

**Shiraz E-Medical Journal**  
Vol. 11, No. 3, July 2010

<http://semj.sums.ac.ir/vol11/jul2010/88054.htm>

**Intestinal Obstruction Due to Metastatic Malignant Melanoma.**

Karimian F\*, Aminian A\*, Mirsharifi R\*, Adhami A\*, Safari S\*, Assareh A\*, Ali FA\*\*, Ghaderi H\*.

\* Department of General Surgery, Imam Khomeini Hospital Complex, Tehran University of Medical Sciences, Tehran, Iran, \*\* Department of Radiology, Mubarak Al-Kabeer Hospital, Kuwait.

Correspondence: Dr. A. Aminian, Department of General Surgery, Imam Khomeini Hospital Complex, End of Keshavarz Boulevard, Tehran, Iran. Fax: +98(21)6658-1657 Email: [aaminian@tums.ac.ir](mailto:aaminian@tums.ac.ir)

Received for Publication: March 4, 2010, Accepted for Publication: March 15, 2010.

**Abstract:**

Metastasis to small bowel may occur in patients with cutaneous malignant melanoma. Intestinal metastases may present with pain, constipation, obstruction, perforation, bleeding, and anemia. A 40-year-old man, a known case of malignant melanoma diagnosed 5 years back, was brought to the emergency department with intestinal obstruction. He had widespread metastatic disease with involvement of brain, lung, liver and small bowels. One metastasis in the ileocecal region caused obstruction. Proximal ileostomy was created as an emergent palliative procedure. In conclusion, palliative operations are successful in relieving some intestinal complications of metastatic malignant melanoma.

**Keywords: malignant melanoma, small bowel, obstruction, metastasis, palliation**

**Introduction:**

Malignant melanoma (MM) has four variants. These are, in order of decreasing frequency, superficial spreading, nodular, lentigo maligna, and acral lentiginous. The lentigo maligna type has a better

prognosis than other variants and acral lentiginous has the worst prognosis. MM tends to spread early, when it is not locally advanced. However, MM is known to develop metastasis decades after initial diagnosis.<sup>(1)</sup> Metastasis may be micro-

scopic and not detected clinically. Lymphatic metastasis, generally, occur first. Distant metastasis to liver, lung, bone, and brain occur even with multidisciplinary treatment approach. MM commonly spreads metastasis to gastrointestinal (GI) tract. Superficial spreading melanoma is the most common subtype of MM that to metastasize to the GI tract.<sup>(2)</sup> Based on CT images, MM metastasis to the small intestine was found in 7.4% of patients.<sup>(3)</sup> Another series reported involvement of small bowel with MM metastasis in 7.8% of cases.<sup>(4)</sup> Intestinal metastases of MM may present with non-specific symptoms, the same as other GI tract tumors, including pain, constipation, tenesmus, and anemia or may cause emergent conditions such as GI obstruction, perforation, or bleeding. MM is responsible for 8.3% of cases of small bowel obstruction caused by secondary tumors.<sup>(5)</sup> These patients may have wide spread metastatic disease involving multiple organs or intestinal obstruction maybe due to isolated metastasis to GI tract.<sup>(5)</sup> Intestinal obstruction in this context may be assumed a terminal event. However, this is a, basically, mechanical obstruction and any patient with this condition should be given the chance of relieving the obstruction, while keeping in mind that this is a palliative measure.

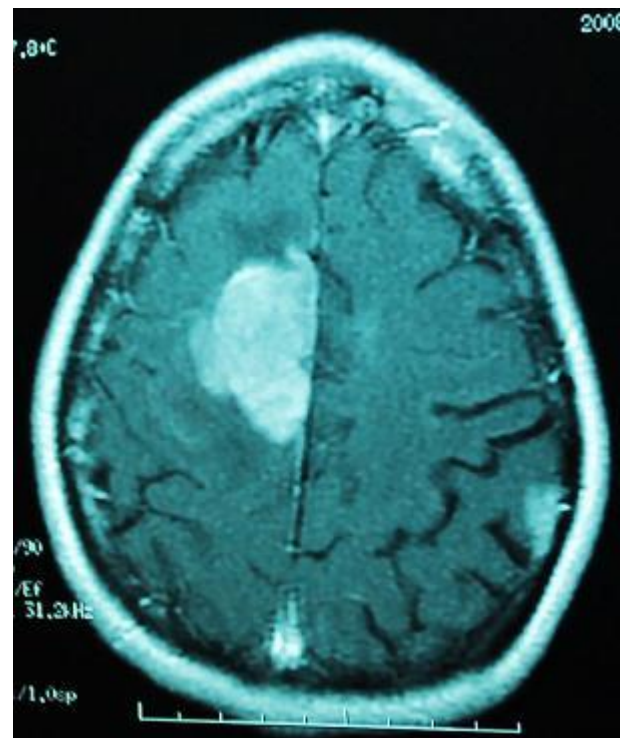
#### Case Report:

A 40-year-old man, a known case of MM since 5 years back, was brought to the emergency department with abdominal pain since 5 days ago. The pain was generalized and of colicky type. The patient was constipated from a week ago and gas passage stopped 3 days back. He

complained from nausea and vomiting in the recent 48 hours.

He had a history of MM over the face diagnosed 5 years ago. He received surgical and adjuvant treatment. He developed brain metastasis that was diagnosed 4 months earlier and was under treatment for it (figure 1). The patient was scheduled for regular follow up visit at neurosurgery clinic. He was referred from there to general surgery clinic for this recent illness.

**Figure 1:** MRI showed a large brain metastasis in the right fronto-parietal lobe



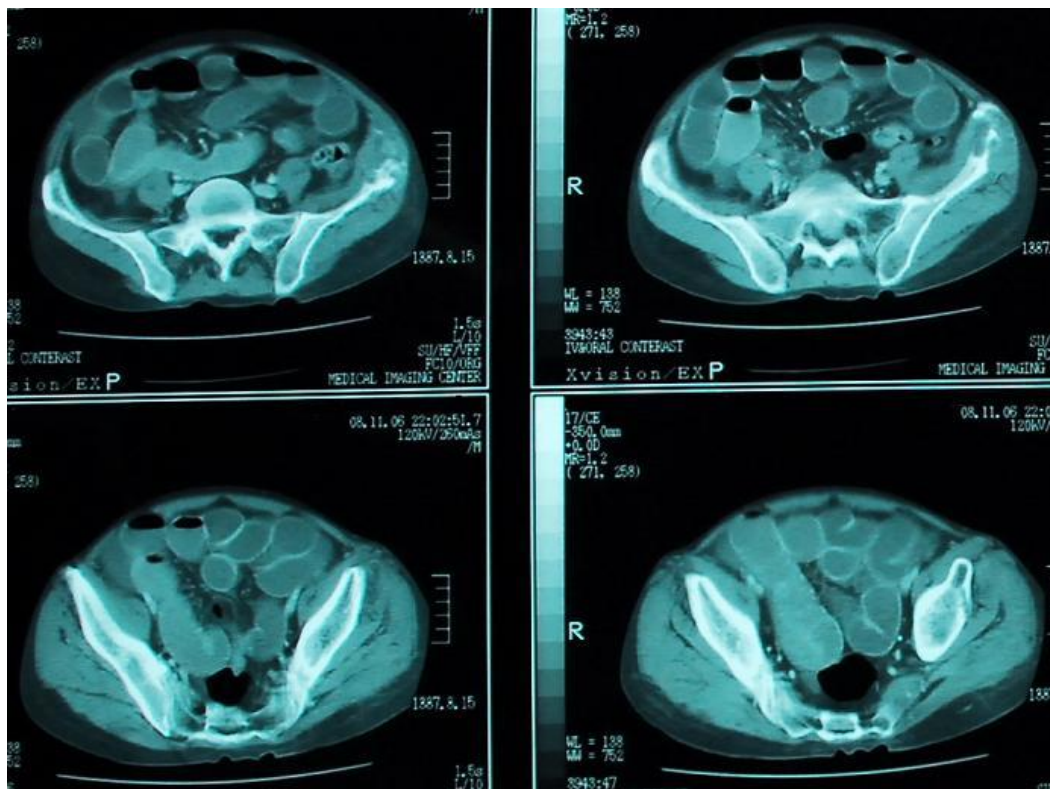
Vital signs were blood pressure: 100/70 mmHg, pulse rate: 110/min, temperature: 37.8 °C, and respiratory rate: 28/min. He was ill and cachectic, conscious but slightly disoriented. He was pale, mucosal membranes were dry, and sclera appeared slightly icteric. The abdomen was distended with mild generalized tenderness. Rectum was empty at digital examination. Less than 100 ml of

concentrated urine flew into the bag after insertion of Foley catheter. Nasogastric tube drained more than a liter of fecaloid fluid instantly. Laboratory findings were WBC: 16000 cells/mm<sup>3</sup>, Hb: 10 g/dL, platelet: 110,000 /micro L, PH: 7.50, PCO<sub>2</sub>: 44 mmHg, HCO<sub>3</sub>: 30 mEq/L, PO<sub>2</sub>: 75 mmHg, AST: 70 units/L, ALT: 56 units/L, alkaline phosphatase: 690 units/L, total bilirubin: 2.1 mg/dL and INR: 1.7. Chest X-ray revealed a few scattered coin like lesions in both lungs. Abdominal films were in favor of GI obstruction (figure 2). CT scan showed distended small intestine with wall edema (figure 3). Additionally, both lobes of liver contained small and large metastatic lesions replacing normal tissue (figure 4).

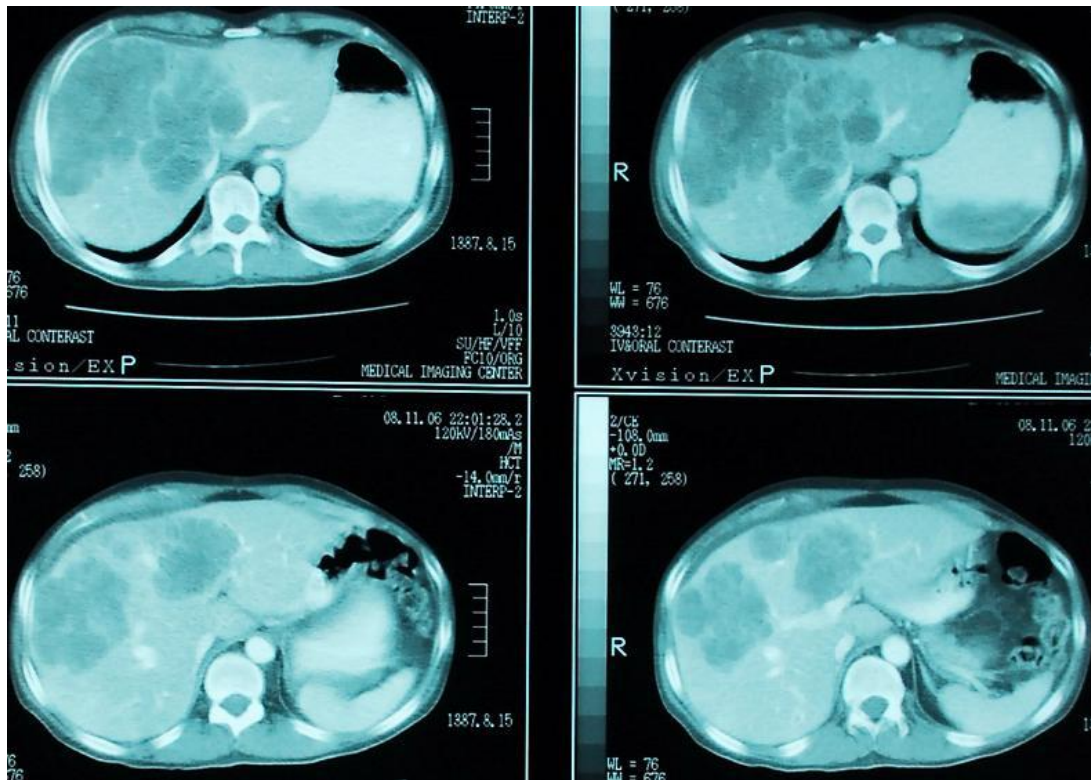
**Figure 2:** Upright abdominal film showed multiple air fluid levels



**Figure 3:** CT scan was in favor of small bowel obstruction



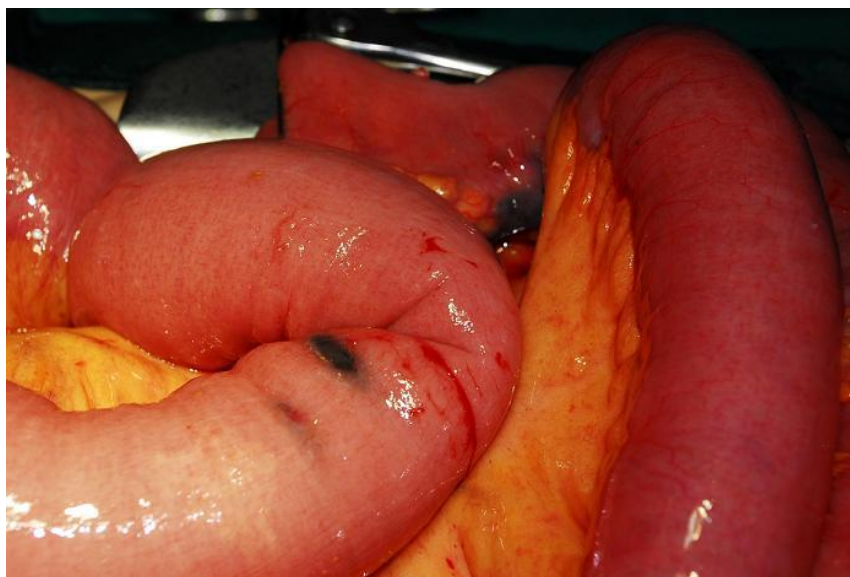
**Figure 4:** CT scan revealed widespread liver metastasis



The patient was resuscitated and hemodynamic abnormality corrected, after which he was taken to operating theater. The abdomen was explored through mid-line laparotomy incision. The small bowel

was distended and the wall was edematous as seen at CT. Small bowel was involved with scattered pigmented tumoral deposits (figure 5).

**Figure 5:** Distended small bowel loops with multiple pigmented metastases



One metastasis in the ileocecal region caused obstruction. Diverting ileostomy was created as a palliative procedure. Obstruction was relieved and he was discharged after 10 days. Two months later, he developed decreased level of consciousness and died at home.

#### **Discussion:**

No one with unrelieved complete mechanical obstruction of intestine will survive long. Intervention in such cases is always by laparotomy, with few exceptions. Metastatic MM is associated with poor prognosis and limited survival. A mean survival of only 6 to 8 months is predicted for patients with systemic metastases from melanoma.<sup>(6)</sup>

Any attempt at increasing survival is appreciated as a step forward. This may be in the form of noninvasive intervention such as adjuvant therapy, or invasive intervention including surgery. Surgery maybe indicated to manage the complication associated with metastasis to a specific site. Examples are increased intracranial pressure due to central nervous system metastasis, pelvic and retroperitoneal metastatic tumoral involvement leading to compression of ureter and hydronephrosis, and intraperitoneal metastatic deposits causing intestinal obstruction. Metastasis to small bowel may present as intraluminal masses, ulcerating lesions, diffusely infiltrating lesions, or mesenteric implants.<sup>(7)</sup> Although a patient with multiple organ metastatic disease is not considered to survive long, this is no justification for not intervening in case of a potentially correctable pathologic condition developing in such patients. Small bowel ob-

struction caused by secondary tumors in these circumstances almost never resolves by conservative treatment and surgical intervention is almost always indicated.<sup>(7)</sup> Surgery may be a palliative measure in this case and is associated with a considerable risk of morbidity and mortality in the context of poor existing conditions. Therefore, the risk-benefit ratio of a major surgery should be fully evaluated, keeping in mind that without intervention the patient will soon die. Studies have reported on the efficacy and improvement in mortality associated with surgical resection for melanoma metastases in GI tract.<sup>(3,4)</sup> In one large study surgical excision of metastatic lesions resulted in symptomatic relief in 100% of patients with abdominal metastasis.<sup>(8)</sup> There are also other reports demonstrating palliation of symptoms and improved survival after resection of both solitary and multiple small intestine metastatic melanoma lesions.<sup>(9,10)</sup> In our patient with widespread metastatic disease to brain, lungs, liver and bowels, only one of the lesions in the ileocecal region was the cause of emergent condition. With performing an emergent palliative ileostomy, obstruction was relieved. In conclusion, MM may metastasize to GI tract. These patients may have wide spread metastatic disease involving multiple organs or intestinal obstruction maybe due to isolated metastasis to bowels. Palliative operations are successful in relieving complications.

#### **References:**

1. Bender GN, Maglante DD, McLarney JH, Rex D, Kelvin FM. Malignant melanoma: patterns of metastasis to the small bowel, reliability of imaging studies, and clinical relevance. *Am J Gastroenterol.* 2001; 96: 2392-400.

2. Schuchter LM, Green R, Fraker D. Primary and metastatic diseases in malignant melanoma of the gastrointestinal tract. *Curr Opin Oncol.* 2000; 12: 181-5.
3. Kawashima A, Fishman EK, Kuhlman JE, Schuchter LM. CT of malignant melanoma: patterns of small bowel and mesenteric involvement. *J Comput Assist Tomogr.* 1991; 15: 570-4.
4. Hao XS, Li Q, Chen H. Small bowel metastases of malignant melanoma: palliative effect of surgical resection. *Jpn J Clin Oncol.* 1999; 29: 442-4.
5. Idelevich E, Kashtan H, Mavor E, Brenner B. Small bowel obstruction caused by secondary tumors. *Surgl Oncol.* 2006; 15: 29-32.
6. Barth A, Wanek LA, Morton DL. Prognostic factors in 1,521 melanoma patients with distant metastases. *J Am Coll Surg.* 1995; 181: 193-201.
7. Pavlakis GM, Sakorafas GH, Anagnostopoulos GK. Intestinal metastases from renal cell carcinoma: a rare cause of intestinal obstruction and bleeding. *Mt Sinai J Med.* 2004; 71: 127-30.
8. Wornom IL III, Smith JW, Soong SJ, McElvein R, Urist MM, Balch CM. Surgery as palliative treatment for distant metastases of melanoma. *Ann Surg.* 1986; 204: 181-5.
9. Gutman H, Hess KR, Kokotsakis JA, Ross MI, Guinee VF, Balch CM. Surgery for abdominal metastases of cutaneous melanoma. *World J Surg.* 2001; 25: 750-8.
10. Agrawal S, Yao TJ, Coit DG. Surgery for melanoma metastatic to the gastrointestinal tract. *Ann Surg Oncol.* 1999; 6: 336-44.