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Clinical and Endoscopic Characters of a Young Female with Colonic Carcinoid Syndrome: A Case Report in Yemen

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Abstract

Neuroendocrine tumors are the proliferation of neuroendocrine cells that are known to be highly aggressive with a high mortality rate. Most of them are seen within the small intestine and rectum, but rarely within the Large intestinal. The clinical presentations vary from asymptomatic incidentally discovered lesions to lethal metastatic disease with carcinoid syndrome. In our case, a 25 year-old-lady presented with acute abdominal pain, frequent attacks of diarrhea, nausea, vomiting, and brief attacks of facial flushing with significant weight loss for 2 months. Work-up of the patient led to the diagnosis of many colonic sub-epithelial lesions involving the cecum, ascending, and transverse colon, a highly unlikely location, with multiple small hepatic nodules. Twenty-four hours urinary 5-HIAA confirms the diagnosis of carcinoid syndrome. Early-stage tumors have a good prognosis with an 85% overall 5-year survival rate but a poor prognosis in late-stage carcinoid syndrome. Therefore, routine colonoscopic examinations should be performed for early diagnosis and management.

Subject Areas

Oncology

Keywords

Carcinoid Syndrome, Colon Cancer, Appendectomy, Yemen

1. Introduction

Carcinoid or argentaffin tumors are recognized as rarely occurring tumors that

belong to the amine precursor uptake and decarboxylation system of tumors [1]. They represent <1% of colorectal malignancies [2] [3]. They commonly arise in the small intestine mainly the terminal 60 cm of the ileum [3]. They most likely metastasize to the liver or have a bulky disease to produce carcinoid syndrome [3]. Colonic neuroendocrine tumors are rare and tend to arise from the cecum or the ascending colon [4]. Carcinoid tumors involving portions of the large bowel other than the rectum have received somewhat less attention. I have been requested to present this case report to illustrate how carcinoid tumors are diagnosed in Yemen. That is easy to do, but in our country, it is difficult since there is no uniformly practiced standard approach being followed for the diagnosis of this disease in addition to a lack of endoscopic and histopathologic facilities for early diagnosis. Herein we highlight the clinical and endoscopic findings of colonic carcinoid syndrome with hepatic and regional lymph nodes metastasis in a young Yemeni female patient.

2. Case Presentation

K. M. S., a 25-year-old female patient, was admitted on the 10th of Jan. 2023 to a rural Hospital in Alhuhaeda city with acute severe abdominal pain that started in the right iliac fossa and progressed in a few hours to become diffuse, associated with nausea and vomiting with few attacks of profuse watery diarrhea. A clinical diagnosis of acute appendicitis was done and an appendectomy was performed but without significant clinical improvement. Instead her condition deteriorates rapidly with recurrent attacks of severe diffuse colicky abdominal pain associated with frequent attacks of diarrhea (3 - 4 times a day), and brief attacks of facial flushing with palpitations, lightheadedness, and lassitude. There had also been significant weight loss. For that, the patient was referred to Althawra Teaching Hospital in the capital of Yemen, Sana'a.

Physical examination revealed her to be a tired, cachexic, young female with a markedly facial flush. The skin was dry. She is 155 cm in height and weighed 35 kg (BMI = 15.5). Blood pressure was normal and heart rate was average and regular. The lungs were clear. The abdomen was soft with slight, generalized abdominal tenderness, most marked in the right lower quadrant and no palpable organomegaly or masses.

3. Findings

3.1. Laboratory and Radiological Findings

Laboratory work-up showed mild microcytic anemia with reactive thrombocytosis (Hb = 11.6 g/dl, MCV 77 fl, platelets count of 600 × 10^9/mm^3). Serum potassium, calcium and albumin were all low with an elevation of ESR (**Table 1**).

Abdominal contrast-enhanced CT scan revealed the presence of diffuse colonic wall thickening involving the caecum, ascending, and transverse colon, causing luminal narrowing with multiple mesenteric lymph nodes and multiple small hypodense hepatic lesions (**Figure 1**).

Table 1. Results of laboratory tests of the patient.

Test	Result
Urinary 5-HIAA	33 mg/24h (normal < 10)
Urinary 5HT + 5HTP	88 mg/24h (normal < 10)
Blood	
HB	11.6 g/dl
WBC	$7.8 \times 10^9/mm^3$
Platelets	$600 \times 10^9/mm^3$
S. K	3 mEq/L
S. Ca	2 mg/dl
S. Albumin	26 mg/dl
AST	30 U/L
Total Bilirubin	0.3 mg/dl
S. Creatinine	17 mmol/l
ESR	80

AST = Aspartate transaminase; ESR = erythrocyte sedimentation rate; Hb = hemoglobin; WBCs = White blood cells.

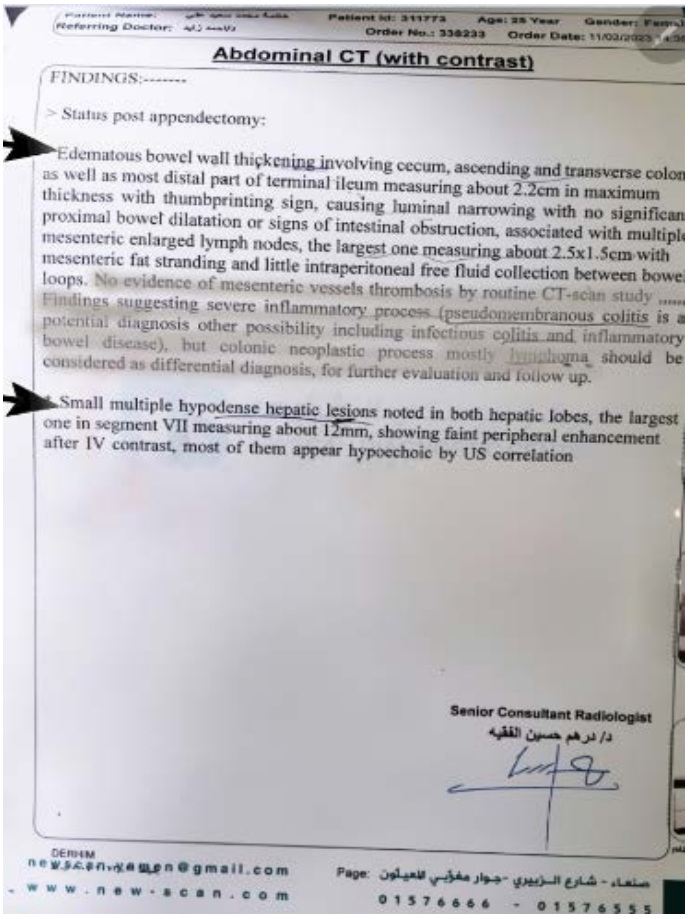

Figure 1. The abdominal CT scan report of the case.

3.2. Colonoscopic Findings

Colonoscopy showed many sub-epithelial lesions of variable sizes; the largest one was about 4 cm, with normal overlying mucosa involving the caecum and the right side of the colon (**Figure 2**).

The biopsy result was not conclusive (**Figure 3**), and twenty-four-hour urinary 5-hydroxyindoleacetic acid (5-HIAA) was markedly elevated at 33 mg/day (normal < 10). Serotonin and 5 hydroxytryptophan were also increased with a value of 88 mg/day (normal < 80) (**Table 1**). Diagnosis of late-stage carcinoid syndrome was done and subcutaneous injections of Octreotide were recommended.

4. Discussion

The incidence of the neuroendocrine neoplasm is increasing nowadays [5]. Among gastrointestinal carcinoid tumors, colonic carcinoids have been reported to be relatively rare [6] [7]. Patients usually present in old age with the mean age of presentation of 58 years, in contrast to our case who is young in her twenties only, and it is twice more likely to be seen in females compared to males, as observed in this case [8] [9]. The clinical manifestations of colonic carcinoid tumors mimic those of any colonic cancer [10] [11]. They are frequently right-sided and may be clinically occult until an advanced stage is reached, at which point they become bulky [7] [12]. Carcinoid syndrome is the most common systemic manifestation of carcinoid tumors. Flushing and diarrhea are the two most common symptoms, occurring in up to 73% - 89%, as observed in our patient [3]. Our case presented lately with bulky late-stage carcinoid syndrome involving the right side of the colon with hepatic metastasis. Abdominal CT or MRI, together with colonoscopy, is often sufficient to diagnose and stage neuroendocrine tumors [4]. We depend for the diagnosis of our case on the result of abdominal CT and colonoscopic findings supported by the result of the 24 H urinary 5-HIAA where its value was high enough to be diagnostic for carcinoid tumors. To the best of our knowledge, there have been no previous reports about colonic carcinoid tumors in Yemen.

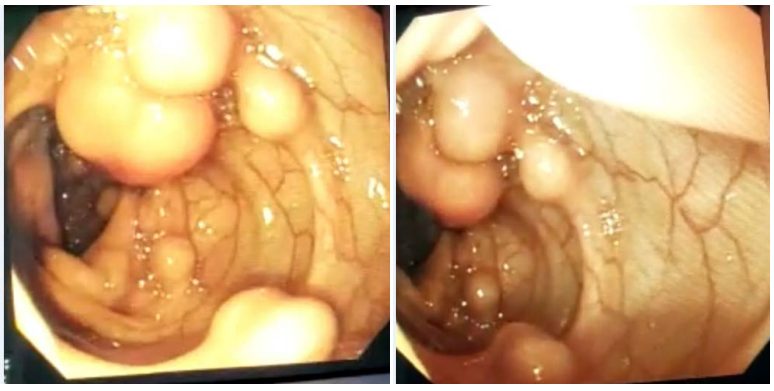

Figure 2. Colonoscopic views of the patient.

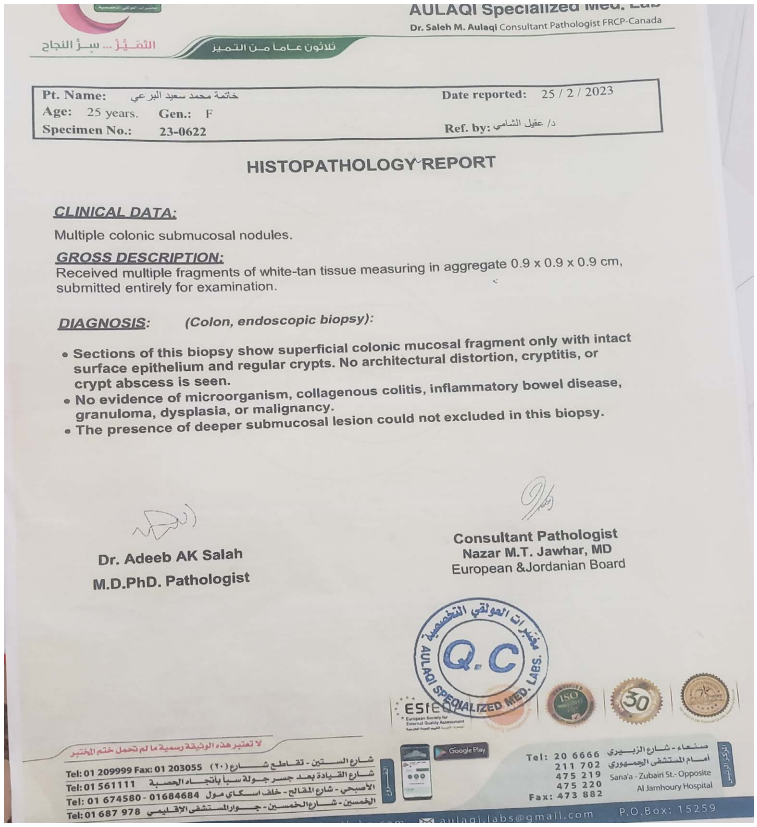

Figure 3. Biopsy result of the case.

5. Conclusions

Neuroendocrine carcinoma of the transverse colon is a rare entity encountered within the gastrointestinal system. Patients usually remain asymptomatic, and the disease is detected at an advanced stage at the time of diagnosis. One must have a high index of suspicion of carcinoid syndrome in patients presenting with vague multisystemic symptoms. Furthermore, a routine colonoscopic examination should be performed in order for earlier detection of the tumor.

The clinical manifestations, laboratory investigations, and endoscopic characterization of a Yemeni girl with late-stage colonic carcinoid Syndrome are reported in this paper.

Conflicts of Interest

The authors declare no conflicts of interest.

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