JAPANESE DERMATOLOGICAL ASSOCIATION
THE JOURNAL OF DERMATOLOGY
doi: 10.1111/1346-8138.13266
Journal of Dermatology 2016; **43**: 1–2

LETTER TO THE EDITOR

Keratotic condyloma acuminatum

Dear Editor,

Condyloma acuminatum (CA) is a benign tumor caused by infection with human papillomavirus (HPV) types 6 and 11. CA usually presents with small wet nodules on the genital areas. However, some unusual characteristics have been reported. We herein report a case of keratotic CA on the penile shaft, in a patient who also suffered from promyelocytic leukemia. A histopathological examination established a diagnosis of CA; a polymerase chain reaction (PCR) confirmed infection with HPV type 11.

A 45-year-old man presented with a 2-year history of a keratotic nodule on his penile shaft. He had been suffering from promyelocytic leukemia and had completed a course of medication. His wife did not have a history of gynecological disease. A physical examination revealed keratotic small nodules on the penile shaft. Two light brown to normal skin-colored nodules coalesced on the penile shaft (Fig. 1a). Verruca vulgaris and CA were suspected. Prominent hyperkeratosis papillomatosis and acanthosis were observed in the resected specimen (Fig. 1b). A high-power view demonstrated a slightly disordered arrangement of keratinocytes without atypia and koilocytosis (Fig. 1c). After obtaining informed consent, a PCR was performed to detect HPV DNA using tissue samples taken from the lesions. A HPV PCR was performed with consensus sequence primers, L1C1/L1C2, which are located in the L1 open reading frame of the HPV genome; the PCR conditions have previously been described.[1] The PCR products were purified and subjected to direct DNA sequencing. The sequences corresponded to the L1 gene of HPV type 11. We also performed an immunohistochemical analysis using an anti-HPV antibody (K1H8; Dako, Glostrup, Denmark) and observed positive cells in the granular layer (Fig. 1d). We diagnosed the patient as having "keratotic condyloma acuminatum".

Condyloma acuminatum usually presents as soft, pink, velvety and protuberant lesions; however, we previously reported unusual cases of pigmented plaque-like CA[2] and pigmented CA.[3] HPV types 6 or 11 are usually detected in CA. The HPV typing of 621 subjects with CA revealed that 94% of the CA contained genital HPV types. The most common HPV type detected in CA patients was HPV type 6 (62%); HPV type 11 was detected in 10% of CA lesions.[4] Because the clinical diagnosis of keratotic CA is sometimes difficult due to the unusual manifestations, HPV typing is useful for differentiating keratotic lesions in the anogenital region. The mechanism of the keratotic manifestation is unclear. It is recognized that CA of the penile shaft resembles common warts, probably due to contact with common warts elsewhere on the patient or the partner.[5]

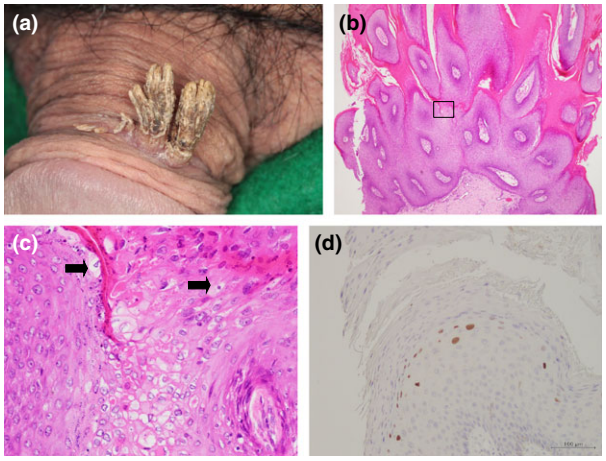

Figure 1. Clinical appearance and histopathological findings. (a) There was a brownish keratotic nodule on his penile shaft. (b) A low-power view showing hyperkeratosis, acanthosis and papillomatosis (hematoxylin–eosin [HE], original magnification ×20). (c) The high-power view of the inset of (b) shows a slightly disorderly arrangement of keratinocytes and koilocytes (arrows) without atypia (HE, ×100). (d) Immunohistochemistry using an anti-human papillomavirus (HPV) antibody (K1H8; Dako) demonstrated HPV capsid proteins in the epithelium (HE, ×100).

Furthermore, warts in the anogenital area in children are often more hyperkeratotic and may be caused by HPV types associated with cutaneous disease as well as HPV types 6 and 11.[5] Our patient suffered from hematological disease and his immunocompromised condition might have been a factor in the unusual manifestation. Because the patient's clinical manifestation was characteristic of keratotic CA, we should keep this in mind when similar keratotic lesions are observed in the anogenital area.

ACKNOWLEDGMENT: We thank Saki Mizuno (Gunma University, Japan) for technical support.

CONFLICT OF INTEREST: None declared.

Akira SHIMIZU,[1] Mai HATTORI,[1] Kyoichi KAIRA,[2] Osamu ISHIKAWA[1]

Departments of [1]Dermatology, and [2]Oncology Clinical Development, Gunma University Graduate School of Medicine, Maebashi, Japan

Correspondence: Akira Shimizu, M.D., Ph.D., Department of Dermatology, Gunma University Graduate School of Medicine, 3-39-22 Showa-machi, Maebashi, Gunma 371-8511, Japan. Email: shimizuakira@gunma-u.ac.jp

REFERENCES

1 Shimizu A, Tamura A, Abe M *et al.* Detection of human papillomavirus type 56 in Bowen's disease involving the nail matrix. *Br J Dermatol* 2008; **158**: 1273–1279.
2 Shimizu A, Tamura A, Nakatani Y *et al.* Pigmented plaque-type condyloma acuminatum associated with human papillomavirus type 6. *J Dermatol* 2012; **39**: 860–861.
3 Shimizu A, Kato M, Ishikawa O. Pigmented condyloma acuminatum. *J Dermatol* 2014; **41**: 337–339.
4 Sturegard E, Johansson H, Ekstrom J *et al.* Human papillomavirus typing in reporting of condyloma. *Sex Transm Dis* 2013; **40**: 123–129.
5 Rook A, Burns T. *Rooks Textbook of Dermatology*, 8th edn, Vol. **2**. Chichester, West Sussex, UK; Hoboken, NJ: Wiley-Blackwell, 2010.