Case study

Bard's syndrome: a rare presentation of pulmonary miliary metastases of gastric carcinoma: About a case report and literature review

Comment [RS1]: modified

Abstract :

Bard's syndrome is a rare disease related to the miliary dissemination of gastric cancer to the lungs. The symptoms of primary neoplasm are subclinical despite the advanced proliferative process, and the metastatic lesions cause many respiratory symptoms suggesting primary pulmonary pathology, which explains the difficulties in diagnosis between numerous diseases. We report the case of a 39-year-old man who presented for chest pain, progressive worsening dyspnea that appeared one month ago, dry cough, apyrexia, fatigue, and weight loss. The chest CT scan showed disseminated micronodular lesions, a thickened interlobular septa, and mediastinal lymphadenopathy. Flexible bronchoscopy showed diffuse inflammation on the entire bronchial tree. Staged bronchial biopsies revealed the presence of metastatic carcinoma, probably stomach in origin. The cytologic examination from the bronchial aspirate reveals the presence of neoplastic cells. After re-interviewing the patient, he reported a history of intermittent epigastralgia, so we completed an oesophageal-gastro-duodenal fibroscopy that confirmed the gastric adenocarcinoma and the diagnosis of Bard’s syndrome was made.

Comment [RS2]: grammatically corrected

Key words:

Bard’s syndrome, pulmonary miliary metastases, gastric carcinoma

Introduction

Bard's syndrome is a rare disease, and few cases are reported in the literature. It is related to miliary dissemination of gastric cancer to the lungs which is

revealed by respiratory symptoms and explains the difficulties in diagnosis between numerous pulmonary diseases. We report the observation of a patient with adenocarcinoma of the gastric mucosa revealed by miliary pulmonary metastases.

Comment [RS3]: grammatically corrected

Case présentations :

A 39-year-old man, a chronic smoker with 2 pack-years, without comorbidities, had never been treated for pulmonary tuberculosis, and with no known recent tuberculosis contagion, his family history was negative. Presented for chest pain, dry cough, progressive worsening dyspnea that appeared one month ago, apyrexia, fatigue, and weight loss.

Comment [RS4]: grammatically corrected

The physical examination found a skin pallor, the epigastrium was painful on palpation, and no abnormalities were found in the rest of the clinical examination.

Chest X-ray showed a reticulomicronodular interstitial pattern predominantly in the bases (Figure 1). Chest computed tomography scan revealed disseminated micronodular lesions, thickened interlobular septa, and mediastinal lymphadenopathies (Figure 2).

Comment [RS5]: grammatically corrected

The blood count found microcytic hypochromic anemia and no abnormalities in other laboratory tests.

Flexible bronchoscopy showed a bilateral inflamed bronchial tree. Staged bronchial biopsies revealed the presence of metastatic carcinoma, probably stomach in origin. The cytologic examination from the bronchial aspirate reveals the presence of neoplastic cells. The search for mycobacterium tuberculosis by Gene Xpert MTB/RIF in fluid aspiration was negative.

Comment [RS6]: grammatically corrected

After re-interviewing the patient, he reported a history of intermittent epigastralgia for one year medically treated (***Helicobacter pylori*** serology was negative). We completed an oesophageal-gastro-duodenal fibroscopy that showed a non-stenotic ulcerative Cardiol process suspected of malignancy (figure 3), and the examination of the specimens led to the diagnosis of a differentiated infiltrating adenocarcinoma with independent cells.

Comment [RS7]: grammatically corrected

We completed an abdominal-pelvic CT scan, showing a metastatic liver mass (figure 4). After a multidisciplinary decision, the patient was transferred to the oncology center for palliative chemotherapy. The evolution was marked by his death 10 days after the diagnosis.

Comment [RS8]: grammatically corrected

Discussion :

Pulmonary lymphangitic carcinomatosis refers to the metastatic malignant tumor infiltration of the lung lymphatic vessels secondary to a primary site [1]. It occurs in about 6-8% of patients with lung metastasis and may rarely develop in the course of gastric cancer [2].

The exact prevalence is not known because its delayed diagnostic consideration often leads to autopsy confirmation. In a previous retrospective study of 43 patients with pulmonary lymphangitic carcinomatosis six gastric carcinomas were found [3].

Patients with primary gastric cancer and lymphangitic carcinomatosis usually present with progressive dyspnea lasting for two to four months before definite diagnosis [4], dry cough, and loss of weight are usually found. Often these patients experience no gastric complaints at all. In a series of six young patients (aged 21–29 years), only one had gastrointestinal symptoms (nausea and epigastric burning) [5].

Comment [RS9]: grammatically corrected

Chest X-ray may be normal in 30% to 50% of patients [6], and have often nonspecific appearances, it shows septal lines (Kerley A and B lines), increased broncho vascular markings, linear, reticulonodular and micronodular infiltrates [4]. HRCT is the imaging technique of choice, it reveals the thickening of interlobular septa, fissures, and broncho-vascular bundles, nodularity in pleura, and ground glass opacity. They may be seen as limited or diffuse, unilateral or bilateral, symmetric or asymmetric infiltrates. Pleural effusion can also be observed [7].

Comment [RS10]: grammatically corrected

The final diagnosis can often only be made by biopsy using minimally invasive methods such as transbronchial biopsy or lung biopsy under video thoracoscopic control. In the study of Dennstedt *et al.,* the final diagnosis was

only made at autopsy in four of six patients with a primary gastric tumour and lymphangitic carcinomatosis [5].

Comment [RS11]: grammatically corrected

The differential diagnosis of diffuse interstitial lung changes should include sarcoidosis, viral pneumonias, pulmonary oedema, radiation pneumonitis, drug-induced lung disease, miliary tuberculosis and, lymphocytic interstitial pneumonia. [8,9]

Currently, there are no proven effective treatment strategies on recent studies for pulmonary lymphangitic carcinomatosis, it mainly based on chemotherapy [10]. The general prognosis of patients with lymphangitis carcinomatosis is poor with an average survival of only three months in historical series [2].

The Bard's syndrome, a rare desease, is a primary stomach carcinoma with miliary dissemination to the lungs. The symptoms of primary neoplasm are subclinic despite the advanced proliferative process, and the metastatic lesions cause many respiratory symptoms suggesting primary pulmonary pathology. In fact few cases are reported in literature and that is due to misdiagnosis and difficulty to differentiate among numerous pulmonary diseases.

Comment [RS12]: grammatically corrected

Conclusion :

The pulmonary lymphangitic carcinomatosis should be suspected in patients with advanced gastric cancer presenting with respiratory symptoms. Bard's syndrome, a rare disease, should be always taken into account particularly due to the prevalence of gastric cancer.

Comment [RS13]: grammatically corrected

References

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UNDER PEER REVIEW

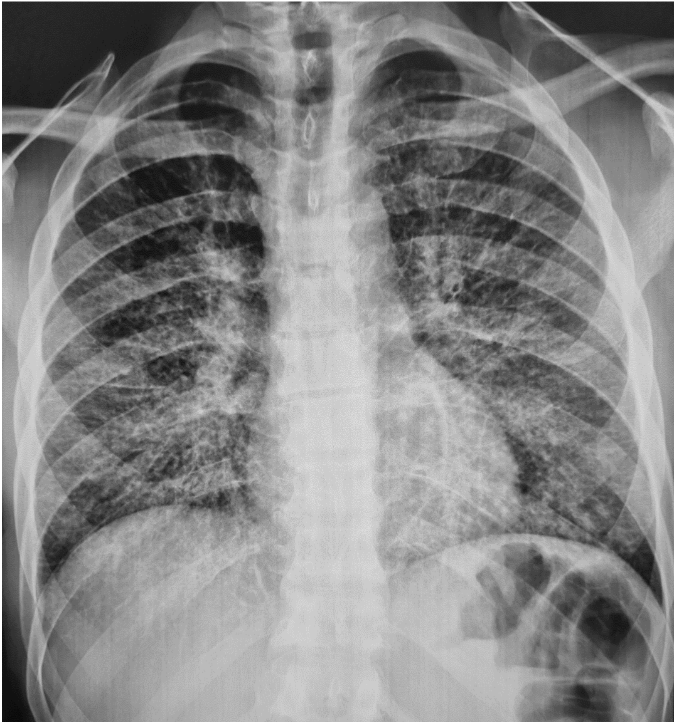
Figure 1 : Chest X-ray showed diffuse reticulomicronodular pattern.

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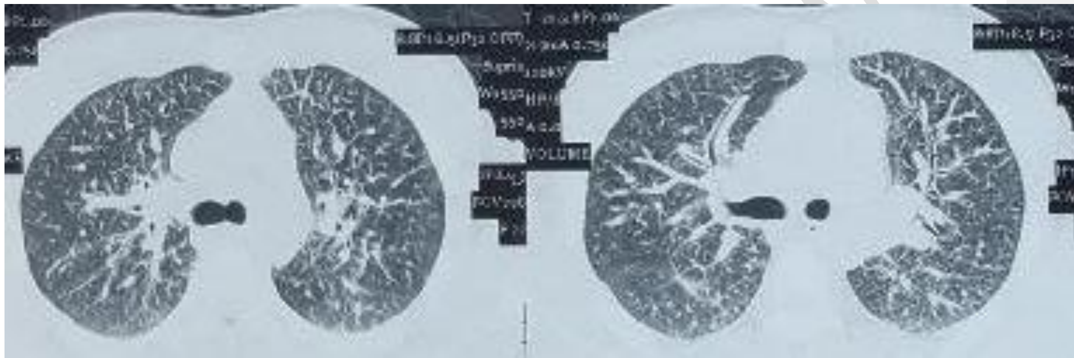

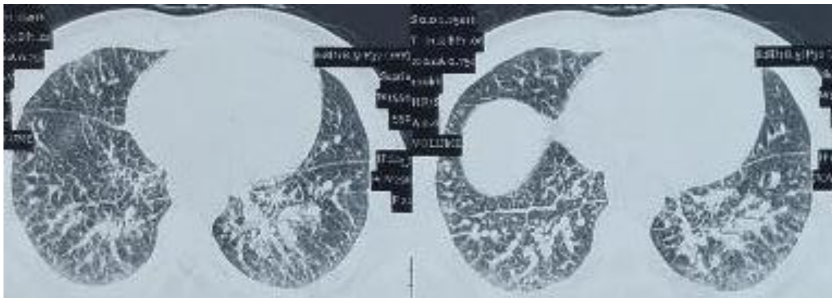

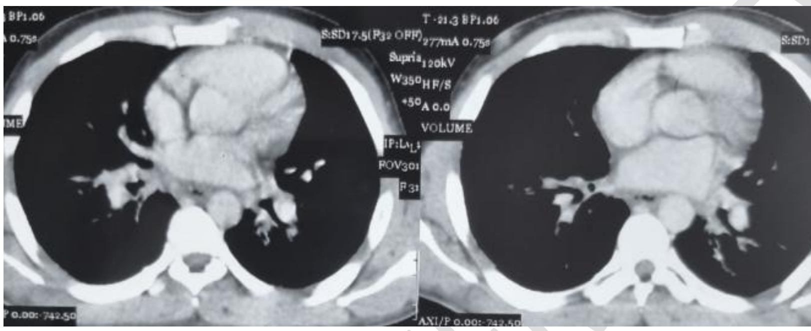

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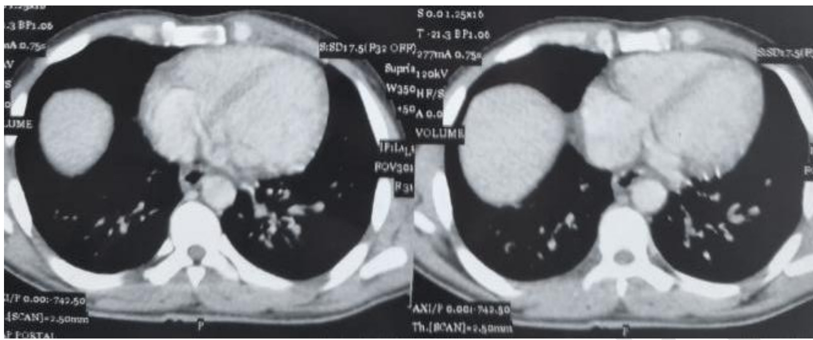

Figure 2 : Chest computed tomography scan showed disseminated micronodular lesions, a thickened interlobular septa and mediastinal lymphadenopathies.

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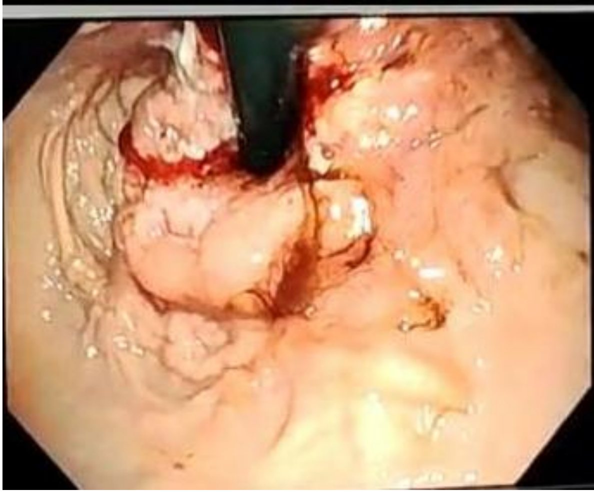

Figure 3 : oesophageal-gastro-duodenal fibroscopy showed a non-stenosing ulcerative cardial process suspected of malignancy.

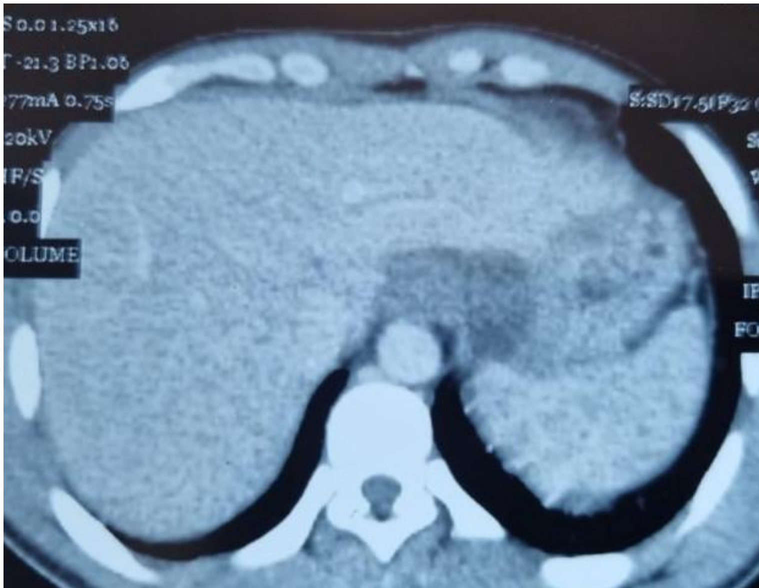

Figure 4 : abdominal-pelvic CT scan showed a metastatic liver mass.