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Gastric neuroendocrine tumor presenting with carcinoid syndrome

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Dear Editor,

We present the case of a 51-year-old male patient with a medical history of arterial hypertension and diabetes mellitus. He was referred to our clinic due to epigastric pain and significant weight loss (approximately 20 kg in one year). Additionally, he reported experiencing episodes of diarrhea, sweating, and flushing (Fig. 1A). On physical examination, jaundice, facial telangiectasias, and firm nodular hepatomegaly were noted, with no ascites. Analytically, there was an elevation in transaminases and cholestatic enzymes (AST 65 IU/L, ALT 147 IU/L, GGT 1511 IU/L, FA 472 IU/L) and total bilirubin of 6 mg/dL. Computed tomography revealed hepatomegaly with numerous hypodense nodular formations dispersed throughout the parenchyma, suggestive of secondary lesions (Fig. 1B). Upper digestive endoscopy identified an edematous and eroded fold in the gastric fundus (Fig. 1C), biopsied, with histological findings

consistent with a well-differentiated neuroendocrine tumor. Due to limited sample availability, evaluation of proliferative indices was not feasible, prompting a liver metastasis biopsy (Fig. 1D), which confirmed positivity for CAM 5.2, synaptophysin, chromogranin, and CD56. The Ki-67 labeling index was 25% (NET G3). Elevated levels of hydroxyindoleacetic acid and chromogranin A (11mg/24 hours and 52.5nmol/L, respectively), as well as CA 19.9 (395 U/ml), were observed, while other tumor markers remained within normal limits. Immediate action octreotide therapy (100 mcg every 12 hours) was initiated, leading to clinical improvement. Subsequently, prolonged-release octreotide (20 mg intramuscularly every four weeks) was adopted due to escalating symptoms. The patient continues to maintain symptom control under long-acting octreotide and has been referred to a neuroendocrine tumor reference center.

DISCUSSION

Neuroendocrine tumors (NETs) are rare neoplasms, predominantly occurring in the gastrointestinal tract, characterized by the production of neuroendocrine mediators [1][2]. Carcinoid syndrome (CS), a subset of NETs, manifests as a constellation of symptoms resulting from systemic release of these mediators. CS symptoms include diarrhea, flushing, abdominal pain, valvular heart disease, palpitations, telangiectasia, wheezing, weight loss, and pellagra. Gastric neuroendocrine tumors rarely present with classical CS symptoms [2][3]. Patients with gastrointestinal NETs and CS necessitate targeted management of their hormonal symptoms to improve their diminished quality of life. Prompt recognition of symptoms is crucial for tailored management [3][4].

Somatostatin, a peptide inhibiting the secretion of various hormones, binds to somatostatin receptors expressed on most NETs. Consequently, somatostatin analogues such as octreotide and lanreotide effectively suppress serotonin and other vasoactive substance release. Symptomatic relief, particularly in flushing and diarrhea, is achieved in over 80% of patients with carcinoid syndrome [3][5]. Therapy typically commences with short-acting subcutaneous octreotide; however, extended-release

formulations are preferred for initial management unless patients exhibit severe symptoms [5][6].

While widespread disease characterizes most cases of carcinoid syndrome, cytoreductive interventions such as surgical resection, ablation, or intra-arterial liver embolization may be considered in select cases. Resection or embolization of the majority of tumor bulk can induce biochemical responses and clinical benefits. The decision to pursue these options should consider factors such as serotonin overproduction, tumor growth rate, and somatostatin analogue efficacy. Importantly, somatostatin analogue initiation before interventional therapy reduces the risk of carcinoid crisis [6][7].

This case underscores the late manifestation of carcinoid syndrome in a patient with gastric tumor and liver metastasis, emphasizing the significance of recognizing the syndrome for improved symptom management and quality of life. Treatment involving somatostatin analogues, supplemented by surgery when feasible, can effectively control symptoms and optimize patient outcomes.

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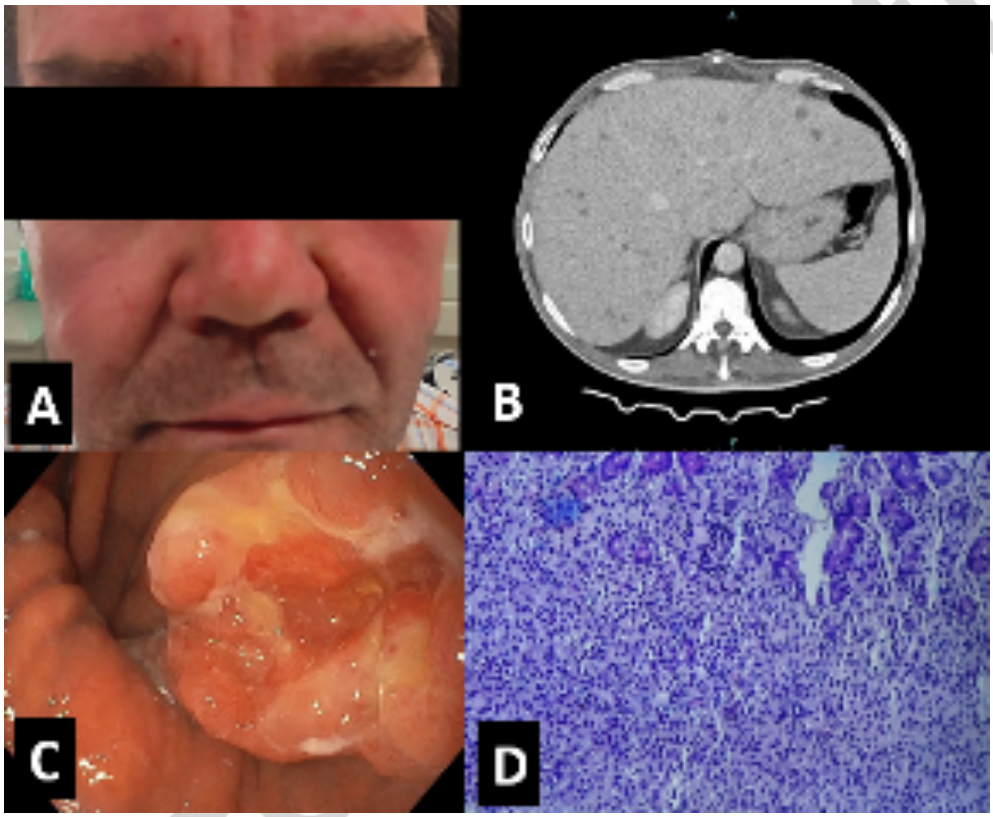

Fig. 1 - A - Patient presenting flushing; B - CT showing multiple metastases; C - Endoscopic image of the lesion; D - Histology of liver metastasis.