CASE REPORT

Fatal Upper Gastrointestinal Bleed Following Endoscopic Biopsy of Testicular Germ Cell Tumor Metastasis to Duodenum

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Introduction

Testicular germ cell tumor, choriocarcinoma and malignant melanoma are highly vascular tumors that tend to bleed when metastatic to gastrointestinal tract. Diagnosis of germ cell tumor metastatic to gastrointestinal tract should be considered when a known patient of germ cell tumor of testis (or ovary) presents with a gastrointestinal bleed. GI bleed can occur spontaneously or following endoscopic biopsy of the lesion. This could be a rare cause of gastrointestinal bleed in a young patient and, exceptionally, this may be the first presentation of this disease. A young adult with of GCT of testis developing recurrence in the form of duodenal metastasis is discussed. Till now only a few similar cases are reported in literature.

Case Report

DMS, a 30 year male started with right testicular swelling in December 2004. He was operated in a rural district hospital and referred to the outpatient department with symptoms of bilateral flank pains, fever and sweating and passage of black tarry stools. On examination, he was pale, had a left supraclavicular node which was hard and fixed. Per abdominal examination revealed a hard mass in umbilical and epigastric region, which roughly measured 12x10cm. Rest of the general physical and systemic examination was normal. Investigative profile showed a

Hb of 6g/dl; TLC of $5.43 \times 10^9/l$, DLC-N-85, L 11.2, M-4, MCV-81.7 fl, Platelet $281 \times 10^9/l$. Serum levels of urea, creatinine, bilirubin, AST, ALT were normal. Proteins were 5.7g/dl (normal 5.5-7.0g/dl) and albumin 2.5 g/dl (normal 3.5 - 5.6 g/dl). Uric acid was 3.9 mg/dl (normal 3.4 - 6.5 mg/dl) and LDH was 3310 u/l (normal 240-480 u/l). Alpha feto protein level was 3391.63u/l and HCG levels were persistently more than 100iu/l. Chest X-Ray was normal. USG scan of the abdomen showed a 6.3x 5.3 mass and nodes in the paraaortic region. CECT of abdomen showed a large, heterogeneous, retroperi-toneal mass having varying contrast enhancement with vascular invasion and mild left sided hydronephrosis. FNAC of the mass was suggestive of anaplastic large cell lymphoma or germ cell tumor and that of the left cervical node showed undifferentiated tumor with marked necrosis. Gastroduodenoscopy showed ulceroproliferative lesion involving 50 percent of circumference. Review of the duodenal biopsy which was initially reported as adenocarcinoma showed features consistent with germ cell tumor. By definition patient had high risk GCT of testis. He was treated with 4 cycles of BEP chemo-therapy. All markers serially normalized. and patient was advised surgical consultation but did not follow up. Later he presented with abdominal pain. USG showed evidence of duodenal or epigastric mass. Chest X-ray showed diffuse bilateral nodular shadows. Repeat upper gastroduodenoscopy showed ulceroinfiltrative tumor in third part of duodenum. Histopathology of the lesion showed evidence of germ cell tumor. However, patient developed hematochezia after the procedure. He did not respond to conservative measures and succumbed to this complication.

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Discussion

In young males with a known or unknown testicular GCT, presenting with GI bleed and duodenal tumor, metastasis from the primary malignancy should be strongly considered. Treatment of this condition could require a multimodality approach, not infrequently including emergency surgery. Though these patients often belong to a poor-prognosis group, the literature review shows that long-term survival is possible using modern treatment principles. The risk of GI hemorrhage, at presentation with or without treatment is particularly high. In a retrospective review of 5 cases with advanced germ cell malignancy (testicular 2 and retroperitoneal 3) and involvement of the upper GI tract with germ cell malignancy was proved, in 4 patients the duodenum and in 1 patient the distal part of the esophagus was involved. Three patients had grade 3 or grade 4 anemia. Ulceration of the upper GI tract was demonstrated in 1 case complicated by an aortoduodenal fistula and aortic rupture. This patient and 2 other cases needed emergency surgery due to GI hemorrhage before and /or during the initial phase of chemotherapy.¹ Three more cases of metastatic testicular cancer to duodenum causing intestinal bleed have been described by other authors.² In similar reports, young patients presenting for the first time with such bleed have been reported.^{3,4,5} Hemorrhage due to such metastasis could be massive and even fatal.^{6,7} A case of metastatic choriocarcinoma with chronic blood loss has also been described.⁸ Propensity to bleed indicates high vascularity analogous to intracranial bleeds in CNS metastasis from melanoma, thyroid, renal cell carcinoma and choriocarcinoma. Other tumors involving small gut that lead to gastrointestinal bleed include, adenocarcinoma, carcinoid tumors, lymphoma, lymphangioma, gastrointestinal stromal cell tumor, lipoma and others.⁹ The patient under discussion was managed conservatively

but had recurrence of duodenal bleed after stabilization and died of the same. Thus it is concluded that the tumor bleed in a metastatic lesion in GCT, spontaneous or following biopsy in a young patient should not be taken lightly and active surgical resection perhaps remains the best option of treatment.

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