



Carcinoma Stomach presenting as lower limb deep vein thrombosis in a Previous GJ patient

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Abstract

We here in reporting a gastric cancer developing over 40 years after gastrojejunostomy without gastric resection, presenting clinically as deep vein thrombosis of left lower limb. A 62 year old man came with a complaint of swelling and pain in left lower limb since 1 week. He had gastrojejunostomy for peptic ulcer disease 40 years back. He was diagnosed to have gastric cancer by endoscopy with liver metastasis on USG abdomen with deep vein thrombosis of left lower limb involving up to external iliac vein. Histological diagnosis was moderately differentiated adenocarcinoma. Patient sent for palliative chemotherapy.

Keywords: *Gastric cancer, Gastrojejunostomy, Peptic ulcer disease, Deep vein thrombosis (DVT).*

Introduction

Gastric remnant carcinoma has been well known as a cancer developing over 10 years after gastrectomy for benign or malignant disease, though gastric cancer occurring many years after simple gastrojejunostomy without gastrectomy for benign diseases is very rare. The incidence ranges from 2-6% in gastric remnants and a variety of causative factors have been proposed including alkaline duodenal gastric reflux and increased N-nitroso compounds secondary to bacterial overgrowth¹. Advanced gastric carcinoma usually presents with dyspeptic symptoms, outlet obstruction or features of metastasis. Although migrating superficial thrombophlebitis (Trousseau's Sign) and Deep vein thrombosis (DVT) have been described in gastric carcinoma, these are rare. DVT in gastric carcinoma is usually seen in lower limbs.

Case Report

A 62 year old man came with a complaint of swelling and pain in left lower limb for 7 days. He received gastrojejunostomy for peptic ulcer disease 40 years ago. Venous Doppler of left lower limb revealed acute complete thrombosis of external iliac, common femoral, superficial femoral and popliteal veins, partial thrombosis of anterior and posterior tibialveins. On general examination icterus present. LFT shows raised direct bilirubin and alkaline phosphatase levels. Ultrasonogram abdomen revealed gastric carcinoma with outlet obstruction and perigastric nodes, hepatomegaly with liver metastases. Endoscopy revealed large antral ulcer, biopsy from which was moderately differentiated adenocarcinoma. So patient was sent to palliative chemotherapy in view of advanced stage .we encountered sudden demice of the patient due to pulmonary embolism.

1. Clinical photograph of left lower limb DVT



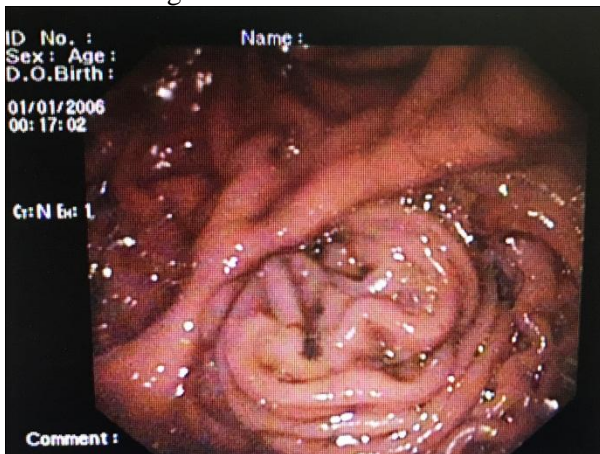
2. UGIE showing jejunal efferent limb



3. UGIE showing GE junction



4. UGIE showing GJ site



5. UGIE showing large antral ulcer



UGIE – Upper gastrointestinal endoscopy; GE junction – Gastro esophageal junction; GJ site – Gastro jejunostomy site; DVT – Deep vein thrombosis

Discussion

It has been observed that patients who undergo gastrojejunostomy for peptic ulcer disease are at increased risk for gastric adenocarcinoma². Gastric carcinoma usually arises in an area of chronic gastritis, metaplasia and dysplasia which often occurs near the stoma. Most cases of stump

carcinoma have been reported following Billroth 2 gastroenterostomy, but cases have also been reported following Billroth 1 gastroduodenostomy¹. Gastric stump carcinoma is defined as an adenocarcinoma of the stomach occurring 10 years or more after gastrectomy for cancer or benign disease. Thus, gastric stump carcinoma after benign

disease develops as a new lesion, while that after malignant disease may be a metachronous multiple lesion^{1,3}.

A complete margin-negative (R0) resection remains the only potentially curative treatment for gastric adenocarcinoma^{4,5}. Gastric stump carcinomas often have low resectability rates and a poor prognosis. Gastric stump carcinomas often have low resectability rates and a poor prognosis. Gastric stump carcinoma has a wide range of lymphnode (LN) metastases, including LN within jejunal mesentery in Billroth2 reconstruction cases. Therefore, it is suggested that radical operation for Billroth 1 patients need removal of gastroduodenectomy anastomosis and above LNs, and that Billroth 2 patients need removal of 10 cm of jejunum besides gastrojejunostomy anastomosis, and clearance of LN within its mesentery, in addition to Billroth 1 stump carcinoma^{6,7}.

A recent study by Newman et al. supported the opinion that the outcome after resection in gastric stump carcinoma does not differ that of patients with other primary proximal gastric cancers of the same stage. Therefore, the consequences of surgical therapy in these patients are identical⁸.

A growing body of evidence has demonstrated a strong association between cancer and venous thrombo-embolism. Numerous studies have addressed this issue and post-mortem studies have demonstrated a markedly increased incidence in thromboembolic disease in patients who died of malignancy, particularly those with mucinous carcinoma of the pancreas, lungs and gastrointestinal tract (GIT)⁹.

Pathogenic mechanisms like Hypercoagulability due to tumor cell activation, vessel wall injury and stasis for the development of thrombotic disorders in patients with malignancy were proposed by Virchow more than a century ago. Tissue factor procoagulant activity has been identified in malignancies like acute leukemia and solid tumor of ovary, stomach and kidney. The sialic acid moiety expressed by tumor cells of mucin secreting adenocarcinoma can cause non-enzymatic activation of Factor X¹⁰. Consequently Adenocarcinoma of

pancreas, GIT, lungs and ovaries are often associated with venous thrombus. Cancer cells can injure endothelium by direct vascular invasion resulting in an onset of a pro-thrombotic state⁹.

The incidence of venous thrombo embolism (VTE) were 20.3% & 7.1% in Khanna et al¹¹ and Rollins et al¹² studies respectively.

However literature correlating gastric cancer in a gastrojejunostomy patient presenting as DVT of lowerlimb is lacking.

Conclusion

Recommendations has been made to screen patients with gastro-jejunostomy by endoscopy atleast annually to detect the cancer in early stages.

A significant line of research needs to be dedicated to investigation of thromboembolic phenomena in GI cancers. The effect of VTE on survival continues to be clarified. As well, the role of anticoagulation on the survival of patients with GI cancers also remains to be defined.

Acknowledgement

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