A CUTANEOUS HORN MIMICKING POLYDACTYLY: A CASE REPORT

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ABSTRACT

A cutaneous horn is a general name for cornified material protruding from skin. On the other hand, polydactyly is a common congenital anomaly of the hand and foot which is characterized by extra finger or toe. A cutaneous horn might mimic polydactyly by resembling an extra toe. Hereby, we present a 72-year-old white Caucasian male with an extra toe-like projection on his fourth toe. Initially, polydactyly was suspected, however a cutaneous horn was also considered. The lesion was surgically removed. The histopathological examination of the specimen revealed hyperkeratosis, and thus confirmed the lesion to be a cutaneous horn.

UDC CODE & KEYWORDS

■ UDC: 6 ■ Hyperkeratosis ■ Cutaneous ■ Horn ■ Polydactyly

INTRODUCTION

A cutaneous horn is a general name for hyperkeratotic, projectile lesions protruding from skin. Cutaneous horns are usually found on sun exposed areas such as face, ears, dorsum of the hands, and scalp. The shape of a cutaneous horn might be curved, spiral or straight and its size may vary considerably from a few millimeters to centimeters ("Precancerous Lesions", 2009). Histopathological evaluation of a cutaneous horn shows thickening of the stratum corneum. However, the histopathological examination of a cutaneous horn is of paramount importance as the base of a cutaneous horn may harbor precancerous or malignant lesions such as actinic keratosis, keratoacanthoma, squamous cell carcinoma, basal cell carcinoma, sebaceous carcinoma and malignant melanoma (Boyd, 2010; Fernandes, Sinha, Lambert & Schwartz, 2009). Therefore, surgical excision and histopathological examination of a cutaneous horn is mandatory in order to rule out malignancy (Oliveira Mantese et al., 2010).

Polydactyly is a common congenital anomaly of the hand and foot which is characterized by an extra finger or toe (Galois, Mainard, & Delagoutte, 2002). The clinical presentation of polydactyly might vary from a soft tissue mass to a complete digit. Except cutaneous horn, the differential diagnosis of polydactyly includes digital fibrokeratoma, verruca vulgaris and also neurofibroma (Galois, Mainard, & Delagoutte, 2002; Upjohn, Barlow & Robson, 2006; Yerebakan et al., 2002). However, polydactyly of foot is rare among adults while the patients are usually treated surgically in childhood prior to walking age. Polydactyly is usually treated with surgery to relieve symptoms such as pain and walking tenderness, and also for aesthetic reasons (Galois, Mainard, & Delagoutte, 2002; Rafique, Arshad & Abu-Zaid, 2014).

A cutaneous horn might resemble an extra digit, therefore it might be a clinical challenge to distinguish between a cutaneous horn and polydactyly. However, surgical excision and histopathological evaluation of the specimen would help to reach a definitive diagnosis.

Case Report

A 72-year-old white Caucasian male complaining of finger-like mass on the fourth toe of his right foot was admitted to hospital for further clinical evaluation (Figure 1). The patient admitted that the lesion was painless, however it resembled an extra toe and continued to grow in the last ten years. The patient's chief complaint was having difficulties to find the right shoe to fit in. The family history was unremarkable as the patient did not know if the other family members had similar symptoms. The physical examination of the right foot revealed a solitary, 1x0.8x0.4 cm, skin coloured, firm, cylindrical projection with a keratotic cap on the lateral side of the fourth toe. The patient's left foot was unremarkable as there was

Figure 1: Appendage with a keratotic cap on the fourth toe of the patient's right foot

Source: Authors

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no sign of an abnormality. The lesion was surgically removed under local anesthesia. (Figure 2). The patient did well postoperatively and he was discharged home without any complications. Histopathological examination of the specimen revealed hyperkeratosis.

Figure 2: Surgical removal of the lesion. The lesion, 1x0.8x0.4 cm with a keratotic cap on the tip, was surgically removed. The histopathological examination of the specimen revealed hyperkeratosis

Source: Authors

Discussion

A cutaneous horn is a general name for cornified material protruding from skin (Fernandes, Sinha, Lambert & Schwartz, 2009). A cutaneous horn is normally classified under benign lesions. However, premalign and malign lesions might be found at the base of a cutaneous horn. Therefore, local excision of a cutaneous horn with subsequent histopathologic evaluation is mandatory. Morphologically, a cutaneous horn greater than 1 cm in height is rarely seen. Moreover, photoprotected (non-sun-exposed) areas of the skin are unusual locations for cutaneous horns (Solanki, Dhingra, Raghubanshi & Thami, 2014; Nair, Chaudhary & Mehta, 2013). The occurrence of a cutaneous horn on a toe is also uncommon. Despite the fact that a cutaneous horn is often diagnosed simply by its clinical appearance, reaching a definitive diagnosis just by evaluating its morphological features could be difficult in some rare cases.

Polydactyly is the possession of extra finger or toe. Polydactyly is generally classified into three major groups as preaxial, central and postaxial (Mukherjee, Paul, Bandyopadhyay & Das, 2011). Preaxial polydactyly refers to duplicated first digit. Central type polydactyly affects the second, third and fourth fingers. Postaxial type is characterized by the presence of extra digit beside the little finger (Baptista & Valloto Júnior, 2013). The severity of polydactyly may vary as various morphologic phenotypes ranging from small skin projections to fully formed extra digits (Galois, Mainard, & Delagoutte, 2002; Mukherjee, Paul, Bandyopadhyay & Das, 2011).

Conclusion

The case presented above is a rare example of a cutaneous horn appearing on a toe. The clinical appearance of the lesion was confusing as the lesion was similar to an extra toe. The cutaneous horn mimicked polydactyly. However, the surgical removal of the lesion not only helped us to reach a final diagnosis as cutaneous horn, but also ruled out an occult malignancy.

REFERENCES

1. Baptista, A.D. & Valloto Júnior, E. (2013). Bilateral polydactyly of the adult foot: case report. *Revista ABTPé*, 7(1), 56-60.
2. Boyd, A. S. (2010). Tumors of the Epidermis. In Barnhill, R.L., Crowson, A. N., Magro, C. M., Piepkorn, M. W. (Eds.), *Dermatopathology* (pp. 600-601). New York: The McGraw-Hill.
3. Fernandes, N. F., Sinha, S., Lambert, W. C., & Schwartz, R. A. (2009). Cutaneous horn: a potentially malignant entity. *Acta Dermatovenereologica Alpina, Pannonica et Adriatica*, 18(4), 189-193.
4. Galois, L., Mainard, D., & Delagoutte, J.P. (2002). Polydactyly of the foot. Literature review and case presentations. *Acta Orthopaedica Belgica*, 68(4), 376-380.
5. Mukherjee, S., Paul, R., Bandyopadhyay, M., & Das, P. (2011). Post-axial polydactyly in four limbs with different bony configurations. *International Journal of Anatomical Variations*, 4, 77-79.
6. Nair, P. A., Chaudhary, A. H., & Mehta, M. J. (2013). Actinic keratosis underlying cutaneous horn at an unusual site-a case report. *Eccancermediscience*, 26, 7:376. doi: 10.3332/ecancer.2013.376.
7. Oliveira, Mantese, S. A., Rocha, A., Mariano, Ferreira, A. K., Diogo, P. M., Camargo, Villela, Berbert, A.L., & Ferreira, T.C. (2010). Cutaneous horn: a retrospective histopathological study of 222 cases. *The Brazilian Annals of Dermatology*, 85(2), 157-163. doi.org/10.1590/S0365-05962010000200005.
8. Rafique, A., Arshad, A., & Abu-Zaid, A. (2014). Rare presentation of foot postaxial polydactyly. *The Journal of Foot and Ankle Surgery*, 53(3), 331-4. doi:10.1053/j.jfas.2013.12.023.
9. Solanki, L. S., Dhingra, M., Raghubanshi, G., & Thami, G.P. (2014). An innocent giant. *Indian Journal of Dermatology*, 59(6), 633. doi: 10.4103/0019-5154.143582.
10. Upjohn, E., Barlow, R., & Robson, A. (2006). Rudimentary polydactyly in an adult: an unusual presentation to a dermatological surgery unit. *Australasian Journal of Dermatology*, 47(3), 206-208. doi: 10.1111/j.1440-0960.2006.00275.
11. Wolff, K., & Johnson, R.A. (Eds.). (2009). *Precancerous Lesions and Cutaneous Carcinomas In Fitzpatrick's Color Atlas & Synopsis of Clinical Dermatology* (pp.275-276). New York: The McGraw-Hill.
12. Yerebakan, Ö., Çiftçioğlu, M.A., Ermiş, O., Kılıçaslan, B., Tüzüner, S., & Yılmaz, E. (2002). Rudimenter Polidaktili. *Archives of the Turkish Dermatology and Venereology*, 36(3), 208-210.