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Peri-lymphatic Hypopigmentation following Intralesional Triamcinolone: An Unusual Case Presentation

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Abstract

Corticosteroids are one of the most common drugs to be used and abused in the field of medicine and surgery. It can be used as topical, oral, intravenous, intra-articular and intralesional forms. Intralesional route of administration have the advantage of achieving high concentration of drug locally with minimal systemic absorption and side effects. However adverse effects like local atrophy, ulceration, infections etc. can occur. We report a case of 20-year-old male, who presented with linear hypopigmentation following intralesional steroids which is a rarer side effect and has been highlighted in this case report.

Key words: Corticosteroid; Hypopigmentation; Lymphatics

Introduction

Intralesional corticosteroids are commonly used in routine dermatological practice for treatment of keloids, hypertrophic scar, alopecia areata etc. Although it is safer than systemic forms but side effects like local skin atrophy, ulceration, infection, localized calcification, lipoatrophy can occur. Linear hypopigmentation following corticosteroids is a rare side effect which can occur either as a result of lymphogenous spread or vascular spread. This condition is usually non progressive and improves on its own with time.¹

Case report

A 20-year-old male presented to OPD with complaints of linear streaks of hypopigmentation involving the wrist, forearm and arm of right upper limb. On further asking patient gave history of a swelling which was present on the dorsum of right hand 3 months back for which he had received multiple intralesional triamcinolone injection from a local unqualified practitioner. One and a half months' later patient

developed a small white macule at the injection site i.e. dorsum of right hand. The lesion progressed proximally in the form of streaks of linear hypopigmentation involving the lateral aspect of forearm and gradually coursing towards the medial aspect of arm in continuity. [Fig.1,2] The lesions were asymptomatic and non-atrophic. The sensation over the lesions were intact. There was no personal and family history of vitiligo or any disorders of hypopigmentation. Muscle bulk and power was normal and there was no difficulty in movements of joints. Colour Doppler was done to rule out arterial and venous involvement. On the basis of history, clinical examination and investigation the diagnosis of "Peri-lymphatic hypopigmentation following intralesional triamcinolone" was made.

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Figure 1: Linear hypopigmentation extending from the wrist to the forearm



Figure 2: Linear hypopigmentation extending from the wrist to the arm

Discussion

Intralesional steroids are used commonly for the treatment of keloids, hypertrophic scars, ganglion etc. Hypopigmentation following the intralesional steroids have been previously reported by various authors.^{1, 2} It may present following single or multiple injections and believed to be dependent on certain factors such as concentration and potency of the drug being injected. Most common culprit drug is triamcinolone as compared to other corticosteroids as it is the most commonly used steroid for intralesional injections due to its stability at room temperature, easy resuspension etc. Other properties of triamcinolone include its higher potency, larger size, density and tendency of molecules to form aggregates. In a case report by Ghunawat et al. hypopigmentation developed following single triamcinolone injection with a latency of 2 months.³ In our case report patient had received multiple injections and development of hypopigmentation was after one and a half month of first dose. The onset of depigmentation in other reports ranges from 2 weeks to several months following the injection.⁴ Hypopigmentation is more commonly seen in dark skinned individuals.⁵ Exact

pathogenesis is not known but it is postulated that linear pattern of hypopigmentation occurs either as a result of lymphogenous spread or vascular spread of the corticosteroid.^{4,6,7} Hypopigmentation following vascular spread are more likely to be associated with atrophy, while those due to lymphogenous spread are not. In a study, Kikuchi and Horikawa injected evans blue dye or alphazurine into the atrophic lesions and concluded that the lesion was related to lymphatic vessels.⁸

Conclusion

Steroid induced hypopigmentation is a rarer side effect which can be distressing to the patient and can result in a significant behavioural changes. It can be confused with vitiligo and hence should be diagnosed accurately and followed by proper counselling of the patient. Although it can resolve spontaneously over time, immunomodulators such as topical tacrolimus can be used to fastens the recovery. 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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