

Symptomatic Malignant Melanoma of the Gastrointestinal Tract

Operative Treatment and Survival

EDUARDO JORGE, M.D., HAROLD A. HARVEY, M.D., MARY A. SIMMONDS, M.D.,
ALLAN LIPTON, M.D., RAYMOND J. JOEHL, M.D.

Malignant melanoma involving the gastrointestinal tract is a common autopsy finding in patients who die with this disease. Melanoma metastatic to bowel infrequently causes symptoms. Some investigators suggest that survival following the onset of gastrointestinal symptoms is very poor and, as a result, surgical intervention to relieve symptoms should be avoided. We reviewed the clinical courses of 15 consecutive patients with symptomatic malignant melanoma of the bowel who underwent resection alone or in combination with bypass of symptomatic intestinal lesions. There were no deaths within 30 days of operation; 14 patients obtained relief of intestinal symptoms; 11 patients survived a mean of 7.9 months; and four patients are alive 2, 7, 22, and 23 months after operation. These results suggest that operations to treat symptomatic intestinal melanoma provide reasonable palliation and survival for patients with this disease.

INVOLVEMENT OF THE small intestine is found at autopsy in 58% of patients with malignant melanoma.¹ Rarely are these intestinal lesions symptomatic. Because the clinical course of metastatic melanoma can be unpredictable, patients with melanoma involving the gastrointestinal tract also may have a variable course. A report in the radiologic literature suggests that metastasis to the bowel portends a grave prognosis and that significant palliation for these patients may not be obtained by operative resection or bypass procedures.² We report our experience with operative treatment for patients with abdominal symptoms due to melanoma of the intestine and their postoperative outcome and survival.

Clinical Materials and Methods

During the 10-year period from 1973 through 1982, 320 new patients were evaluated at our institution for

From the Department of Surgery and the Division of Oncology, the Department of Medicine, The Pennsylvania State University College of Medicine, The Milton S. Hershey Medical Center, Hershey, Pennsylvania

treatment of malignant melanoma. Fifteen consecutive patients with melanoma and symptomatic involvement of the gastrointestinal tract were identified. These patients are the basis for this report. An abdominal operation was performed in each patient and only intestinal lesions causing symptoms were treated. There were nine women and six men; the mean age was 48 years (range 25–72 years). The region of primary melanoma was known in 12 patients and was the following: head and neck—five patients; lower extremity—four; trunk—two; and anus—one. Clark's level could be determined in five patients with cutaneous melanoma and was either level III (two patients) or level IV (three patients). Each cutaneous melanoma was excised widely and skin grafted. In three patients with an unknown primary, a thorough examination of skin, eyes, and anus failed to locate a primary lesion.

Results

Presentation

In 11 patients with a primary melanoma of the skin, the mean time from initial diagnosis until presentation with abdominal symptoms was 43.5 months (6–90 months). The frequency of presenting abdominal signs and symptoms in all 15 patients were: sign of intestinal obstruction (cramping pain, vomiting)—6/15 patients; gastrointestinal bleeding (not massive)—6/15; intractable or nonspecific abdominal pain—4/15; tenesmus (rectal melanoma)—1/15; and hemorrhoids (anal primary)—1/15.

Reprint requests: Raymond J. Joehl, M.D., Department of Surgery, The Milton S. Hershey Medical Center, P.O. Box 850, Hershey, Pennsylvania 17033.

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Diagnosis

Contrast x-rays were diagnostic for intestinal tumors in ten patients; upper gastrointestinal and small bowel x-rays demonstrated metastases in nine patients and barium enema in one patient who had a cecal mass. Figure 1 demonstrates the "coiled spring" appearance of a jejunal intussusception and Figure 2 demonstrates the resected jejunal melanoma (intussusceptum). Small bowel x-rays also demonstrated mass lesions and areas of ulceration (Fig. 3). Endoscopic procedures visualized and obtained biopsies of intestinal melanoma in four patients, two each by gastroduodenoscopy (Fig. 4) and proctosigmoidoscopy. Abdominal ultrasound and computed tomography helped characterize diffuse disease in two patients. Table 1 lists the site of gastrointestinal melanoma in our patients; some patients had multiple sites involved. Five patients were clinically free of metastases other than to the bowel at the time of abdominal operation, while ten patients were known to have other metastatic disease involving bone, liver, or lung.

Operative Treatment

The indications for abdominal operation were: intestinal obstruction—four patients; intestinal bleeding—four; abdominal mass and pain—two; obstruction and bleeding—one; partial intestinal obstruction and intractable pain—one; bleeding and intractable pain—one; rectal mass—one; and melanoma of anus—one. Operations performed in these 15 patients were: bowel resection—ten patients (two of these were abdominal-perineal resection); intestinal bypass—two patients; resection and bypass—two. Operative treatment was directed only at those intestinal lesions thought to be causing the patient's symptoms. Small or otherwise incidental melanoma implants were not resected, especially in those patients with other metastases to bone, liver, or lung.

Outcome and Survival

Follow-up for all 15 patients is complete. Fourteen patients obtained relief of their original symptoms after operation; one patient did not. This patient was moribund and specifically requested an operation to relieve symptoms. At operation, multiple obstructing intestinal (duodenal and jejunal) metastases were found. In spite of small bowel resection and gastrojejunostomy, the patient was unable to eat and died nearly 5 weeks after operation.

Wound infections and anastomotic complications did not occur. Eleven patients are dead, including one patient who committed suicide; mean survival was 7.9 months (range 1–47 months) after abdominal operation. Four patients are alive, surviving a mean of 13.5 months (range

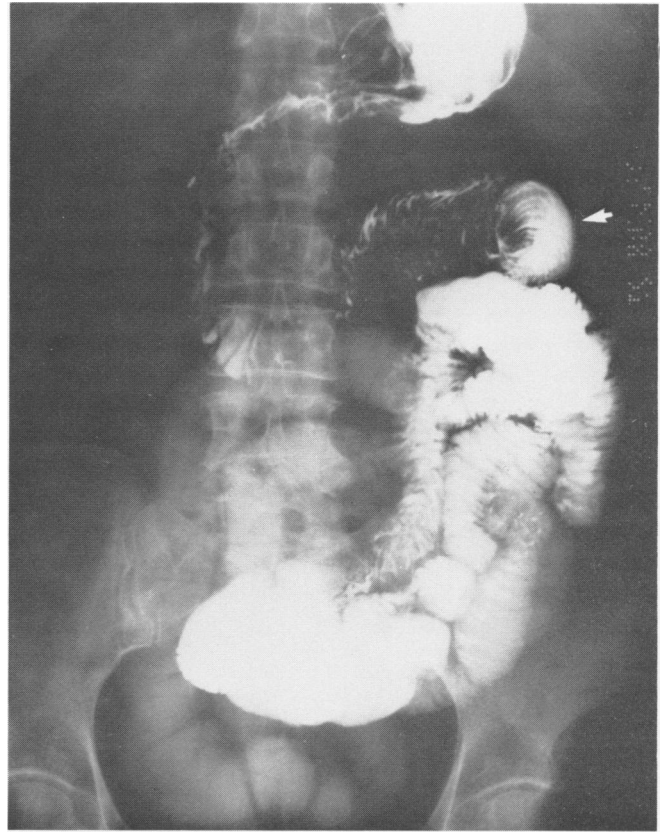


FIG. 1. Small bowel x-ray demonstrates jejunal intussusception and characteristic "coiled spring" appearance (arrow).

2–23 months). The overall mean survival after operation for the entire group is 9.1 months. Ten patients were known to have other metastases to bone, liver, or lung at the time of abdominal operation; nine of these patients died a mean of 3.6 months (range 1–8 months) after abdominal operation and one patient is alive at 7 months.

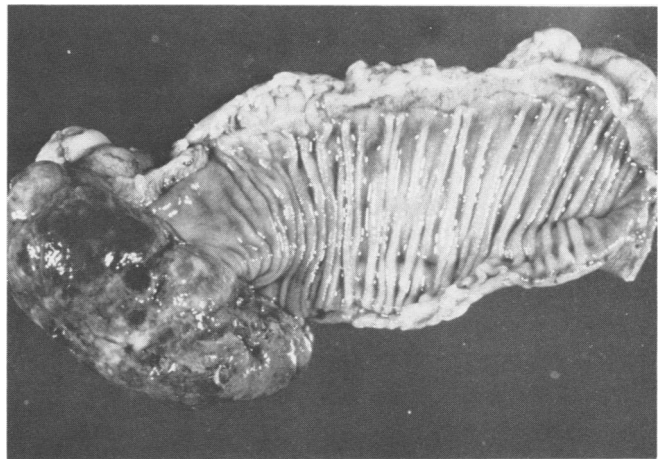


FIG. 2. Resected jejunal melanoma that was the intussusceptum in Figure 1.

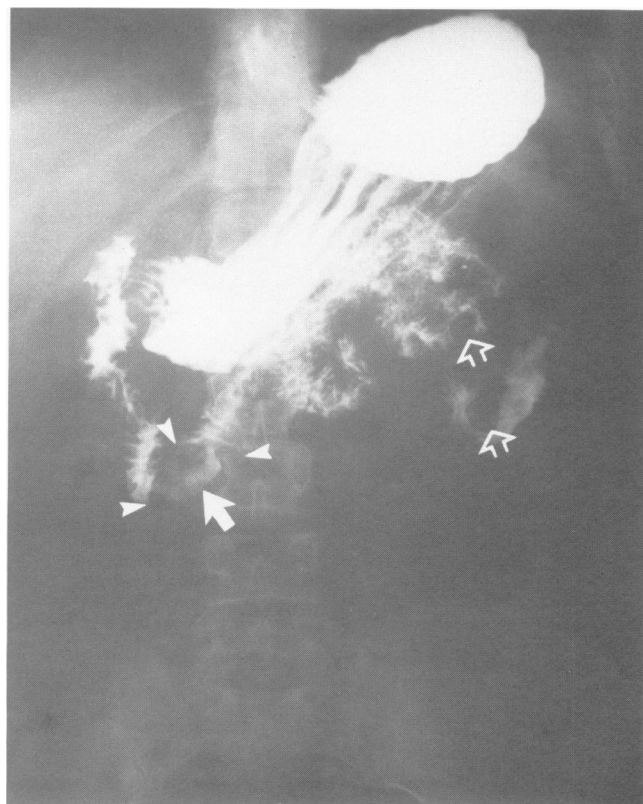


FIG. 3. Upper gastrointestinal x-ray demonstrates a round mass in the third part of duodenum (small solid arrows) containing a central ulcer (large solid arrow). Multiple filling defects (large open arrows) also are shown.

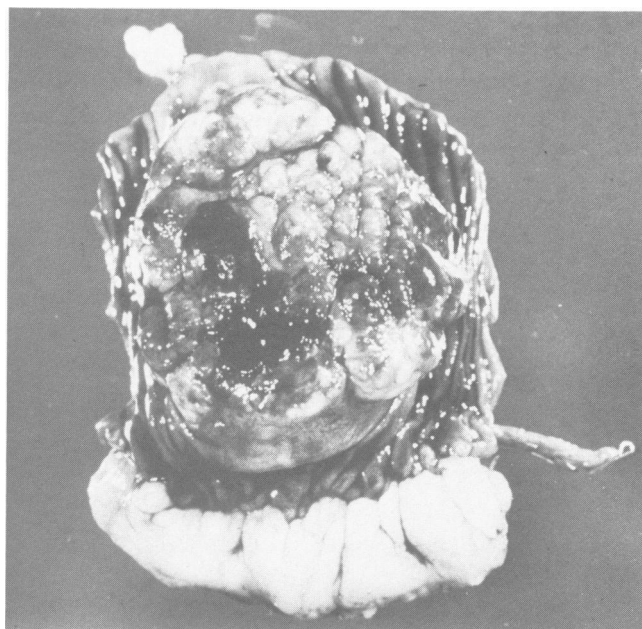


FIG. 4. Resected duodenal melanoma which was the ulcerated mass in Figure 3.

TABLE 1. Site of Gastrointestinal Melanoma

Site	Number of Patients*
Stomach	1
Duodenum	5
Jejunum or ileum	10
Cecum	1
Rectum	1
Anus	1

* Some of these patients had multiple sites of involved bowel.

Five patients had no sign of other metastases at time of operation; two of these patients have died at 4 and 47 months and three are alive at 2, 22, and 23 months after operation.

Discussion

All of our patients had abdominal or intestinal symptoms. Only the patient with melanoma of the anus, which was an incidental finding after hemorrhoidectomy, had minimal symptoms. Fourteen of 15 patients obtained relief of their original symptoms following abdominal operation. Because the majority of our patients had other metastases to bone, liver, or lung at the time of abdominal operation and because some of our patients had multiple sites of intestinal melanoma while not all were causing symptoms, our operative approach was directed only at those intestinal lesions that were causing symptoms. Other investigators, who have described their experience in a similar group of 16 patients, were more aggressive surgically excising as much "tumor-bearing gut as practical" and reported three operative deaths and a median survival of 4.5 months for the remaining 13 patients.³ Our results, no operative deaths within 30 days and a median survival of 6 months with four patients still alive at 2, 7, 22, and 23 months after operation, suggest that a more conservative surgical approach, as we have used, is warranted. McNeer and Das Gupta reported a 1% 1-year survival in patients with malignant melanoma and visceral metastases.⁴ Two of our patients are surviving more than 1 year after abdominal operation; the visceral (intestinal) melanoma in each patient was resected.

The presence of metastatic melanoma involving bone, liver, or lung that is known at the time of abdominal operation for symptomatic gastrointestinal melanoma, appears to be associated with a poor prognosis. Nine of our 10 patients with these associated findings survived a mean of 3.6 months after abdominal operation. Three of the five patients without these associated findings are alive.

The presenting signs and symptoms in our patients included intestinal obstruction, gastrointestinal bleeding,

and abdominal pain. These clinical signs and symptoms are similar to those reported by other investigators.⁵

Contrast gastrointestinal x-rays were useful and reliable in demonstrating the offending melanoma lesions in most of our patients. The characteristic defects in the bowel wall, that is mural filling defects (some of which contain central ulcers and appear as "bulls-eye" lesions) and intussusception described by others,^{1,2,6} were noted in some of our patients (Figs. 1 and 3). Other investigators have found gastrointestinal x-rays to be unreliable,^{2,3} although this was not our experience. Endoscopic procedures were excellent methods to confirm the diagnosis in those patients whose tumors were within reach of the scope. As a result, endoscopy may be the preferred diagnostic approach in certain patients. Computed tomography helps identify those patients who have extensive hepatic, mesenteric, and retroperitoneal involvement.

In approximately 5% of patients with metastatic melanoma, the primary lesion is not found.⁷ Spontaneous regression of the original lesion is reported to occur^{8,9} and may explain the lack of a primary lesion in some of these patients. In three of our patients, a primary melanoma was not found.

A melanoma of the anus is included in this series. Though uncommon, representing only 1% to 3% of all primary melanomas, the ano-rectal region ranks behind only the skin and eye as the source of primary malignant melanoma.¹⁰ Melanoma represents 0.25% to 1.25% of all malignant tumors of the anus.¹¹ Because pruritis and bleeding are the usual presentation, melanoma of the anus is often mistaken for a benign condition as it was in our patient who was thought to have symptomatic piles. Morson emphasizes that ano-rectal lesions are anal primaries for melanoma, even if the anus appears uninvolved.¹² In these patients, an abdominal-perineal resection may be curative if the lesion is discovered early. Our patient survived 47 months after abdominal-perineal resection.

In conclusion, malignant melanoma involving the gastrointestinal tract is common. In the uncommon symp-

tomatic patient, contrast x-rays of the gastrointestinal tract along with endoscopic examination should be performed to identify the offending lesions. Operations to relieve abdominal symptoms are indicated and can be performed safely if only the symptomatic lesions are treated operatively. Some of our patients obtained prolonged periods of palliation despite the presence of metastatic disease. We encourage an aggressive diagnostic and operative approach in patients with malignant melanoma who develop abdominal complaints.

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