Mucosal gastric metastases: A very rare site of metstasis from germ cell tumour

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Dear Editor,

Secondary gastric cancer is a rare event identified in <2% of cancer patients. However it may be involoved by hematogenous spread from a distant primary (most commonly breast, melanoma and lung) apart from contiguous spread from an adjacent malignancy. Metastasis from testicular germ cell tumours (GCTs) to the stomach is even rare.

A 29-year-old male patient presented with history of orchiectomy in July, 2012 for undecended left tesicle and histopathology was suggestive of nonseminomatous GCT (NSGCT) (embryonal with yolk sac element), for which he took no treatment. Computed tomography (CT) chest and abdomen done after 3 months showed liver and lung lesions along with multiple left paraaortic lymphnodes. Serum beta-human chorionic gonadotropin (HCG) was 27650 mIU/ml and serum alpha fetoprotein (AFP) was 115 ng/ml. After 4 cycles of bleomycin, etoposide and cisplatin based chemotherapy till February 2013, repeat scanning showed partial response with normal tumour markers. After 4 months patient again presented with progressive lesions on positron emission tomography-CT with very high level of beta-HCG (24000 mIU/ml) and AFP level of 2.79. Patient was started on paclitaxel, ifosfamide and cisplatin (TIP) based chemotherapy but after 3 cycles of chemotherapy he developed brain metastasis, progressive lung and liver lesions with elevated tumour markers (Beta-HCG 2, 26, 220 mIU/ml and AFP 1.88 ng/ml). Whole brain RT was given for brain metastases. After 2 weeks he presented with hematemesis. Upper gastrointestinal (GI) endoscopy showed multiple gastric lesions suggestive of metastasis. Gastric biopsy was suggestive of metastasis from NSGCT [Figure 1]. In view of progressive disease he was started on gemcitabine and oxaliplatin based chemotherapy.

Discussion

The involvement of the stomach by metastases is rare with the most common reported primaries include breast and lung cancer. The estimated incidence of gastric metastases at autopsy in individuals with a known malignancy varies from 1.7% to 5.4%.[1] Most of the individuals harboring such metastases are symptomatic, most commonly with bleeding, pain, vomiting and anorexia.[2]

It is estimated that half of the patients with testicular GCTs will have metastases at diagnosis; most common destinations being brain, lymph nodes, liver, and lung.[3] Metastases are relatively uncommon to the stomach, adrenals and spleen.

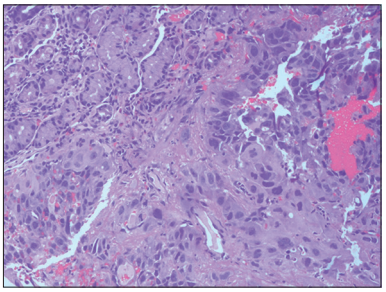

Figure 1: Microphotograph showing submucosa of gastric biopsy infiltrated by a metastatic germ cell tumor (arrow) with areas of haemorrhage (H and E, ×100)

In a case series report by Campoli *et al*., among 771 patients with gastric neoplasms only 20 cases of gastric metastasis were reported with only one case of testicular GCT (Embryonal carcinoma).[4] In a retrospective review of five cases with advanced germ cell malignancy (testicular two and retroperitoneal three) and secondries invoving GI tract, 4 patients had duodenal and 1 patient had esophageal involvement. Hemorrhage due to such metastasis could be massive and even fatal.[5]

Gastric metastases may be recognizable as abnormalities on gastroscopy (single lesion in the gastric body or by multiple lesions. Often the lesion is described as a "volcano-like" ulcer.[1,2] In this case there were multiple well demarcated lesions typical of secondries seen on endoscopy.

The outcome of the patients of metastatic GCT with GI involvement has been shown to be quite poor, and in one series, 4/5 patients died from unresponsive or progressive disease. Management of such patients mostly requires multimodality approach, including endoscopic techniques, chemotherapy and angio-embolisation.[5]

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Conflicts of interest

There are no conflicts of interest.

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