Malignant acanthosis nigricans: a cutaneous marker of hepatocellular carcinoma

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DESCRIPTION

A man in his 60s presented with darkening of skin on the neck, both axillae and groins for the last year. Subsequently, he noticed coarse thickening of the palms. He gave a history of loss of appetite, heaviness of right upper abdomen and significant weight loss (from 65 to 49 kg) for the past year with a fall in body mass index from 24.8 kg/m^2 to 18.7 kg/m^2. Examination revealed diffuse, ill-defined, symmetrically distributed, velvety, hyperpigmented plaques over the neck, upper back, bilateral axillae, groins, perianal region, vertex of the scalp and dorsal aspect of bilateral hands (figure 1A–C). Prominent rough dermatoglyphic ridging (tripe palm) was noted on both palms (figure 1D). Groups of multiple pinhead-sized, pebble-like, rough papules (Huntley's papules) were also noted over the dorsal aspect of knuckles and interphalangeal joints (figure 1C). Per abdominal examination revealed hepatomegaly with nodular surface. The rest of the examination was normal. Differential diagnoses considered were malignant acanthosis nigricans (MANs), pseudoacanthosis nigricans and generalised acanthosis nigricans (ANs). Pseudoacanthosis nigricans associated with obesity and generalised AN common in children were ruled out. Based on clinical features, a provisional diagnosis of MAN was made. The patient was referred to gastroenterologist for further evaluation. Triphasic CT of the abdomen showed multiple small masses and a large nodule of size 5.6×6×6.2 cm which showed hyperenhancement in arterial phase followed by a washout in the portovenous phase, in the liver and tumour thrombus in portal vein along with ascites, thus confirming the diagnosis of hepatocellular carcinoma (HCC) with the Barcelona clinic liver cancer (BCLC)—stage D. His alpha-fetoprotein was also raised (1240 ng/mL). Thus, a final diagnosis of HCC with BCLC (stage D) with MAN was made. The patient was advised palliative care for malignancy. For AN, topical tretinoin 0.05% once daily was started. However, the patient expired within 3 months of diagnosis of carcinoma.

AN is a mucocutaneous disease characterised by velvety, hyperpigmented, hyperkeratotic plaques on the skin and papillomatous lesions of mucosa. The predominantly involved sites are neck, flexures, axilla, antecubital fossa, skin folds, navel and anogenital regions. Based on clinical associations, AN can be divided into two types, benign and malignant. Other forms also exist viz pseudoacanthosis nigricans, generalised AN, acral AN, etc. Benign AN is usually associated with obesity or insulin resistance. MAN is often associated with malignant cancers viz gastric adenocarcinoma, ovary, pancreatic, lung, breast, oesophageal, renal and bladder carcinomas.[1] The pathophysiology of MAN still remains debatable. Tumour-derived factors such as epidermal growth factor (EGF) and transforming growth factor alpha are recognised by EGF receptors and lead to the proliferation of the epidermis. Also, insulin receptor antibodies or insulin-like growth factors produced by the tumours may stimulate keratinocytes and dermal fibroblast, leading to ANs.[2] We hereby present a case of MAN with tripe palms, which lead to the diagnosis of HCC. Dermatologists should be aware of this rare presentation

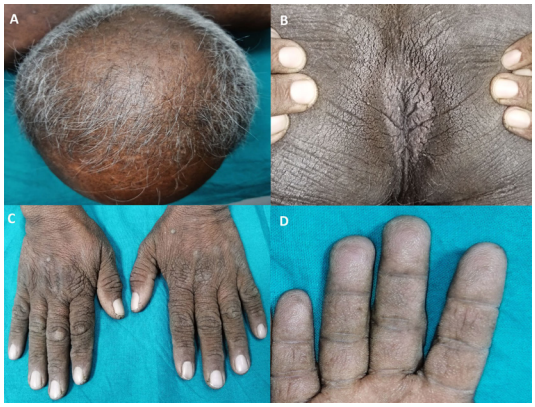

Figure 1 (A) Ill-defined hyperpigmented velvety plaque present over the vertex of the scalp. (B) Diffused hyperpigmented velvety plaque present over buttocks and perianal area. (C) Groups of multiple pebble-like rough papules coalescing to form plaques present over the dorsal aspect of knuckles and interphalangeal joints; Huntley's papules. (D) Prominent rough dermatoglyphic ridging present on the palm; tripe palm.

Learning points

- Malignant acanthosis nigricans (MANs) and tripe palms are rare dermatological paraneoplastic manifestations observed in various malignancies.
- Widespread acanthosis nigricans with tripe palms and Huntley's papules indicate further evaluation to rule out malignancy.
- Further research should be pursued for a better understanding of the prognostic importance of MAN in malignancies.

in order to establish a prompt diagnosis and treatment of the underlying malignancy.

Contributors KND was the first contact physician and actively managed and followed the patient during his entire course of treatment. She did manuscript preparation along with GCD. GCD also acquired the images and data. NH edited, proofread the manuscript and obtained the necessary consent from the patient. PS contributed fully to the management of the patient and drafting of the manuscript. Conception and design of the manuscript, data analysis, interpretation, final drafting of the article, and revision and approval were done by NH, the consultant under whom the patient was treated.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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