



CUTANEOUS HORN FOLLOWING AN OLD INTRAMUSCULAR INJECTION ABSCESS- A CASE REPORT

Plastic surgery

Dr. Kuldeep Singh* MBBS, MS, General surgery, Mch Plastic & Reconstructive surgery, Medical College & Hospital, Kolkata West Bengal, India *Corresponding Author

ABSTRACT

Background- A cutaneous horn is a clinical entity which grows very slowly and patients tend to present very late mostly with complications. Though most of the lesions are benign, 20-25% of old age, giant cutaneous horn may turn malignant. **Case presentation-** A 40-year-old female came to our outpatient department (OPD) with a cutaneous horn on the lateral aspect of her left arm following intramuscular (IM) injection 15 years back. After relevant investigations were done and patient underwent excision and coverage by split thickness skin graft. **Conclusion-** We report for the first time a benign presentation of cutaneous horn of size 10 cms in length following intramuscular injection 15 years back.

KEYWORDS

Cutaneous horn, IM injection

INTRODUCTION:

Cutaneous horn is a type of hypertrophic senile keratosis in which the horny layer accumulates to form a horn. Several kinds of cutaneous horn have been described viz; (a) filiform horn, (b) papillomatous horn, (c) verrucous horn. They all vary in appearance, causation and histology.(1)(2)

A cutaneous horn is conical projection of hyperkeratotic epidermis as there is high keratin cohesiveness. Grossly, it looks similar to animal horn but it lacks any bony structure. On histopathologic examination it is a mixture of squamous epithelial cells and trichilemmal keratinized debris. It is yellowish white in colour and size can vary from few millimetres to several centimetres. It can be straight, twisted or curved.(3) Base of a cutaneous horn may be associated with squamous cell carcinoma, viral warts, keratoacanthoma, actinic keratosis, Bowen's disease, Basal cell carcinoma (BCC). It can be seen in multiple diseases like actinic keratoses, wart, molluscum contagiosum, seborrheic keratoses, keratoacanthoma, basal cell and squamous cell carcinoma.(4)(5) Most cutaneous horns are usually benign in nature but with advancing age, duration of disease, the lesion can turn malignant, hence all cutaneous horn should undergo surgical removal and biopsy for early and definitive diagnosis and management.

In 1588, the first case of cutaneous horn was reported in London.(6) Thereafter, there were many case reports in the 16th and 17th century but were not treated due to lack of knowledge and healthcare facilities. There were various natural and supernatural theories regarding this disease. In the late 18th century, it was characterised as a medical disorder by Dr. Edward Home and Dr. John Hunter in London.(3).

Literature survey:

The largest study of 643 cutaneous horns was reported by Yu *et al.* According to their study, 39% of cutaneous horns were derived from malignant or premalignant epidermal lesions, and 61% from benign lesions. Other two studies on cutaneous horn showed 23%–37% of these to be associated with actinic keratosis or Bowen's disease and another 16%–20% with malignant lesions. Cutaneous horns are mainly located on head and upper limbs due to more actinic damage. Studies have shown that benign cutaneous horn occurs on less sun exposed areas of body whereas on the other hand, the malignant cutaneous horn develops on more sun exposed areas of body. (7)

Among the 222 lesions examined by Mantese *et al.*, cutaneous horns (41.44%) presented benign histopathologic alterations on their bases being the most frequent: viral wart (31.52%), keratoacanthoma (26.09%), keratosis seborrheic (21.74%), benign epithelial hyperplasia (6.52%), trichilemmoma (3.26%) and others (10.87%). A total of 114 lesions (51.35%) were premalignant and 16 (7.21%) malignant.(8). Our case is unique in a way that it does not show any correlation with the most common aetiologies described above.

Case Report:

A 40-year-old, non-diabetic woman presented to our outpatient department with a cutaneous projection over upper 1/3rd of the lateral aspect of the left arm. As per the patient, four years ago, she first

noticed it about 1x1cm in size which gradually progressed to the present size of approximately 7x1.5cms. She also gave a history of IM injection for fever at the same site 15 years back which developed into an abscess within 2 weeks of injection. The abscess was drained by incision and drainage by the doctors elsewhere, but the woman gave a history of intermittent thick yellowish pus discharge which was treated in a nearby facility with oral & topical antibiotics for about 3 months and recovered completely in subsequent visits. She did not complain of any pain, spontaneous bleeding from the lesion, any sensory or motor neurological deficits at the site. She denied any loss of weight or appetite. There were no other lesions elsewhere in her body. There was no other intervention done till she came to our facility.

The time interval between the abscess drainage and appearance of lesion is of approx. 11 years. The lesion appeared as a hard woody cutaneous laterally curved projection measuring about 7cms in length & 1.5cms in breadth with a circular base. It was rough in texture. The surrounding tissue showed scarring and hypopigmentation of the skin which was consistent with the history of incision and drainage. There was no recurrent breakdown of the scar. There was a slight constriction of mid- upper arm circumference as compared to other arm at the site of lesion due to the scar tissue. The projection was not fixed to the underlying muscle or bone. Axillary lymph nodes were not palpable. There was no inflammation, redness around the base, the patient did not experience any pain or rapid growth of the lesion, the malignant potential of the lesion was low.

A clinical diagnosis of cutaneous horn was made for which excision and coverage under general anaesthesia was planned. A wide local excision of the lesion was done with ease and revealed normal underlying tissue with no bony involvement. The defect was covered by split thickness skin graft harvested from left thigh. Specimen was sent for histopathological examination which confirmed the diagnosis of cutaneous horn. Also, there was no sign of malignancy in the specimen sent. As the patient didn't turn up for follow ups subsequently, surrounding scar management couldn't be done.

DISCUSSION:

Cutaneous horn occurs mainly in individuals who are above 50 years of age, in both sexes, probably due to a major actinic and neoplastic degeneration occurring in elderly people.7

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exposed areas of body whereas on the other hand, the malignant cutaneous horn develops on more sun exposed areas of body. (9)

Our case is unique in a way that it does not show any co-relation with the most common aetiologies described above. In our case, there was no rapid progression, similar growth anywhere in body or pain at site of lesion. The most common cause of malignant cutaneous horn is squamous cell carcinoma, axillary lymph nodes were not palpable nor there was any cutaneous skin lesion apart from the said cutaneous horn. Chronic local irritation at the site of injection along with surgical intervention for abscess drainage might have led to formation of cutaneous horn. Cutaneous horn can be described as conical, cylindrical, pointed, or curved.

Deducing from the history, pus discharge for 3 months together with exposure to sun may led to cutaneous horn formation. In our case, the cutaneous horn was curved with low malignant potential. Histopathological examination showed multiple layers of keratin with hyperkeratotic, hyperplastic epithelium with no pre-malignant or malignant lesion.

Although surgical excision is the management of choice, patients who are unwilling for surgery can be provided with other options like electro cautery, cryotherapy, CO₂ & Nd: YAG laser. The lesion was quite large in our case, so other treatment modalities were out of question.

CONCLUSION:

As majority of the cutaneous horns are benign in nature but the possibility of malignancy cannot be ruled out. So, proper treatment protocol should be followed accordingly. In our case, the patient had a long history of developing a cutaneous horn with the inciting agent being an IM injection 15 years back. The lesion was quite large so wide local excision was done.

Abbreviations:

OPD - Outpatient Department

IM - Intramuscular

BCC - Basal cell carcinoma

CO₂ - Carbon di oxide

Nd: YAG - Neodymium doped Yttrium Aluminium Garnet

Pictures



Figure 1

Figure 2

Pre-operative pictures showing cutaneous horn.



Figure 3. Specimen after excision



Figure 4

Figure 5

Follow up after 7 days of discharge

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