

Case Report

Triple palm, florid cutaneous papillomatosis and malignant acanthosis nigricans maligna as a first sign of gastric carcinoma

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ABSTRACT

Authors report the case of a 68-year-old male with a history of well-controlled type 2 diabetes mellitus. Five months before his dermatological evaluation, he developed hyperpigmented facial lesions, alopecia, and multiple verrucous lesions on the oral mucosa, palms, and soles. These findings were consistent with acanthosis nigricans, pachydermatoglyphia, and florid cutaneous papillomatosis. The patient also had a 14 kg unintentional weight loss and altered bowel habits over the prior 10 months. Diagnostic workup revealed stage IV gastric adenocarcinoma. The combination of these three paraneoplastic dermatoses is exceedingly rare. Although some hyperpigmented dermatoses are known to be associated with malignancy, the association between pigmented lichen planus and cancer remains undocumented.

Keywords: Carcinoma, Gastric cancer, Tripe palm, Pachydermatoglyphia, Florid cutaneous papillomatosis, Malignant acanthosis nigricans, Pigmented lichen planus

INTRODUCTION

Paraneoplastic dermatoses are skin conditions that may precede, accompany, or follow an internal malignancy. Early recognition can be pivotal for timely cancer diagnosis and improved outcomes.

Malignant acanthosis nigricans should be suspected in cases with rapid progression, mucosal involvement, and palmoplantar changes. It is frequently associated with intra-abdominal malignancies, especially gastric carcinoma.^{5,6}

Florid cutaneous papillomatosis, often confused with viral warts, presents as multiple eruptive papular lesions and is also linked to gastrointestinal tumors.^{4,7,9}

CASE REPORT

A 68-year-old man with a history of well-controlled type 2 diabetes mellitus presented with a five-month history of progressive skin changes and a ten-month history of unintentional weight loss and altered bowel habits. Addison's disease was initially suspected at another hospital but was eventually ruled out. Upon clinical evaluation at our institution, the patient exhibited a variety of cutaneous lesions.

The scalp, face, and earlobes showed symmetrical, hyperpigmented, dark brown macules and papules with poorly defined borders, characteristic of lichen planus pigmentosus (Figure 1). On the scalp, symmetrical plaques of pseudo-alopecia were evident, predominantly affecting the parietotemporal areas. In intertriginous areas

including the axillae, groin, and posterior neck, hyperpigmented plaques with a velvety surface were noted, consistent with acanthosis nigricans (Figure 2).

The palms and soles exhibited diffuse palmoplantar keratoderma with accentuated dermatoglyphs (pachydermatoglyphia) (Figures 3 and 4).

Perioral regions and the oral mucosa revealed millimetric, keratotic, skin-colored papules, while the tongue and buccal mucosa displayed hyperpigmented, dark brown macules (Figure 5). On the chest, the nipples and areolas demonstrated marked hyperkeratotic papillomatosis (Figure 6). Systemic examination revealed palpable cervical lymphadenopathy, hepatosplenomegaly, and a deviation of the lip commissure.

Histopathological findings confirmed the clinical impressions, revealing irregular papillomatosis, orthokeratotic hyperkeratosis, wedge-shaped hypergranulosis, basal layer hyperpigmentation, and vacuolar interface damage (Figures 7 and 8).

Laboratory analysis showed mild anemia, while other parameters remained within normal ranges. Upper gastrointestinal endoscopy identified a tumor in the gastric body, thickened gastric folds, and diffuse esophageal papillomatosis.

The esophagus exhibited circumferential involvement in all three segments, with a large 7 mm papilloma surrounded by numerous smaller papillomatous lesions (Figure 9).

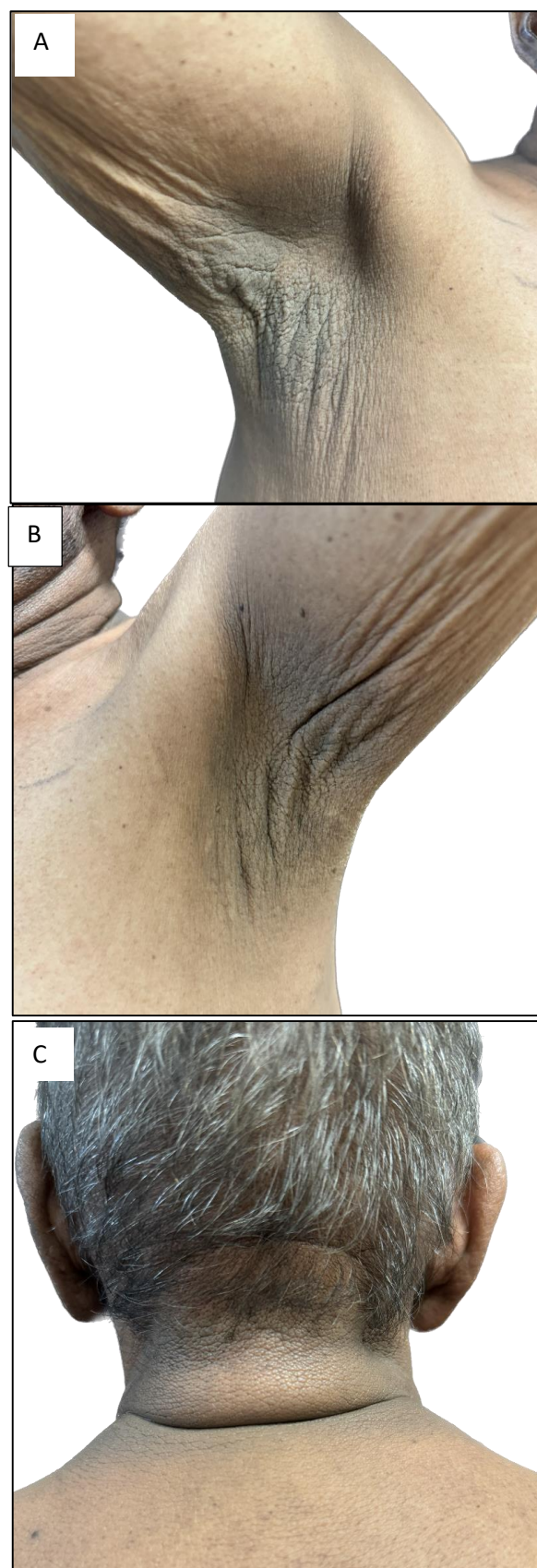


Figure 2(A-C): Hyperpigmented plaques with a velvety and rough surface involving the axillae and posterior neck folds, characteristic of malignant acanthosis nigricans.



Figure 1: Symmetrical, hyperpigmented, dark brown macules and papules with poorly defined borders on the scalp and face, consistent with lichen planus pigmentosus. Pseudo-alopetic plaques are visible in the parietotemporal areas of the scalp.

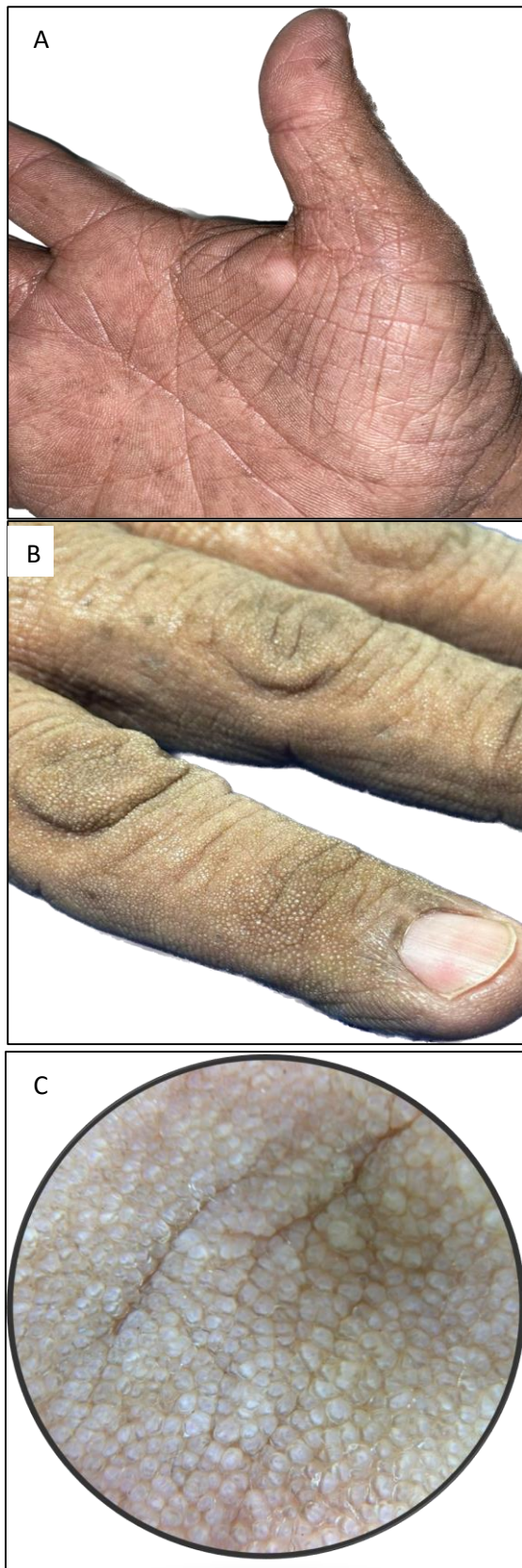


Figure 3: (A and B) Diffuse palmoplantar keratoderma and accentuated dermatoglyphs (pachydermatoglyphia); (C) dermatoscopic view showing pronounced skin markings.



Figure 4: Clinical close-up of diffuse palmoplantar keratoderma with thickened skin and deepened dermatoglyphics.



Figure 5: Keratotic, millimetric, skin-colored papules localized around the mouth and on the oral mucosa. The tongue and buccal lining mucosa show dark brown hyperpigmented macules.



Figure 6: Hyperkeratotic papillomatous lesions involving the nipples and areolas, consistent with florid cutaneous papillomatosis.

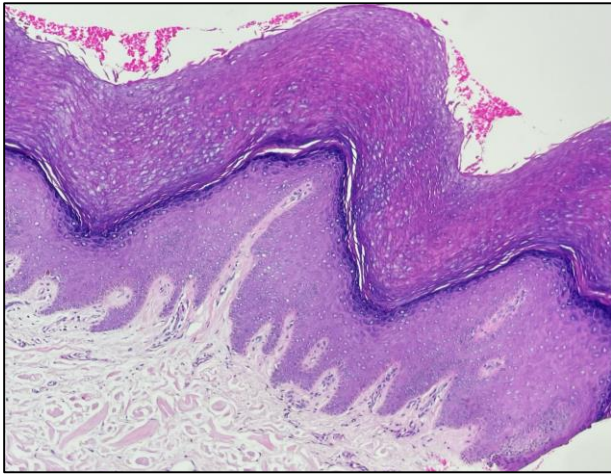


Figure 7: Histopathological findings showing irregular papillomatosis and orthokeratotic hyperkeratosis (H&E, 100X magnification).

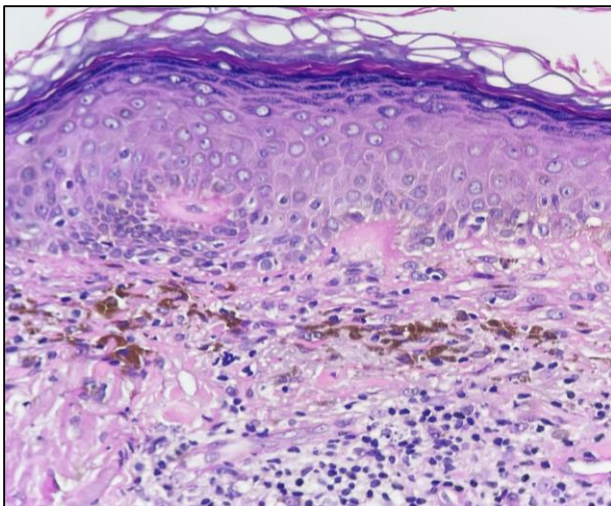


Figure 8: Interface damage with wedge-shaped hypergranulosis, basal layer hyperpigmentation, and vacuolar degeneration (H&E, 200X magnification).

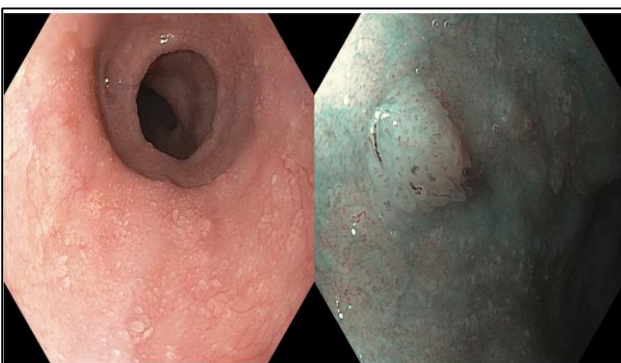


Figure 9: Endoscopic image showing diffuse esophageal papillomatosis with a large 7 mm papilloma surrounded by multiple small papillomatous lesions involving the entire esophageal circumference.

Biopsy of the gastric tumor confirmed a diagnosis of invasive, poorly differentiated diffuse signet-ring cell adenocarcinoma. The patient was referred to a tertiary oncology center for specialized management.

DISCUSSION

Paraneoplastic dermatoses may provide crucial clues for early cancer detection. Curth's criteria help establish these associations.³ Tripe palms, or pachydermatoglyphia, manifest as thickened palmar skin with accentuated dermatoglyphs. Commonly associated malignancies include gastric and lung cancers.⁶

Malignant acanthosis nigricans, typically affecting older adults, presents suddenly and progresses rapidly, often paralleling the underlying neoplasm. Flexural and mucosal involvement is typical.^{5,6}

Florid cutaneous papillomatosis is a rare paraneoplastic entity mimicking viral warts. It is most frequently linked to gastrointestinal adenocarcinomas.^{4,7,9}

Lichen planus pigmentosus (LPP) is a rare hyperpigmented variant of lichen planus. Although typically idiopathic, there have been occasional reports suggesting a paraneoplastic association.^{10,11} For instance, Sassolas et al. described a patient with LPP and acrokeratosis of Bazex associated with a head and neck carcinoma, where both dermatoses resolved following cancer treatment.¹⁰ Micalizzi et al. reported a case of LPP *inversus* concomitant with two internal malignancies, proposing a potential paraneoplastic nature.¹¹

In our case, the presence of LPP alongside other well-established paraneoplastic dermatoses, such as malignant acanthosis nigricans and florid cutaneous papillomatosis, in a patient with advanced gastric adenocarcinoma, suggests a possible paraneoplastic origin. This underscores the importance of considering underlying malignancies in patients presenting with atypical or multiple dermatoses.

Recognizing these cutaneous markers, particularly when associated with systemic symptoms such as weight loss or gastrointestinal disturbances, can facilitate early oncologic referral and diagnosis.

CONCLUSION

This case illustrates the rare triad of malignant acanthosis nigricans, florid cutaneous papillomatosis, and tripe palms as presenting signs of advanced gastric cancer. Timely identification of these dermatoses can guide prompt cancer diagnosis and management. Increased awareness among clinicians is essential for recognizing such paraneoplastic syndromes.

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