



Intralesional Steroid Induced Linear Dermatomal Hypopigmentation And Atrophy

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Abstract

A 31-year-old female presented with a two-month history of hypopigmentation and atrophy over the dorsum of the left hand subsequent to receiving intralesional Methyl Prednisolone (Depo Medrol) 40 mg for the treatment of Trigger Finger in the left middle finger. Following successful resolution of the Trigger Finger, a unique linear, streaky hypopigmentation with mild atrophy was observed approximately 6 cm long in the perilesional area, extending from the metacarpophalangeal joint (MCP) to the wrist joint.

A diagnosis of corticosteroid-induced linear dermatomal hypopigmentation and atrophy was established based on the clinical presentation and temporal association with the intralesional steroid injection. The patient was informed about the nature of the disorder and subsequently treated with Tacrolimus ointment 0.1%. The rationale behind Tacrolimus use was to expedite the repigmentation process and alleviate atrophy through its immunomodulatory properties.

The patient did not return for follow-up, emphasizing the importance of ongoing monitoring and management in cases of corticosteroid-induced cutaneous side effects. Further research and follow-up studies are warranted to enhance our understanding of the long-term effects and management strategies for corticosteroid-induced linear dermatomal hypopigmentation and atrophy.

Keywords: Intralesional steroid, linear, hypopigmentation, atrophy

Introduction

Corticosteroid is one of the most potent and effective anti-inflammatory drugs used in current day clinical dermatological practice.^{1,2} Intralesional steroids are frequently used in treating various skin conditions like Alopecia areata, Keloid, Hypertrophic scar, Hypertrophic Lichen planus and Lichen simplex chronicus.^{3,4,5,6} While intralesional steroid is generally well-tolerated, certain adverse reactions have been documented, including local atrophy, ulceration and an increased susceptibility to infections.^{2,4,7} One distinctive side effect associated with intralesional steroid is hypopigmentation and atrophy.^{2,4} Notably, this condition tends to repigment spontaneously over time. Tacrolimus, a topical calcineurin inhibitor has been employed for its immunomodulator action.³

Case Report

A 31 year old female presented with hypopigmentation and atrophy over dorsum of left hand for 2 months. She was diagnosed as Trigger Finger- left middle finger in the department of Orthopaedics and treated with intralesional injection of Methyl Prednisolone (Depo Medrol) 40 mg single dose for the same. Two months later Trigger finger was completely cured however, approximately 6 cm long, linear, streaky, hypopigmentation with mild atrophy was observed in the perilesional area extending from metacarpophalangeal joint(MCP) to wrist joint. With these features a diagnosis of corticosteroid-induced linear dermatomal hypopigmentation and atrophy was considered.

Patient was counselled regarding the nature of the disorder and treated with Tacrolimus ointment 0.1 %.

She didn't come for follow up.

Figure 1 shows linear hypopigmentation over dorsum of left hand.



Figure 2 shows 6 cm long linear hypopigmentation with atrophy over dorsum of left hand extending from base of terminal phalanx to wrist joint.



Discussion

Intralesional corticosteroid injections are associated with various local adverse effects.^{1,2} Occasionally, atrophy and color changes instead of remaining confined to the site of injection radiate outwards in the perilesional area in a linear streaky pattern termed as 'perilesional lymphatic hypopigmentation or atrophy'.^{3,4,5,6,7} It is a distinctive adverse effect that may develop after a variable latency period ranging from a few weeks to months.³ It has been observed following a single, a few or even after several intralesional corticosteroid injections.³ The color changes are more prominent in dark skinned individuals and they extend both proximally and distally for variable distances.^{4,5,6,7} Depigmentation up to two feet from the site of injection has also been reported.⁷ In its natural course these changes gradually regress and up to one year may relapse before complete resolution occurs.³ While the exact pathogenesis is not known it is postulated that the spread of corticosteroid crystals along the cutaneous lymphatic vessels is the underlying mechanism.³

Conclusion

Triamcinolone acetonide is the most commonly associated preparation, probably because it is most widely administered form. There is no specific treatment for this condition. Further injections should be withheld and the patients should be kept under observation. It is emphasized that while administering the intralesional corticosteroid injections care should be taken not to inject excess of the drug and to avoid injecting too deep into the underlying dermis and subcutaneous tissue.

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