

Oral Squamous Cell Carcinoma With Ileal Metastases Presenting With Massive Lower Gastrointestinal Bleeding

N Rawat, A Dawson, S Hodder, J Woolgar

Citation

N Rawat, A Dawson, S Hodder, J Woolgar. *Oral Squamous Cell Carcinoma With Ileal Metastases Presenting With Massive Lower Gastrointestinal Bleeding*. The Internet Journal of Surgery. 2004 Volume 6 Number 2.

Abstract

Metastatic involvement of the small bowel from head and neck primary is a rare occurrence. Metastatic tumors of the small bowel mostly present with obstruction and perforation. Massive lower GI bleeding from these deposits is very rare. We report a case of a 66-year-old man with squamous cell carcinoma of the retro-molar fossa presenting with massive lower GI (gastrointestinal) bleeding from metastatic intramural deposits in the small bowel. To our knowledge there are no reports of primary tumors from oral cavity metastasizing to the small bowel and presenting ante mortem.

INTRODUCTION

Head and neck tumors spread predominantly by local invasion of the adjacent structures and dissemination via the lymphatic channels. Haematogenous spread usually involves the lungs, bones and liver. Very rarely, head and neck primaries metastasize to the small intestine. Small intestinal metastases can present with obstruction, perforation, mal-absorption and hemorrhage. Among these, obstruction is the commonest (1). We report a case with massive lower GI bleeding from intra-mural small bowel metastases arising from primary squamous cell carcinoma of the retro-molar fossa.

CASE REPORT

A 66-year old male presented with massive lower GI bleeding. In 1996 he had had resection with partial mandibulectomy, supraomohyoid neck dissection and radial forearm free flap reconstruction for poorly differentiated squamous cell carcinoma (T4 N1 M0) of right retromolar fossa. Secondary to post operative radiation therapy he developed a recurrent oro-cutaneous fistula. In February 2004, he was admitted for elective closure of this fistula. Preoperative workup revealed anemia (Hb: 6 gm/dl; MCV 83 fl). All other blood investigations were within normal limits. His chest X-Ray showed an ill-defined shadow in the right mid zone, which on biopsy was confirmed to be metastatic squamous cell carcinoma.

He underwent an elective closure of the oro-cutaneous fistula following 6-unit blood transfusion. In the

postoperative period his haemoglobin dropped to 7.8 gm/dl. Gastroscopy did not show any upper GI source of bleeding. He later had massive bleeding per rectum and became progressively haemodynamically unstable. His abdomen was soft with no palpable masses and digital rectal examination was unremarkable apart from fresh blood.

Due to ongoing haemorrhage and failure of conservative measures, an exploratory laparotomy was performed. At laparotomy there was fresh blood in the small bowel with multiple intra-luminal polypoid tumors (Fig. 1) of variable sizes from mid jejunum into the ileum. It was noted that bleeding was originating from a single large intra-luminal metastatic lesion in the distal jejunum that had started to erode the serosa from inside out. There was a second almost-obstructing lesion approximately 50 cm. distal to it. The colon was macroscopically normal. There were further metastatic deposits on the serosa and the omentum but liver was clear. Due to the widespread disease these two lesions were resected and end-to-end anastomosis was performed. Intra-operative colonoscopy up to the splenic flexure was normal. He made an uneventful postoperative recovery and was discharged on the 14th postoperative day. Histology of this lesion confirmed it to be metastatic squamous cell carcinoma.

Figure 1

Figure 1: Macroscopic view of ileal nodule ulcerating the mucosa (centimeter scale)



DISCUSSION

The head and neck tumors can spread locally into contiguous structures by direct invasion or may disseminate into the regional or distant nodes via the lymphatics. Distant metastases are haematogenous and most commonly involve the lungs followed by bone and liver (₂). Small intestinal metastases are very rare and are often detected postmortem (_{3, 4}). De Castro et al. reviewed 26 cases from the Mayo clinic of metastatic small intestinal tumors over 50 years; of these none had a primary in head and neck (₁). O'Brien et al. reported four cases of head and neck tumors metastasizing to small bowel on autopsy (₅). Airoidi et al. and Büyükcüelik et al. reported small bowel metastasis from carcinoma of the larynx (_{3, 6}).

Metastatic involvement of the small intestine is more frequent than primary tumors (₇). Malignant melanoma and bronchogenic carcinoma are the most common extra-abdominal tumors metastasizing to the small intestine. Metastases from the testis, breast, rhabdomyosarcomas, osteosarcomas, kidney, malignant fibrous histiocytoma of rib and prostate have also been reported.

Extrinsic tumors may involve small intestine by direct invasion, intra-peritoneal seeding or via the haematogenous route. Richie et al. suggested intra-luminal seedling of the tumor cells from ingestion of expectorated tumor cells from bronchogenic carcinoma (₈). The tumor emboli usually lodge into the submucosal layer, and their growth typically results in intramural masses with a bulky polypoid extension into the lumen (_{1, 9}). These polypoid lesions may obstruct the lumen or may ulcerate and present as perforation peritonitis. Sometimes they may ulcerate or erode into a vessel and present as gastrointestinal bleeding (_{10, 11}).

Most commonly, these metastatic lesions present with small bowel obstruction (₁). This may either be secondary to luminal blockage or intussusception (₉). In the review by De Castro et al., incomplete or total small bowel obstruction occurred in all cases (₁). They may present with iron deficiency anemia secondary to occult blood loss and rarely, may cause life threatening GI bleeding. Blood loss from small bowel secondary is more common with intestinal melanomas (₁₀).

Most of the small bowel metastases present as an emergency, and diagnosis is made only at laparotomy. Due to poor prognosis and late presentation there is not much literature on their preoperative assessment. As with any primary small bowel tumors, symptomatic metastases may be investigated radiologically using small bowel follow-through, enteroclysis, ultrasound or CT scan, but all are relatively insensitive for early diagnosis (₇). According to Berger et al. push enteroscopy is probably more accurate and can provide histological diagnosis, but the examination is limited to distal jejunum (₁₂).

Treatment options in patients with symptomatic small bowel metastases are very limited as their long-term prognosis is very poor. Treatment usually involves local resection of symptomatic lesions and end-to-end anastomosis (₁₀). Gordon et al. reported selective embolization of a bleeding jejunal metastasis from renal cell carcinoma (₁₃). This is only possible where direct mesenteric feed to a tumor can be catheterized. Average survival following resection of these tumors is 16 weeks but survival of more than five years has been reported (_{8, 10}).

In conclusion, clinicians managing patients with known carcinoma who have a massive GI bleeding should consider small intestinal metastases in their differential diagnosis. This is the first case of small bowel metastasis from an oral

primary presenting with massive lower GI bleeding.

LEARNING POINTS

1. Although rare, small bowel metastases can present with occult or massive gastrointestinal bleeding.
2. Surgery provides the best palliation for obstructing or bleeding lesions.
3. Angiography with selective embolization may have a role in selected cases.

References

1. De Castro CA, Dockerty MB, Mayo CW. Metastatic Tumors of the small intestines. *Surgery Gynecol & Obstetrics*. 1957;105:159-65.
2. Merino OR, Lindberg RD, Fletcher GH. An analysis of distant metastases from squamous cell carcinoma of the upper respiratory and digestive tract. *Cancer*. July 1977;40:145-151.
3. Büyükcüelik A, Ensari A, Sarioğlu M, et al. Squamous cell carcinoma of the larynx metastasized to the ampulla of Vater. Report of a case. *Tumori* 2003;89:199-201.
4. Cann CI, Fried MP, Rothman KJ. Epidemiology of squamous cell cancer of the head and neck. *Otolaryngol Clin North Am*. 1985;18:367-388.
5. O'Brien PH, Carlson R, Steubner EA, Staley CT. Distant metastases in epidermoid cell carcinoma of the head and neck. *Cancer*. 1971;27:304-307.
6. Airolidi M, Gabriele P, Succo G, et al. Small bowel metastasis from squamous cell carcinoma of the larynx. A case report. *Tumori* 1993;79:286-287.
7. Gill SS, Heuman DM, Mihas AA. Small Intestinal Neoplasms. *J Clin Gastroenterol* 2001;33:267-282.
8. Richie R E, Reynolds V H, Sawyers J L. Tumor metastases to the small bowel from extra - abdominal sites. *Southern Medical Journal*. 1973;66(12):1383- 1387.
9. Meyers MA, McSweeney J. Secondary neoplasm's of the bowel. *Diagnostic Radiology*. October 1972;105:1-11.
10. Hubens G, Van Eerdeweg W, Schoofs E, Fierens H, et al. Massive intestinal haemorrhage due to a solitary jejunal metastasis of a primary bronchogenic tumor. *Acta Chir. Belg*. 1992;92:87-190.
11. Sakorafas GH, Pavlakis G, Grigoriadis KD. Small bowel perforation secondary to metastatic lung cancer: A case report and review of literature. *Mt. Sinai J Med*. 2003;70(2):130-2.
12. Berger A, Callier C, Daniel C et al. Small bowel metastases from primary carcinoma of the lung: Clinical findings and outcome. *The American journal of gastroenterology*. 1999;94(7):1884-87.
13. Gordon B, Lossef SV, Jelinger E, Barth KH. Embolotherapy for small bowel haemorrhage from metastatic renal cell carcinoma: case report. *Cardiovasc Intervent Radiol*. 1991;14:311-13.
14. Wootton-Gorges SL, Stein-Wexler R, West DC. Metastatic osteosarcoma to the small bowel with resultant intussusception: a case report and review of the literature. *Pediatr Radiol*. 2003;33:890-892.

Author Information

N. Rawat

Department of General Surgery, Morriston Hospital

A. Dawson

Department of General Surgery, Morriston Hospital

S. Hodder

Department of General Surgery, Morriston Hospital

J. Woolgar

Department of General Surgery, Morriston Hospital