



## **KELOIDAL SCARS FOLLOWING TATTOOING- A RARE CASE REPORT**

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<p><b>Article Info</b>                  Received 15/12/2015                  Revised 10/01/2016                  Accepted 10/02/2016</p> <p><b>Key words:</b>                  Keloids, Tattoo,                  Pigments</p>	<p><b>ABSTRACT</b>                  Keloid is overgrowth of fibrous tissue that usually develops after healing of a skin injury and extends beyond the original defect. It most commonly occurs between 10-30 years of age. They often occur after local skin trauma such as laceration, tattoo, ear piercing. Anatomically predisposed sites are shoulder, chest, ear lobes, upper arms and cheeks. We report a case of 25 years old male who presented with complaints of itchy skin lesions over the right arm at the tattoo site for the past 6 months.</p>
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### **INTRODUCTION**

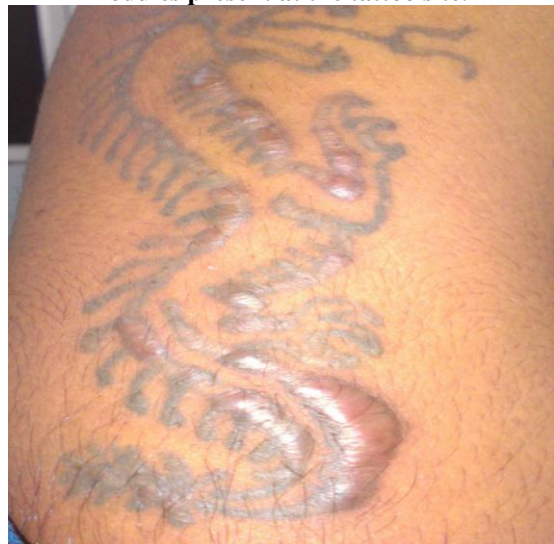
Excessive scarring was first described by Smith papyrus about 1700 BC [1]. Mancini in 1962 and in Peacock in 1970 differentiated excessive scarring into hypertrophic and keloid scar formation. Keloids are oval or oblong with regular margins but some appear claw-like with irregular borders. They do not usually cause symptoms but pruritis, pain, burning and tenderness may be present.

### **CASE REPORT:**

25 years old presented to our OPD with complaints of itchy skin lesions over the right arm for the past 6 months. History of tattooing done at professional beauty parlour 1 year back. 6 months back patient noticed raised erythematous lesion over the right arm at the tattoo site. It initially started only at a particular portion of tattoo then slowly spreading to other areas. There was no history of atopy or keloidal tendency. There was no history of ulceration or discharge. Dermatological examination revealed a green colour tattoo over the right arm extending from the shoulder to lower one of third of the arm. Multiple, pink to red nodules present at the tattoo site. [Figure 1]. Palms, soles, scalp and oral mucousa are

normal. Systemic examination done was normal. Routine investigations done were normal.

**Figure 1. Clinical picture showing multiple, pink to red nodules present at the tattoo site.**



## DISCUSSION

A Keloid (cheloid which means 'crab claw') is a benign, well demarcated area of fibrous tissue overgrowth that extends beyond the original defect. They result from the uncontrolled synthesis and excessive deposition of collagen at sites of prior dermal injury and wound repair. It often occurs after local skin trauma (surgery, earlobe piercing, burns, and vaccination) or pathological (acne). They have equal sex incidence and occurs commonly between 10 and 30 years of age. A positive family history is present in 5-10% individuals and suggests autosomal dominant penetrance with incomplete penetrance. They are common in Asians and dark skinned races.

Keloids appear as well-circumscribed pink to purple firm nodules or plaques with a smooth but irregular border which may grow for months or years. Lesions often assume a 'dumb-bell' configuration, but sometimes bizarre and irregular. It is often irritable and hypersensitive and sometimes exquisitely tender. Ulceration occurs due to the thin overlying epidermis and hyperpigmentation is common. The most common sites are earlobes, neck, shoulder chin, upper trunk and lower leg. Syndromes associated with keloid are Dupuytren's contracture, Ehlers-Danlos syndrome, pachydermoperiostosis and Rubenstein-Taybi syndrome. Keloids are differentiated from hypertrophic scar by being confined to the initial defect, asymptomatic, occurs within 4 to 8 weeks following wound infection, wound closure with excess tension or other traumatic skin injury [2] develops in wounds at anatomic locations with high tension such as presternum, neck, shoulders, ankles and knees [4,5,6], has a rapid growth phase for up to 6 months and then gradually regress leading to flat scars<sup>[3,4]</sup>. Keloids recur following excision, whereas hypertrophic scar formation is rare after excision.

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Keloids is differentiated histologically by endothelial proliferation surrounded by increased number of fibroblast which form large, irregular nodules or whorls of collagen with a peripheral capsule like band and mucinous material is deposited focally in keloids but not in hypertrophic scars.

Treatment includes intralesional corticosteroid, compression therapy, silicone gel sheets, cryotherapy or surgical excision, radiation therapy, bleomycin, interferons pulsed dye laser therapy, topical retinoic acid, 5-Fluorouracil injections, imiquimod, tacrolimus, colchicine, UV radiation, transforming growth factor-  $\beta$ 3 and recombinant human interleukin (IL-10).

Tattoos are becoming more common among men and women. The pigments commonly employed include blue-black, green, yellow red, light blue and brown. Common complications following tattoos are mainly due to pigment ingredients, viral, fungal, bacterial and transfusion transmitted diseases. There is only case reported with a keloid occurring in a tattoo after laser hair removal. Hence this case is reported because of its rarity.

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## CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

## STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

