Keratoacanthoma centrifugum marginatum (KCM) is characterized by a rapidly growing verrucous tumor with progressive peripheral expansion and central clearing. It usually arises from hair bearing and sun exposed skin among lighter skin phototypes. It closely resembles verrucous carcinoma, mycobacterial or fungal infections clinically, hence a biopsy is indispensable to establish the diagnosis. We report an interesting case of KCM in a Filipino, which was initially thought of as either verrucous carcinoma or a chronic infection and was successfully treated with wide excision with split thickness skin graft.

INTRODUCTION

Keratoacanthoma centrifugum marginatum (KCM) is an extremely rare variant of keratoacanthoma (KA) that is characterized by rapidly growing tumor with progressive peripheral expansion and central clearing. It predominantly affects white-skinned races, and affects areas with extensive exposure to UVB. We present a case of a Filipino farmer who presented with a verrucous lesion on the knee, which was eventually diagnosed histopathologically as KCM.

CASE REPORT

A 54-year-old, Filipino male presented with a 1-year history of a verrucous plaque on the lateral side of the right knee. The lesion started as a nodule that grew by peripheral expansion, central clearing with verrucous border. He is a farmer, and a chronic smoker. There was no history of trauma.

Skin examination revealed a solitary annular verrucous tumor with grayish-red hyperkeratotic nodules and a central atrophic area measuring 4 cm x 8 cm on the posterolateral aspect of the right knee (Figure 1). Primary clinical impression was verrucous carcinoma. Tuberculosis verrucosa cutis and chromoblastomycosis were the differential diagnoses. Laboratory tests did not identify any haematological or biochemical abnormalities. Sputum AFB, Mantoux (PPD) test, wound gram stain and culture sensitivity (GS/CS), KOH and fungal culture were negative. However, mycobacterial PCR and culture sensitivity (GS/CS), KOH and fungal culture were negative for microorganisms, respectively. These findings were consistent with keratoacanthoma, and with the annular clinical presentation, this case was diagnosed as keratoacanthoma centrifugum marginatum. A wide excision with split thickness skin graft was done, with no recurrence on the 12-month follow-up.

DISCUSSION

Keratoacanthoma centrifugum marginatum (KCM) is an extremely rare variant of KA with around 50 cases reported in the international literature since Belisario described it in 1965. KCM presents with a distinctive peripheral growth and central clearing, and may reach up to 40 centimeters with less chances of spontaneous resolution.

It rarely occurs among people with skin of color such as Filipinos, in fact no cases have previously been reported in the Philippine Dermatological Society’s central registry. The exact etiology of this disease is unknown, but smoking, ultraviolet radiation, trauma, genetic predisposition, chemical carcinogens and HPV infections may increase the risk of occurrence.

KA is a skin tumor characterized by a dome-shaped nodule with a central keratinous plug that has three rare clinical variants: Giant KA, subungual KA and KCM. Giant KA does not show tendency for spontaneous regression, but can be differentiated from KCM by the absence of downward vertical spread and destruction of underlying tissue in the latter. Clinically, KCM has a distinctive peripheral extension with raised, rolled border and an atrophic center that could be due to the sequential involvement of multiple adjacent hair follicles in a centrifugal fashion, as seen in our case.

Tuberculosis verrucosa cutis is a very close differential diagnosis due to the central clearing, verrucous border and
the peripheral extension of the lesion. The development of nodules and the warty morphology mimic deep fungal infections such as chromoblastomycosis and verrucous carcinoma, hence careful histopathological and laboratory examination are useful to rule out these clinical entities.

There are reports on the use of oral retinoids, 5-fluorouracil (FU) cream and intralesional methotrexate on KCM with inconsistent results. Recently, a case of KCM was treated with intralesional 5% 5-FU. Considering this and the extent of the lesion, the risk of treatment failure and recurrence of our case favor surgical intervention. Hence, wide excision with skin grafting proved to be the most ideal intervention in our case.

This case of KCM in a Filipino highlights the need to do a wedge excision and biopsy of lesions suspected as either a tumor or infection. Although the growth of the tumour is relatively faster than verrucous carcinoma or infections, KCM should always be on the list of differential diagnoses when patients present to us with verrucous and nodular lesions on sun-exposed areas. From the total number of cases presented in literature, surgical intervention is still the appropriate modality of treatment for our case.
REFERENCES


