CASE REPORT

Tripe palm: a cutaneous manifestation of gastric carcinoma

Partha Pratim Chakraborty,¹ Saumik Datta,¹ Sanjay Kumar Mandal,² Manoj Kumar¹

¹Department of Endocrinology, IPGME & R, Kolkata, West Bengal, India

²Department of Internal Medicine, Medical College, Kolkata, West Bengal, India

Correspondence to
Dr Sanjay Kumar Mandal,
sanjaypgcal@yahoo.co.in

Accepted 28 September 2014

SUMMARY

Case 1: A 43-year-old farmer attended our clinic with increasing fatigability, nausea, loss of appetite, loss of weight, postprandial fullness along with thyroid-stimulating hormone value of 0.4 mIU/L and anaemia without any history of cough, chest pain, haemoptysis, osmotic symptoms, haematemesis or melena. The patient received albendazole and iron preparations before attending our clinic. Case 2: A 51-year-old woman, a known patient with type 2 diabetes for the past 8 years, on gliclazide and metformin (2 g), with unaltered liver function test and renal function test, presented with symptoms similar to case 1 of upper gastrointestinal features along with a history of weight loss (about 6 kg) over the past 3 months. Metformin was withdrawn by her primary care physician but her symptoms persisted. A velvety appearance with pigmentation on the palms of the hands was found in both cases. Endoscopy revealed an irregular mass in the stomach. Subsequently, both patients were diagnosed to have gastric adenocarcinoma.

BACKGROUND

Tripe palm or acanthosis nigricans of the palm is an uncommon cutaneous marker of internal malignancy. Tripe is a food preparation made from the rugose surface of bovine foregut. Acanthosis palmaris mimics that, with a thick and moss-like appearance. In 1977, Clarke¹ first coined the term. It usually occurs in association with an underlying malignancy, gastric and lung being the most common. However, it also has been reported without malignancy. This paraneoplastic cutaneous manifestation may often precede the other classical and usual findings of pulmonary or gastric tumour.² Identification of tripe palms should always initiate further investigations to exclude gastric, lung or other malignancies.³

We present two cases: The first case is of a young farmer whose palmar finding was initially overlooked; his ill health was attributed to anaemia and low thyroid-stimulating hormone (TSH) value. He was treated with anthelmintic by his primary care physician and referred to us for evaluation of thyroid status. The second case is of an elderly woman with diabetes on oral agents including metformin. In her case, this novel drug was prescribed for her condition but subsequently withdrawn. Typical finding of tripe palm in both cases helped us to reach the diagnosis.

CASE PRESENTATION

Case 1

A 43-year-old farmer with a long history of smoking (22 years) was referred to our clinic by his primary care physicians for opinion regarding TSH value of 0.4 mIU/L in his clinical background. He was presenting with progressively increasing fatigability, fever, loss of appetite and loss of weight. These features were also associated with nausea, postprandial fullness and occasional epigastric discomfort. He denied any history of cough, chest pain, haemoptysis, osmotic symptoms, haematemesis or melena. The patient received albendazole and iron preparations before attending our clinic.

On examination, his pulse was 86/min, regular; body mass index was 17.6 kg/M² and he had moderate pallor with thickening and darkening of both palms with a velvety appearance (figure 1). There was no goitre, exophthalmos, jaundice, oedema, clubbing or lymphadenopathy. He had normal vitals and an otherwise normal systemic examination.

Case 2

A 51-year-old woman, a manual labourer by occupation, with a history of type 2 diabetes for the past 8 years, presented after recent episodes of recurrent hypoglycaemia for the past 4 months. She had upper gastrointestinal features such as nausea, loss of appetite, early satiety, postprandial bloating and occasional vomiting. She was on oral agents including gliclazide (120 mg) and metformin (2 g), and unintentional loss of weight (about 6 kg) over the past 3 months. She consulted her primary care physician and the loss of weight and gastric intolerance were attributed to her metformin use.

On examination, she was found to have mild pallor with acanthosis over her axilla (figure 2A).

Figure 1 Acanthosis nigricans of the palm (case 1).

CrossMark

To cite: Chakraborty PP, Datta S, Mandal SK, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-206004

Figure 2 (A) Axilla showing acanthosis (case 2). (B) Palmar surface of hands (case 2). (C) Dorsal surface of hands (case 2).

Both the palmar and dorsal surfaces of her hands (figure 2B, C) had a thick, pigmented velvety appearance. The rest of the systemic examination was unremarkable.

INVESTIGATIONS

The investigations for case 1 revealed the following:

Total leucocyte count :7800/mm³ with N_{68%}, L_{22%}, M_{6%}, E_{4%}; erythrocyte sedimentation rate 44 mm; haemoglobin 8.4 g/dL; mean corpuscular volume 72 fL; fasting blood sugar 88 mg/dL, creatinine 0.8 mg/dL, thyroid stimulating hormone 0.4 m IU/L. Chest X-ray was normal. Stool for occult blood test was positive. Oesophagogastrroduodenoscopy revealed an irregular mass in the stomach and histopathological examination of the biopsy sample confirmed gastric adenocarcinoma.

Relevant investigations for case 2 were suggestive of iron deficiency anaemia with unsatisfactory glycaemic control (fasting plasma glucose: 154 mg/dL; postprandial plasma glucose: 286 mg/dL; glycated haemoglobin: 9.8%). Liver, renal and thyroid functions were normal. Chest X-ray was normal.

Upper GI endoscopy revealed an irregular gastric mass and histopathological examination of the biopsy specimen documented adenocarcinoma.

DIFFERENTIAL DIAGNOSIS

- ▶ Acanthosis nigricans associated with internal malignancy
- ▶ Acanthosis nigricans associated with diabetes mellitus (case 2)

TREATMENT

Both the cases were referred to a surgical gastroenterologist and oncologist but the patients refused any further treatment.

DISCUSSION

Both of our cases, a young man without diabetes and an elderly woman without diabetes, presented with similar types of clinical pictures: upper GI features with loss of weight and progressive fatigue.

The male patient was referred to us because of lower normal range TSH (TSH: 0.4 m IU/L). However, he was clinically euthyroid without tachycardia, goitre or exophthalmos and these features did not match with hyperthyroidism. Lower normal range TSH value may be due to non-thyroidal illness. Thick and dark palms with a velvety appearance in association with iron deficiency anaemia and positive stool occult blood prompted us to go for oesophagogastrroduodenoscopy, which revealed an irregular mass in the stomach and histopathological examination of the biopsy sample confirmed gastric adenocarcinoma. There are various cutaneous markers of internal malignancy.⁴ Tripe palm is one of them. Tumour necrosis factor- α is assumed to be the link between skin manifestation and malignancy.⁵

The elderly patient with diabetes was referred for recent episodes of recurrent hypoglycaemia following insulin therapy after metformin was withdrawn, after assuming the metformin might be the cause of the upper GI features and loss of weight. In spite of recurrent hypoglycaemia, her overall glycaemic status was poor. This patient was also referred for chest X-ray and upper GI endoscopy because of her acanthosis nigricans of the palms. Ultimately, she was also found to have gastric adenocarcinoma. Tripe palm should not be confused with benign variants of acanthosis nigricans in patients with diabetes. Both can coexist. Malignant varieties of acanthosis nigricans can also occur in the fifth decade of life.² In contrast to benign forms, malignant forms are characterised by abrupt onset, fast progression and extensive involvement.

However, against the background of risk of malignancy in a person with diabetes, this palmar finding is an important clue for the next step of investigation in a patient having symptoms mimicking gastroparesis or those induced by metformin.⁶

Learning points

- ▶ Palmar appearance may give a clue for gastric malignancy in a patient presenting with loss of weight and vague gastrointestinal (GI) symptoms.
- ▶ The relation between diabetes and malignancy should be borne in mind.
- ▶ Gastric malignancy should be considered, apart from metformin use and gastroparesis, in a patient with diabetes with loss of weight and upper GI symptoms.

Contributors PPC and SD wrote the manuscript. SKM and MK reviewed the literature.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Clarke J. Malignant acanthosisnigricans. *Clin Exp Dermatol* 1977;2:167–70.
- 2 Schwartz RA. Acanthosis nigricans, florid cutaneous papillomatosis and the sign of Leser-Trelat. *Cutis* 1981;28:319–34.
- 3 Möhrenschrager M, Vocks E, Wessner DB, et al. Tripe palms and malignant acanthosis nigricans: cutaneous signs of imminent metastasis in bladder cancer? *J Urol* 2001;165:1629–30.
- 4 Andreev VC. Malignant acanthosis nigricans. *Semin Dermatol* 1984;3:265–72.
- 5 Koyama S, Ikeda K, Sato M, et al. TGF- α producing gastric carcinoma with acanthosis nigricans: an endocrine effect of TGF-alpha in the pathogenesis of cutaneous paraneoplastic syndrome and epithelial hyperplasia of the oesophagus. *J Gastroenterol* 1997;32:71–7.
- 6 Giovannucci E, Harlan DM, Archer MC, et al. Diabetes and cancer: a consensus report. *Diabetes Care* 2010;33:1674–85.

Copyright 2014 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow