

Cutaneous Pseudolymphoma Secondary to Facial Thread Lift Procedure

Abstract

Pseudolymphoma, refers to a heterogeneous group of benign reactive T-cell or B-cell lymphoproliferative processes of diverse causes that simulate cutaneous lymphomas clinically and/or histologically. Thread lift involves the elevation of sagging tissues for rejuvenating the face, which loses its elasticity and volume as one ages, by stimulating the production of new collagen and elastin. The incidence of complications with thread lift is comparatively low, like small ecchymosis, mild erythema, mild transitory hyperesthesia, and mild postoperative tumefaction.^[1] Cutaneous pseudolymphoma secondary to facial thread-lift procedure has not been previously reported as a complication. In this case report, we will be presenting cutaneous pseudolymphoma as one of the complications of thread-lift procedures and will be speculating its pathogenesis.

Keywords: *Complication, pseudolymphoma, thread lift*

Introduction

Pseudolymphoma, also called cutaneous lymphoid hyperplasia, refers to a heterogeneous group of benign reactive T-cell or B-cell lymphoproliferative processes of diverse causes that simulate cutaneous lymphomas clinically and/or histologically. It is a skin lesion that results from known or unknown stimuli, like insect bites, scabies, borreliosis, trauma, folliculitis, drugs, human immunodeficiency virus infection, herpes zoster, vaccination, tattoos, acupuncture, jewellery, and contact allergens like gold earrings.^[1,2]

It usually manifests as a solitary lesion observed in the form of a plaque, mostly localised to the head, ear lobules, nose, and in children, the thorax.

Thread lift is a technique which involves the elevation of sagging tissues for rejuvenating the face, which loses its elasticity and volume as one ages. It involves subcutaneous placement of threads using a cannula or a microneedle along a planned trajectory. Polydioxanone thread is a commonly used material which stimulates the production of new collagen and elastin. The incidence of complications with thread lifts are comparatively low which include ecchymosis, mild erythema,

hemorrhage, mild transitory esthesia, and mild postoperative tumefaction.^[1]

Other complications seen are facial asymmetry, infection, and the formation of scar and granulation tissue.^[3]

In this case report, we present a case of cutaneous pseudolymphoma secondary to trauma by the facial thread-lift procedure.

Case Report

A 50-year old female came to the department of dermatology at our institute with chief complaints of a red raised asymptomatic lesion present on the right cheek for 1 year. The patient had a history of the facial thread-lift procedure done on that area 1 month before the appearance of the lesion. The thread lift had been done using polydioxanone threads in the zygomatic and mandibular region. No other precipitating factor was recorded, nor any other interventional modality had been used.

Cutaneous examination revealed a solitary erythematous plaque with well-defined irregular borders, present on the right cheek measuring 2.5 cm in diameter, which was indurated and nontender on palpation [Figure 1]. There was no loss of sensation. On diascopy, no apple jelly nodules were found.

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Investigations

All routine blood investigations were within normal limits.

The biopsy showed a dense, diffuse, and nodular infiltrate of small and large lymphocytes and histiocytoid cells involving the whole of reticular dermis and extending to subcutis (bottom heavy infiltrate). The nuclei of the lymphocytes varied in size and some of them showed mitosis. At most places, they did not extend between the collagen bundles. Most of the nodules showed the formation of lymphoid follicles. In a majority of the nodules, the shape of the lymphoid follicles was irregular and the number of blood vessels was increased within the nodules. The subepidermal zone was completely spared by the lymphocytes. Some of the epidermal appendages were visualised. A few eosinophils were scattered within the infiltrate [Figures 2-4].

Immunohistochemical staining could not be done, because of nonaffordability of the patient.

The differential diagnoses considered in our case were sarcoidosis and Jessner's lymphocytic infiltration of

skin. Sarcoidosis presents as bluish-red and dusky purple infiltrated nodules and plaque-like lesions on the nose, cheeks, ears, fingers, and toes, while Jessner's lymphocytic infiltration of the skin presents as nonscaly erythematous papules, which expand peripherally, forming well-demarcated, slightly infiltrated erythematous plaques. Other differential diagnoses considered were chronic cutaneous lupus erythematosus and granuloma faciale.

Based on the clinical features and histopathological findings, a diagnosis of pseudolymphoma was made.

Discussion

Pseudolymphoma has occasionally been reported to develop several months or years later at sites of previous trauma. Earlier studies state that the time period between the trigger for pseudolymphoma and its appearance may range from 1 month to 5 years.^[4]

In one case report, cutaneous lymphoid hyperplasia presented in a 35-year-old man as a reaction to the red ink of a tattoo done 2 months prior.^[5]



Figure 1: Solitary irregular, erythematous plaque with well-defined irregular borders measuring 2–3 cm in diameter

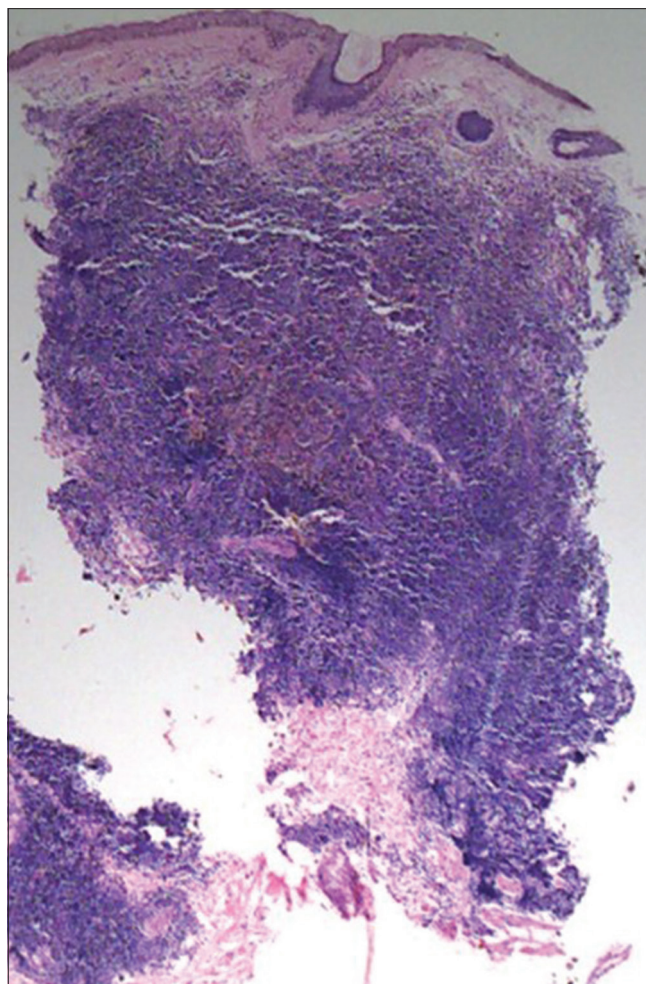


Figure 2: Inflammatory infiltrate involving the whole reticular dermis and extending to the subcut (H and E, 4x)

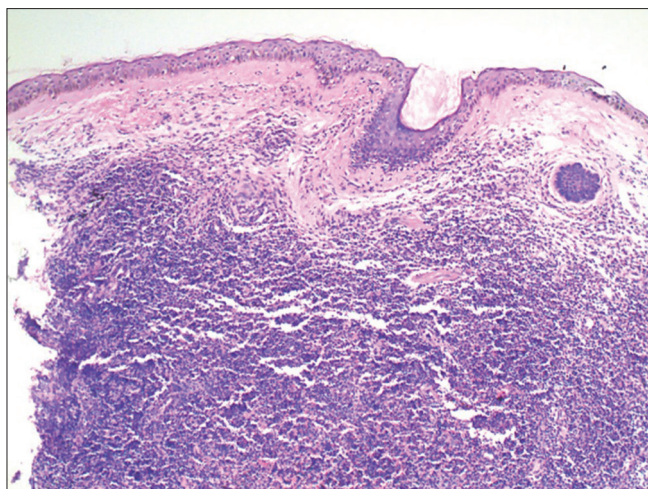


Figure 3: A dense diffuse infiltrate of small and large lymphocytes and histiocytoid cells seen (bottom heavy infiltrate) (H and E, 10×)

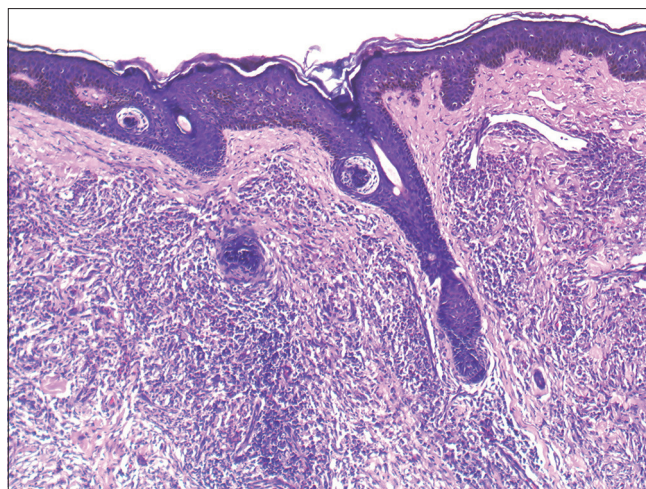


Figure 4: Lymphocytes interspersed with few eosinophils seen (H and E, 40×)

Although the pathogenesis of thread lift-induced pseudolymphoma remains unresolved, a delayed allergic reaction to the threads has been speculated. As seen in various triggers like an insect bite, red dye injection, and vaccination, there is a sequential induction of histiocytic foreign body reaction and granuloma formation.^[4]

Treatment mainly involves removal of the offending agent, which results in the resolution of the cutaneous pseudolymphoma.

Treatment is either surgical removal, cryosurgery, or local irradiation. Some reports have noted a response to topical or intralesional corticosteroid injections and topical immunomodulators such as tacrolimus.

Intralesional steroids were given to our patient at the site of the plaque. The size of the plaque reduced from 2.5 cm to 1 cm within 2 months after the injection.

There exist reports of cutaneous pseudolymphoma occurring after trauma; however, its occurrence after facial thread lift has not been previously reported. We are presenting this case because we were unable to find any previous reports of development of pseudolymphoma secondary to the thread-lift procedure.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the

patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Savoia A, Accardo C, Vannini F, Di Pasquale B, Baldi A. Outcomes in thread lift for facial rejuvenation: A study performed with happy lift™ revitalizing. *Dermatol Ther (Heidelb)* 2014;4:103-14.
2. Prabhu V, Shivani A, Pawar VR. Idiopathic cutaneous pseudolymphoma: An enigma. *Indian Dermatol Online J* 2014;5:224-6.
3. Kalra R. Use of barbed threads in facial rejuvenation. *Indian J Plast Surg* 2008;41:93-100.
4. Maubec E, Pinquier L, Viguier M, Caux F, Amsler E, Aractingi S, *et al.* Vaccination-induced cutaneous pseudolymphoma. *J Am Acad Dermatol* 2005;52:623-9.
5. Gardair Bouchy C, Kerdraon R, Kluger N, Armingaud P, Wakosa A, Estève E. Cutaneous lymphoid hyperplasia (pseudolymphoma) on the red dye of a tattoo. *Ann Pathol* 2013;33:273-7.