

Metastatic melanoma to the common bile duct causing obstructive jaundice: A case report

Radoje B Colovic, Nikica M Grubor, Miodrag D Jovanovic, Marjan T Micev, Natasa R Colovic

Radoje B Colovic, Nikica M Grubor, Miodrag D Jovanovic, Marjan T Micev, Natasa R Colovic, Institute for Digestive Diseases, First Surgical Clinic, Clinical Center of Serbia, Koste Todorovica 6, Belgrade 11000, Serbia

Correspondence to: Radoje B Colovic, Institute for Digestive Diseases, First Surgical Clinic, Clinical Center of Serbia, Koste Todorovica 6, Belgrade 11000, Serbia. marcolov@eunet.yu

Telephone: +381-11-3610715 Fax: +381-11-3615569

Received: 2006-10-10 Accepted: 2006-12-29

Abstract

Metastatic melanoma to the common bile duct is very rare with only 18 cases reported so far. We report a 46 year old women who, 18 mo after excision of a skin melanoma, developed a painless progressive obstructive jaundice. At operation a melanoma within the distal third of the common bile duct was found. There were no other secondaries within the abdomen. The common bile duct, including the tumor, was resected and anastomosed with Roux-en-Y jejunal limb. The patient survived 31 mo without any sign of local recurrence and was submitted to three other operations for axillar and brain secondaries, from which she finally died. Radical resection of metastatic melanoma to the common bile duct may result in lifelong relief of obstructive jaundice. It is safe and relatively easy to perform. In other cases, a less aggressive approach, stenting or bypass procedures, should be adopted.

© 2007 The WJG Press. All rights reserved.

Key words: Metastatic melanoma; Common bile duct; Jaundice

Colovic RB, Grubor NM, Jovanovic MD, Micev MT, Colovic NR. Metastatic melanoma to the common bile duct causing obstructive jaundice: A case report. *World J Gastroenterol* 2007; 13(5): 813-815

<http://www.wjgnet.com/1007-9327/13/813.asp>

INTRODUCTION

The great majority of malignant melanomas arise from the skin, squamous mucose membranes, retina, and

leptomeninges. They can metastasize to almost every organ of the body. The intraabdominal viscera are involved in diffuse metastatic disease in approximately 60% of patients^[1-3]. DasGupta and Brasfield in 1964 reported a 15% involvement of the gallbladder and 6% involvement of the remainder of the biliary tree^[2].

CASE REPORT

A 46-year-old woman was admitted to our hospital with painless progressive obstructive jaundice. Previously she had been submitted to excision of a skin melanoma on the back in a local hospital. Our laboratory data showed an elevated bilirubin (235.9 $\mu\text{mol/L}$, direct bilirubin 138.4 $\mu\text{mol/L}$), alkaline phosphatase (1540 U/L), gamma GT (638 U/L), SGOT (525 U/L), SGPT (870/U/L), and ESR (76/1 h). Ultrasonography showed a dilated gallbladder and common bile duct and suspected stone within the distal third of the common bile duct. In December 1996, a cholecystectomy was performed. An operative cholangiography through the cystic duct showed a tumorous mass within the distal common bile duct causing almost complete obstruction (Figure 1). The duodenum was mobilized, the common bile duct was opened and a piece of dark soft tumour tissue was removed. Frozen section biopsy showed a malignant melanoma. The common bile duct was then carefully dissected and transected 1 cm away from the lower edge of the tumor. The duct was proximally resected close to the convergence of the hepatic ducts. The distal end of the common bile duct was oversewn and the proximal end was anastomosed with Roux-en-Y jejunal limb. A careful search showed no other secondaries within the abdomen.

The recovery was uneventful. Histopathology revealed ill-defined epithelioid tumor cell aggregates infiltrating bile ducts and the surrounding fibro-adipose structures. There was strong brown granular intracytoplasmic pigmentation in some parts of the infiltrate (Figures 2 and 3). Fontana-Masson histochemical staining confirmed melanin pigment and positive strong anti-S100 protein and anti-HMB45 immunoreactivity with weak positivity to anti-melan A antibodies proved the diagnosis of a metastatic melanoma. The patient survived 31 mo without any signs of local recurrence. She had to be submitted to another three surgeries for the axillar and brain secondaries, which were a final cause of her death.

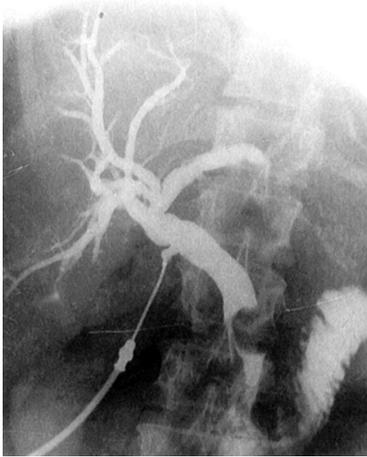


Figure 1 Showing filling defect within the distal common bile duct causing almost complete obstruction.

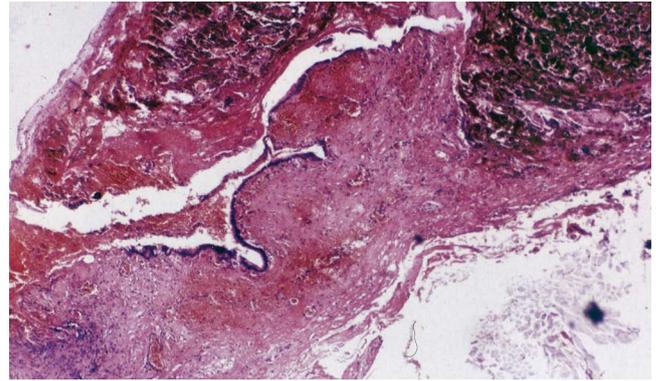


Figure 2 A pigmented malignant tumour evidently infiltrates extrahepatic bile duct. Later histochemical and immunohistochemical analyses showed melanoma cells (HE, $\times 13$).

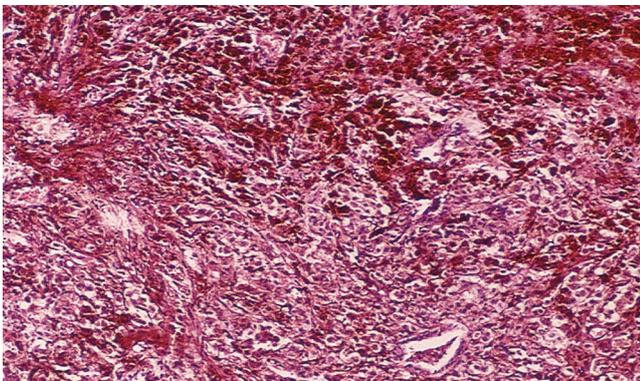


Figure 3 Higher magnification of the same tumour field showed insular and trabecular-to-solid histological organization of melanoma cells. Most of the cells were hyperpigmented with massive intracytoplasmic melanosome granules (HE, $\times 64$).

exact preoperative diagnosis of the tumour is established, almost exclusively when localised at the Vater's papilla so that a biopsy can be taken^[18], or on the basis of histologic examination of a small fragment of the tissue retrieved from the bile duct with a Dormia basket after papilotomy^[19].

The current literature has few recommendations with regard to appropriate treatment of the melanoma metastases to the bile ducts^[14,19]. It seems reasonable to perform radical surgical resection in patients with potentially curable disease and isolated deposits in the bile duct^[14,19]. We believe it is particularly indicated if resection is not too dangerous and if it is relatively easy to perform, as in the present case. A resection may be necessary in cases of serious hematuria^[10]. If there is a concurrent metastatic disease elsewhere, it is prudent to adopt a less aggressive approach in order to relieve obstructive jaundice, such as the bypass procedures^[14], or stenting^[18,19].

DISCUSSION

The first case of a metastatic melanoma to the bile duct was described by Spigelberg in 1895, and the second by Duval in 1908^[4]. A search throughout Medline showed 18 metastatic melanomas to the common bile duct reported so far^[4-19]. Within this period, about 20 cases of primary malignant melanomas of the common bile duct have been described. However, in spite of confirmatory immunohistochemical stains, electron microscopic studies, the presence of junctional activity adjacent to the tumour, and tests to rule out other possible remote or concurrent primary sites, absolute exclusion of a metastatic melanoma from an unknown occult site or regressed site is not entirely possible^[20]. The melanoma secondaries usually arise from the primary skin lesion but occasionally they may arise from primary or metastatic melanoma of the gallbladder^[7,12,16].

Patients with metastatic melanoma to the common bile duct usually present with progressive painless obstructive jaundice^[4,19]. Rarely the patients have hematuria^[10], pain^[5,8], or cholangitis^[19]. Laboratory data show a cholestatic jaundice. On ultrasonography this tumour is echogenic with little or no acoustic shadowing^[9]. The

REFERENCES

- 1 **Pomerantz H**, Margolin HN. Metastases to the gastrointestinal tract from malignant melanoma. *Am J Roentgenol Radium Ther Nucl Med* 1962; **88**: 712-717
- 2 **Dasgupta TK**, Brasfield RD. Metastatic melanoma of the gastrointestinal tract. *Arch Surg* 1964; **88**: 969-973
- 3 **Patel JK**, Didolkar MS, Pickren JW, Moore RH. Metastatic pattern of malignant melanoma. A study of 216 autopsy cases. *Am J Surg* 1978; **135**: 807-810
- 4 **Cohen AJ**, Thompson LD, Jaques DP, d'Avis JC. Biliary tract melanoma. *Mil Med* 1990; **155**: 5-8
- 5 **Zaide EC**. Malignant melanoma of the choledochus. *Arq Oncol* 1963; **26**: 254-255
- 6 **Cole HS**, Freston JW. Recurrent melanoma presenting with obstructive jaundice. Report of two cases. *Rocky Mt Med J* 1973; **70**: 42-46
- 7 **Armbruster C**. Pancreatocephaloduodenectomy for melanoma metastasis in the terminal ductus choledochus. *Zentralbl Chir* 1973; **98**: 681-682
- 8 **Bowdler DA**, Leach RD. Metastatic intrabiliary melanoma. *Clin Oncol* 1982; **8**: 251-255
- 9 **Daunt N**, King DM. Metastatic melanoma in the biliary tree. *Br J Radiol* 1982; **55**: 873-874
- 10 **McArthur MS**, Teergarden DK. Metastatic melanoma presenting as obstructive jaundice with hemobilia. *Am J Surg* 1983; **145**: 830-832

- 11 **O'Connell JB**, Whittemore DM, Russell JC, Ellis WA, Becker DR. Malignant melanoma metastatic to the cystic and common bile ducts. *Cancer* 1984; **53**: 184-186
- 12 **Verbanck JJ**, Rutgeerts LJ, van Aelst FJ, Tytgat JH, Decoster JM, Noyez DN, Theunynck PJ, Geboes KJ. Primary malignant melanoma of the gallbladder, metastatic to the common bile duct. *Gastroenterology* 1986; **91**: 214-218
- 13 **Kohler B**, Riemann JF. Obstructive jaundice due to an intraductal melanoma metastasis. *Endoscopy* 1987; **19**: 79-80
- 14 **England MD**, Sarr MG. Metastatic melanoma: an unusual cause of obstructive jaundice. *Surgery* 1990; **107**: 595-596
- 15 **Parquier JN**, Peetrons P, Liénard D, Maisonnier H, Jeanmart L. Jaundice secondary to a metastasis of a malignant melanoma at the level of the common bile duct. *J Belge Radiol* 1991; **74**: 201-204
- 16 **Zhang ZD**, Myles J, Pai RP, Howard JM. Malignant melanoma of the biliary tract: a case report. *Surgery* 1991; **109**: 323-328
- 17 **Thompson JF**, Mathur MN, Coates AS. Common bile duct obstruction due to intraluminal metastatic melanoma. *Aust N Z J Surg* 1993; **63**: 502-504
- 18 **Sans M**, Llach J, Bordas JM, Andreu V, Campo A, Castells A, Mondelo E, Terés J, Rodés J. Metastatic malignant melanoma of the papilla of Vater: an unusual case of obstructive cholestasis treated with biliary prostheses. *Endoscopy* 1996; **28**: 791-792
- 19 **Garas G**, Bramston B, Edmunds SE. Malignant melanoma metastatic to the common bile duct. *J Gastroenterol Hepatol* 2000; **15**: 1348-1351
- 20 **Wagner MS**, Shoup M, Pickleman J, Yong S. Primary malignant melanoma of the common bile duct: a case report and review of the literature. *Arch Pathol Lab Med* 2000; **124**: 419-422

S- Editor Liu Y L- Editor Zhu LH E- Editor Ma WH