Metastatic Gastric Adenocarcinoma in 23-Year-Old Female

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Introduction

Gastric cancer is the fourth most common malignancy in North America. Since there are no screening recommendations in place, most gastric cancers are detected at a late stage, especially in America. The average age of occurrence of gastric cancer is >40 yrs. Some of the most common risk factors include Helicobacter pylori infection, atrophic gastritis, ethnicity, dietary factors. We present a case of gastric adenocarcinoma in a young female with no detectable risk factors.

Case discussion

A 23- year-old female with a past medical history of attention deficit hyperactivity disorder presented with complaints of worsening dry cough and exertional dyspnea for 2 months. The patient also reported experiencing poor appetite, occasional nausea, vomiting, and unintentional weight loss of 10 pounds in 2 months along with low back pain. The patient does not smoke cigarettes, drinks alcohol socially. No significant family history. As her symptoms did not improve with outpatient therapy, the patient presented to the hospital. On arrival, vitals were stable. Physical examination was significant for diffuse mild wheezes and tenderness to palpation in the right upper quadrant of the abdomen. Laboratory showed no significant findings other than ALP of 189 U/L. Chest x-ray showed moderately severe bilateral central and lower airspace disease and peripheral micronodular/interstitial changes with atelectasis at left base. CT chest showed a miliary pattern of the lung parenchyma with multifocal patchy infiltrates, along with mediastinal and hilar lymphadenopathy, visualized upper abdomen showed mixed attenuation of left hepatic lobe parenchymal lesions, ascites, and retroperitoneal lymphadenopathy. (Figure 1)

Case discussion

CT abdomen and pelvis demonstrated a calcified mass at the lesser curvature measuring up to 36.4 mm, with mixed attenuation lesion in the left hepatic lobe along with portal, celiac, and retroperitoneal lymphadenopathy; metastatic lesion within the L2 vertebral body with mild superior endplate compression and soft tissue extension to epidural space along with left portal venous thrombosis (Figure 1). The patient was started on systemic anticoagulation for portal vein thrombosis along with supportive therapies for symptom control. For better delineation of the gastric mass, Upper GI endoscopy was performed which showed a large, infiltrative, and ulcerated, noncircumferential mass with no bleeding and no stigmata of recent bleeding on the lesser curvature of the gastric body (Figure 2). Biopsy of the gastric mass revealed Infiltrating adenocarcinoma, poorly differentiated with mucous and signet - ring features (Figure 3). Tumor cells were negative for HER-2, PD-L1, CPS 1 and EBV immunohistochemical staining. IMPACT testing reveals FGFR2 amplification, germline testing was negative. Palliative chemotherapy was performed because of the advanced nature of the disease.

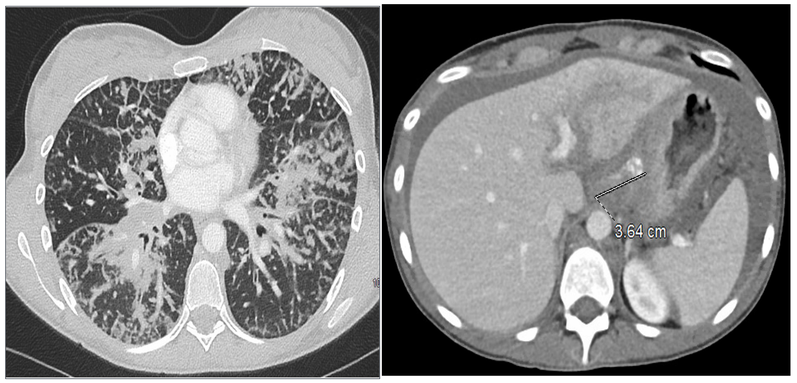
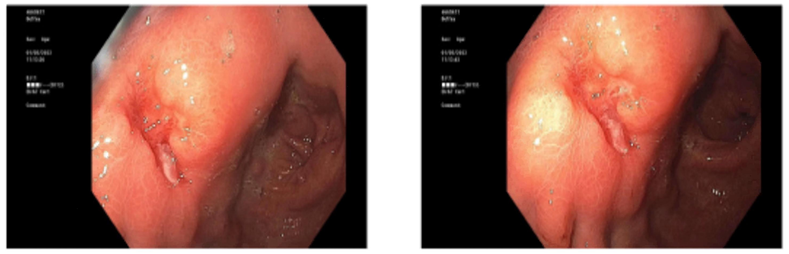


Figure 1. CT of chest and abdomen.



12 Gastric Antrum

13 Gastric Body

Figure 2. EGD finding.

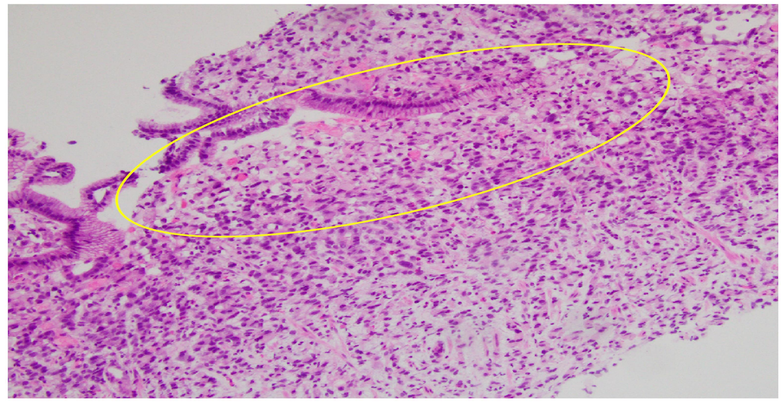


Figure 3. Histopathology findings

Conclusions

Significant progress has been made in understanding gastric adenocarcinomas but still, the pathways leading to the development of gastric cancer are unclear. As gastric cancer exhibits heterogeneity in histopathological and molecular expressions, it makes it more difficult to understand. Improvements in micro-array-based gene expression profiling can help us to better delineate the tumor behavior and help us with treatment.

Contact

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