

Case Report

CUTANEOUS HORN ON THIGH FOLLOWING KANGRI THERMAL BURNS: AN UNUSUAL CASE REPORT

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ABSTRACT

We report a 58-year-old female presenting with a cutaneous horn on the medial aspect of left thigh following Kangri thermal burns. Cutaneous horn is a well defined, projectile, cone shaped, densely cohesive, hyperkeratotic lesion that often resembles the horn of an animal. It is seen in sun-exposed areas and its occurrence on the thigh is uncommon. Cutaneous horn following a burn injury has been reported only twice, while one after Kangri thermal burns has not been reported in the literature. The association with malignancy makes proper identification of these lesions essential. Standard treatment involves local excision and histopathological analysis of the base to rule out malignancy.

Key Words: *Cutaneous Horn, Cornu Cutaneum, Sebaceous Horn, Thermal Burns, Kangri*

INTRODUCTION

Cutaneous horn or sebaceous horn, also known by the Latin name cornu cutaneum is a well defined, projectile, cone shaped, hard, densely cohesive, hyperkeratotic lesion that often resembles the horn of an animal or sometimes of wood or coral. The difference from animal horn is that, it lacks a bony core (Korkut *et al.*, 1997). Cutaneous horn is not a true pathologic diagnosis, but a clinical diagnosis based on the morphology of the lesion. This term cutaneous horn is generally applied to lesions in which the height of the keratotic mass equals to at least half of its diameter but it may also be flat, nodular, or crater form (Bart *et al.*, 1968). Histologically, it consists of concentric layers of cornified epithelial cells (compact keratin). It's a relatively uncommon lesion, usually small and localized, but larger in very rare cases (Nthumba, 2007; Copcu *et al.*, 2004). Most have a yellow-white or yellow-grey color, and may be straight or curved and twisted. These lesions are found most frequently on sun exposed skin, particularly the face, ear, nose, forearms, and dorsum of hands, but may also occur on the penis, neck, shoulder and eyelid (Copcu *et al.*, 2004). It's occurrence on the thigh is uncommon. Cutaneous horn following a burn injury has been reported only twice (Nthumba, 2007; Salati and Rather, 2010) while one after Kangri thermal burns has not been reported in the literature. We report a 58-year-old female presenting with a cutaneous horn on the medial aspect of left thigh following Kangri thermal burns.

CASES

A 58-year-old female presented with a raised painless growth on the medial aspect of left thigh of 5-years duration. She complaint itching and redness around the lesion and over the preceding years before the lesion started erupting. There was no history of discharge. After further questioning, it was revealed, that, she was had been using kangri during winters for almost 25 years. She uses to place the kangri between the thighs and often had superficial thermal burns particularly at the site of the growth (Figure 1). Patient stopped using kangri almost 5 years back. Examination revealed a large cone shaped keratotic cutaneous horn about 2 cm in length and 0.5 cm in breadth at the base, in the centre with smaller 3-4 raised lesions about 0.3 to 0.5 cm on the medial aspect of left thigh (Figure 2).

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Figure 1: Kangri also known as kanger, is a brazier, a pot filled with embers to provide heat in extreme cold by Kashmiri people



Figure 2: Photograph showing cutaneous horn yellow-white in color, curved and twisted in shape. Surrounding the base of it and the intervening skin between the multiple, smaller cornu cutaneum are hyperpigmented plaques



Figure 3: Photograph showing cutaneous horn yellow-white in color, curved and twisted in shape. Surrounding the base of it and the intervening skin between the multiple, smaller cornu cutaneum are hyperpigmented plaques

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Around the base of the cutaneous horn and intervening skin between the multiple, smaller cornu cutaneum was showing hyperpigmented plaques (Figure 3). The surrounding skin was showing tell-tale signs of thermal burns in the form of hypopigmented areas, erythema ab igne and few hyperpigmented plaques (Figure 2).

There was no inguinal lymphadenopathy. Procedure was performed under local anesthesia using 1% lidocaine with adrenaline. An elliptical incision was given incorporating the larger cutaneous horn along with smaller ones.

The lesion was excised along with a rim of normal tissue (Figure 4). Primary closure was performed. Postoperative period was uneventful. Unfortunately the lesion could not be biopsied due to non-compliance on part of the attendants and we really regret this mistake. The patient however did well and was under follow up for 3 years and there is no report of malignancy.



Figure 4: Excised specimen along with a rim of normal tissue

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DISCUSSION

The earliest documented case of cutaneous horn dates back to 1588 is that of Mrs. Margaret Gryffith, an elderly woman in London, being advertised in a pamphlet. Everard Home and John Hunter in 1791 described it as a medical disorder (Bondeson, 2001). Sun exposure is the most important etiological factor in pathogenesis of the cornu cutaneum like other skin lesion (Copcu *et al.*, 2004). They occur most commonly in light-skinned patients 50 years or older. They are more common in white races, and this can be attributed to the relative protection the pigmented skin enjoys from UV (ultraviolet) solar rays. Though seen more frequently on the sun exposed skin, lesions on the lower limbs have also been reported, though, small in numbers (Festa *et al.*, 1995; Castillo *et al.*, 2002). No consistent sex predilection has been demonstrated (Copcu *et al.*, 2004).

Burn scars are known to complicate with skin depigmentation, hypertrophic scars, keloid, and chronic non-healing scars which may progress into squamous cell carcinomas (Marjolin's ulcers). However, there appears to be only two previous mentions in the literature of a cutaneous horn arising from a thermal burn or burn scar (Nthumba, 2007). Cutaneous horn developing after Kangri thermal burns has never been reported in the literature. Kangri also known as kanger, is a brazier, a pot filled with embers (to provide heat) used by Kashmiris beneath their traditional cloathing, the phiren, which is an overcoat type of garment to keep them warm during extremely chilly winters. Conditions associated with prolonged use of the kangri include erythema ab igne (Riahi *et al.*, 2010) and kangri cancer (Wani, 2010). Kangri cancer is a type of squamous-cell carcinoma of the skin occurring on the lower abdomen and inner thighs due to the use of a kangri. It is found only in Kashmir (Wani, 2010). Erythema ab igne is a skin condition caused by long-term exposure to heat or infrared radiation (Riahi *et al.*, 2010). Prolonged thermal radiation exposure to the skin can lead to the development of erythema, hyperpigmentation and telangiectasias in the affected area, presenting with mild itchiness, redness and a burning sensation. Mechanism involves damage to the epidermis and superficial blood vessels that subsequently lead to vascular dilation and hemosiderin deposition in a reticular distribution (Riahi *et al.*, 2010). We propose that the cutaneous horn in our case is a consequence of epidermal damage due to prolonged exposure to thermal injury because of the use of kangri, which also occurs in erythema ab igne.

Cutaneous horn is thought to result from a wide variety of underlying benign, premalignant or malignant epidermal lesions at the base (Bondeson, 2001; Festa *et al.*, 1995; Castillo *et al.*, 2002). Tenderness at the base and surrounding inflammation and an infiltrated base may indicate malignancy. Upto 40% of cutaneous horns shown to have an underlying premalignant or malignant lesion, hence the importance of complete excision and histopathological diagnosis. The surgical excision is conservative and should also guarantee a sufficient security margin (Bondeson, 2001; Festa *et al.*, 1995; Castillo *et al.*, 2002).

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