on her right eyebrow (Figure 1). She had not received any therapy thereafter.

We first examined the patient seven years after the injection. On dermatologic examination a 1x1 cm² atrophic and alopecic area was encountered on her right eyebrow and some parts of her eyelashes were absent. Ophthalmologic examination revealed 4 mm ptosis and 13 mm levator function on her right eye. Her right eyelid crease was higher than the left one. Neurologic examination including extraocular muscle movements were normal. Tensilon test for the diagnosis of myasthenia gravis was negative. The patient was treated with strip scalp graft for the eyebrow reconstruction and aponeurotic repair was applied for the treatment of ptosis. The patient had satisfactory appearance after the operation.

Discussion

ILCS injections have been used to treat a variety of dermatological and non dermatological diseases with variable results. The purpose of the injection is to attain a high local concentration of the drug at the affected site with minimal systemic absorption, thus avoiding the numerous side effects associated with systemic absorption. Several corticosteroid preparations are available for ILCS injection, although triamcinolone derivatives have gained the widest usage in dermatology. The dosage and the intervals between the injections depend on the type, size and severity of the lesion as well as the response to the previous injections (5).

All treatment plans for patients with AA depend on two major factors; the extend of scalp involvement and the age of the patient (1). ILCS remain as the therapeutic standard for patients with limited patches. Triamcinolone acetonide is the commonly preferred IL product, concentration of 10 mg/ml (maximum total of 2ml) or 5 mg/ml (maximum total of 4 ml) can be used on the scalp at once (6).

Several local and systemic side effects have been reported following ILCS injections (most of them are rare or acceptable), however, there is no clearly stated frequency of these side effects or the extend of their severity. They are primarily local reactions such as pain, hemorrhage, ulceration, atrophy, pigmentary changes, perilesional linear atrophy and hypopigmentation, calcification, secondary infection, granuloma formation and allergic reactions. Hypothalamus-pituitary-adrenal axis suppression, endocrine dysfunction, growth inhibition, allergic reactions, syncope and blindness were reported as systemic reactions. Complications are either infrequent or mild and acceptable with proper corticosteroid preparation or injection technique (5).

Review of the literature revealed two cases of tissue necrosis following ILCS injection. Abdel-Fattah reported complete sloughing of a presternal keloid treated with intralesional triamcinolone acetonide and postulated that his patient had an unusual sensitivity to this product (7). Sutula and Glower reported eyelid necrosis following ILCS injection for eyelid capillary hemangioma. They concluded that rapid enlargement of the mass might have

caused the tissue necrosis and vasoconstrictive effect of corticosteroids might have enhanced this process (8).

Townshend and Droste separately reported linear subcutaneous atrophy after corticosteroid injection for the treatment of periocular hemangiomas (9,10). Abel and Munro detected low plasma cortisol levels 24 hours after the corticosteroid injection, suggesting the possibility of a systemic effect (11).

The atrophogenic potential of a corticosteroid is related directly to the strength of the preparation, the quantity injected, the duration of action, the skin condition being treated, the area of the body being injected. The face, genitalia, lips and buccal mucosa are particularly prone to development of atrophy (5).

Aponeurotic ptosis results from dehiscence of the levator aponeurosis between Whitnall's ligament and the tarsal plate. Since the muscular portion of the levator muscle is normal, aponeurotic ptosis is characterized by excellent levator function. Eyelid crease is elevated due to loss of cutaneous attachments and a thin upper eyelid (12).

Since our patient has excellent levator function and her right eyelid crease is higher than the left one, she has been diagnosed as having aponeurotic ptosis. Exclusion of the other causes of ptosis made by normal neurologic examination, negative ten-silon test and absence of physical trauma. Because of the loose subcutaneous tissue of the eyelids, injected corticosteroid solution may have diffused more easily and this may have attenuated or caused the dehiscence of the aponeurosis of the levator muscle in our case.

Ptosis that is presumed to developed after the corticosteroid injection we describe, illustrate an additional complication of ILCS. Dermatologists and other physicians who use this method of therapy for the lesions located near the eyelids should be aware of and patients should be informed about this complication.

REFERENCES

1. Shapiro J, Madani S. Alopecia areata: diagnosis and management. *Int J Dermatol* 1999; 38: 19-24.
2. Tosti A. Alopecia areata - More on pathogenesis and therapy. *Dermatologica* 1989; 178: 61-3.
3. Shapiro J, Price VH. Hair regrowth - therapeutic agents. *Dermatol Clin* 1998; 16(2): 341-56.
4. Shapiro J. Alopecia areata. *Dermatol Clin* 1993; 11: 35.
5. Firooz A, Tehranchi-Nia Z, Ahmed AR. Benefits and risks of intralesional corticosteroid injection in the treatment of dermatological diseases. *Clin Exp Dermatol* 1995; 20(5): 363-70.
6. Fiedler VC. Alopecia areata. *Arch Dermatol* 1992; 128: 1519-29.
7. Abdel-Fattah AMA. Unusual complications of triamcinolone injected keloids: Tissue necrosis and systemic corticosteroid effects. *Br J Plast Surg* 1976; 29: 283.
8. Sutula FC, Glover AT. Eyelid necrosis following corticosteroid injection for capillary hemangioma. *Ophthalmic Surg* 1987; 18: 103-5.
9. Townshend LM, Buckley EG. Linear subcutaneous fat atrophy after a single corticosteroid injection for ocular adnexal hemangioma. *Am J Ophthalmol* 1988; 105: 65-9.
10. Droste PJ, Ellis FD, Sondhi N, Helveston EM. Linear subcutaneous fat atrophy after corticosteroid injection of periocular hemangiomas. *Am J Ophthalmol* 1988; 105: 65-9.
11. Abell E, Munro DD. Intralesional treatment of alopecia areata with triamcinolone acetonide by jet injection. *Br J Dermatol* 1973; 88: 55-9.
12. Nunery WR, Cepela M. Levator function in the evaluation and management of blepharoptosis. *Ophthalmol Clin North Am* 1991; 4(1): 1-16.