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Case Report

Nasal skin papilloma mimicking a cutaneous horn in an infant

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ABSTRACT

A cutaneous horn is a hyperkeratotic projection whose clinical significance lies in its underlying epidermal pathology, which can range from benign to premalignant or malignant. While typically seen in sun exposed areas of elderly patients, this report details a rare presentation in an infant where the lesion clinically mimicked a cutaneous horn but was histopathologically identified as a benign skin papilloma. An 11-month-old male infant presented with a keratotic projection on the dorsum of his nose, present since early infancy. Clinical examination revealed a hard, conical mass resembling a cutaneous horn. The lesion was successfully excised under general anesthesia with primary wound closure. The post-operative period was uneventful. Histopathological examination revealed the lesion to be a benign skin papilloma. This case highlights the unusual presentation of a benign skin papilloma mimicking a cutaneous horn in a pediatric patient. It emphasizes that despite rarity in this demographic, thorough evaluation and surgical excision are crucial for definitive diagnosis and treatment, ensuring appropriate management and ruling out any potential underlying malignancy.

Keywords: Skin papilloma, Cutaneous horn, Acrochordon

INTRODUCTION

A cutaneous horn, or Cornu Cutaneum, is a clinical term for a conical, hyperkeratotic projection on the skin's surface that morphologically resembles a horn. These lesions may present as cylindrical, conical, or curved and are defined by a height measuring at least half of their basal diameter.[1,2] While the horn itself is composed of avascular, necrotic keratin, its clinical significance is determined by the underlying epidermal pathology at its base, which may be flat, nodular, or crateriform.[3,4]

The term 'cutaneous horn' is a clinical descriptor rather than a specific histopathological diagnosis, as it signifies an underlying hyperproliferative process.[3] A wide spectrum of lesions can manifest as a cutaneous horn, ranging from benign entities, such as viral warts, seborrheic keratosis, and cysts, to premalignant conditions like actinic keratosis. Importantly, a cutaneous horn can also arise from a malignant base, including Bowen's disease, squamous cell carcinoma, basal cell carcinoma or malignant melanoma.[5] Although approximately 60% of cases have a benign origin, studies report that 16% to 39% of cutaneous horns are associated with an underlying premalignant or malignant lesion.[6,7]

Epidemiologically, cutaneous horns are most prevalent in elderly populations, typically presenting after the fifth decade of life, and occur predominantly on sun-exposed areas, such as the face, scalp, ears and upper extremities.[8] The risk of malignancy at the base is reportedly higher in male patients as compared to age matched female patients.[3]

Given the varied nature of the underlying pathology, a biopsy is essential for a definitive histopathological diagnosis. For smaller lesions, an excisional biopsy of the horn, including its base, is recommended for both diagnosis and treatment.[4] Alternative treatments include shaving, electrocauterization, cryotherapy, and laser

ablation, particularly in cosmetically sensitive areas.[9] Postoperative annual examinations are advised to monitor for recurrence or new malignancies.[10] This report presents a rare case of a benign skin papilloma of the nose in an infant, which clinically mimicked a rhino cutaneous horn, which is a significant deviation from the typical patient demographic.

CASE REPORT

An 11-month-old male infant presented to the ENT clinic with his mother's complaint of a projecting mass from the outer surface of the nose since early infancy. The mother expressed embarrassment regarding showing the child to relatives and friends.

On clinical examination, a hard, conical mass was projecting from the dorsum of the nose near the tip (Figure 1 and 2). Anterior rhinoscopy revealed no other unusual projectile masses from either nasal cavity. The examination of the neck did not reveal any clinically positive lymph nodes. A provisional clinical diagnosis of rhino cutaneous horn on a sun exposed area of the dorsum of the nose was made.

The skin margins were elliptically marked with methylene blue. Under general anesthesia, and after infiltrating the surrounding area with 2% xylocaine with adrenaline, the lesion was excised (Figure 3). The margins were undermined for proper approximation in layers, and the wound was closed primarily. The wound was covered by dry, sterilized gauze and secured. The stitches were removed on day seven (Figure 4). The six-week follow-up period was uneventful.

The excised specimen was sent for histopathological examination. The report revealed features consistent with a benign skin papilloma. Microscopic examination showed papillary projections of fibrovascular cores covered by hyperkeratotic and acanthotic squamous epithelium. No signs of malignancy were identified.

Figure 1: Conical, horn-like lesion on the dorsum of the infant's nose (lateral view).

Figure 2: Close-up clinical photograph of the nasal lesion, demonstrating its texture and firm appearance.

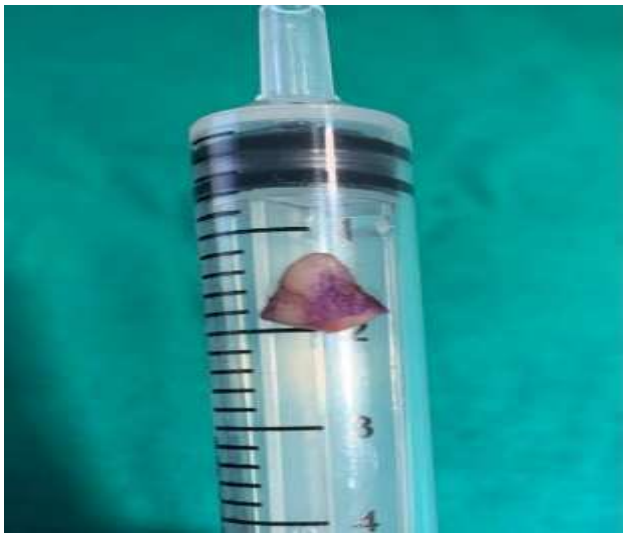

Figure 3: The gross specimen after complete surgical excision with an elliptical margin of surrounding skin.

Figure 4: Post-operative result on day seven after suture removal, showing a well-healed primary closure.

DISCUSSION

Lesions presenting as a cutaneous horn, though rare in infants, are distinct protrusions of cornified material resembling an animal horn.[1] While macroscopically similar, human cutaneous horns differ histologically; they lack the central bone structure found in animal horns and are instead characterized by an abundance of compact keratin protruding from the epidermis.[2] The critical aspect of a cutaneous horn lies not in the horn itself, which is composed of dead keratin, but in the underlying epidermal pathology at its base. This underlying pathology can range from benign to premalignant or malignant proliferations.[4] This case perfectly illustrates this principle, as a lesion that appeared clinically as a cutaneous horn was revealed to be a benign skin papilloma upon histopathological review.

Cutaneous horns can arise from a wide variety of underlying conditions. Benign causes include seborrheic keratosis, viral warts, skin papilloma, histiocytoma, inverted follicular keratosis, verrucous epidermal nevus, and molluscum contagiosum. Premalignant etiologies encompass solar keratosis, arsenical keratosis, and Bowen's disease. Malignant lesions, though less common can include squamous cell carcinoma (SCC), basal cell carcinoma, metastatic renal carcinoma, granular cell tumor, sebaceous carcinoma, and Kaposi's sarcoma.[3]

The largest retrospective study conducted by Yu et al on 643 cutaneous horns revealed that 38.9% originated from malignant or pre-malignant epidermal lesions while 61.1% were derived from benign lesions.[6] Other significant studies have reported that 23-37% of cutaneous horns are associated with actinic keratosis or Bowen's disease, and an additional 16-20% are linked to malignant lesions.[7] This underscores the importance of a thorough histopathological examination particularly at base of the lesion to rule out underlying malignancy.[10]

While cutaneous horns are most commonly observed in Caucasians, they are relatively rare in Asians, and even rarer in Africans, possibly due to the protective role of melanin pigment against ultraviolet (UV) radiation-induced damage. Long-term sun exposure and immunodeficiency are also implicated as causative factors.[2] The lesion predominantly affects individuals over 50 years of age, likely due to increased actinic and neoplastic degeneration in the elderly.[5]

Several features are associated with an increased likelihood of premalignant or malignant base pathology. Age is a significant factor, with the mean age of patients having premalignant or malignant lesions being 8 to 9 years greater than those with benign lesions ($p<0.0005$). Sex also plays a role, as males are more prone to developing cutaneous horns with premalignant base pathology ($p<0.001$). The anatomical site is crucial; over 70% of all pre-malignant lesions are found on the nose, pinnae, backs of hands, scalp, arms and face. Lesions at these sites are 2.1 times more likely to have originated from a premalignant base compared to other body parts ($p<0.0001$). Furthermore, the geometry of the lesion is important: those with a wide base or a low height-to-base ratio are significantly more likely to indicate premalignant base pathology.[6]

In the pediatric population, cutaneous horns are rare, and their differential diagnosis can be varied. Common causes in infants and children include molluscum contagiosum, common wart, subepidermal calcified nodule, and pyogenic granuloma. However, unusual causes such as juvenile xanthogranuloma (JXG) have also been reported.[11]

Skin papillomas, also known as acrochordons or squamous papillomas, are common benign growths of the epidermis.[12] While often associated with human papillomavirus (HPV) in adults, their etiology in infancy is less certain. They typically appear as soft, fleshy growths, and their presentation as a firm, hyperkeratotic horn on the nose of an infant is exceptionally rare.[13] This case underscores that the clinical morphology of these benign lesions can be highly variable and mimic other pathologies. Therefore, surgical excision remains the treatment of choice, as it provides both the definitive diagnosis through biopsy and curative treatment.[10]

CONCLUSION

This case report highlights the rare presentation of a benign skin papilloma of the nose clinically mimicking a rhino cutaneous horn in an infant, a significant deviation from the typical demographic of elderly patients with sun-exposed lesions. While the clinical presentation suggested a cutaneous horn, the final diagnosis underscores that this term is a descriptor, not a definitive pathology. The diverse underlying pathologies associated with such presentations can range from benign to premalignant and malignant. As demonstrated, surgical excision remains the cornerstone of management, providing both diagnostic clarity and curative treatment. This rare presentation in a pediatric patient emphasizes the importance of considering a broad differential for horn-like lesions in younger patients and ensuring thorough histopathological evaluation for appropriate management and to rule out any underlying malignancy.

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REFERENCES

1. Gupta V, Chopra V, Verma S. A Large Cutaneous Horn of the Glans Penis: a Rare Presentation. Indian J Surg. 2013;76(2):143.
2. Phulari RGS, Rathore R, Talegaon TP, Shah A. Cutaneous horn: A mask to underlying malignancy. J Oral Maxillof Pathol. 2018;22(4):S87-90.

3. Rajesh, Pallavi. Rhino Cutaneous Horn in a Sun-Protected Area: A Rare Case with Historical Review. Int J Otorhinolaryngol. 2006;6(2):NA.
4. Vanik S, Mehta S, Shah R, Trivedi P, Rathod P, Bhatt S. Giant Cutaneous Horn: Is It a Tip of An Iceberg? Two Case Reports and a Review of Literature. Indian J Otolaryngol Head Neck Surg. 2022;74(3):5432-5.
5. Copcu E, Sivrioglu N, Culhaci N. Cutaneous horns: are these lesions as innocent as they seem to be? World J Surg Oncol. 2004;2:18.
6. Yu RCH, Pryce DW, Macfarlane AW, Stewart TW. A histopathological study of 643 cutaneous horns. Brit J Dermatol. 1991;124(5):449-52.
7. Schosser RH, Hodge SJ, Gaba CR, Owen LG. Gutaneous horns: A histopathologic study. South Med J. 1979;72(9):1129-31.
8. Wee JJ, Kiong KL. Nasal septal verrucous carcinoma presenting as a cutaneous horn. Europ J Med Case Rep. 2022;6:107-10.
9. Lowe FC, McCullough AR. Cutaneous horns of the penis: An approach to management: Case report and review of the literature. J Am Acad Dermatol. 1985;13(2):369-73.
10. Ezerarslan H, Basaran MM, Akmansu SH. Diagnosis and Management of Cornu Cutaneum of Nasal Vestibule: A Rare Case Report. Case Rep Med. 2015;2015:625832.
11. Iraji F, Ganjei Z, Kazemipour S. Cutaneous horn: A rare subtype of juvenile xanthogranuloma. Clin Case Rep. 2019;8(1):65.
12. Belgam Syed SY, Lipoff JB, Chatterjee K. Acrochordon. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.
13. Gupta S, Aggarwal R, Gupta S, Arora SK. Human papillomavirus and skin tags: Is there any association? Indian J Dermatol Venereol Leprol. 2008;74(3):222-5.

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