Primary malignant melanoma of the rectum presenting with lower gastrointestinal bleeding

Dear Editor,

Primary malignant melanoma of the gastrointestinal (GI) tract is a rare tumor with unfavorable prognosis and its early diagnosis is difficult [1,2]. Anorectal primary melanoma accounts for approximately 0.2-3% of all melanomas [1].

A 68-year-old woman was admitted in November 2008 to our hospital complaining of abdominal discomfort and lower gastrointestinal bleeding. She gave a history of gradual dizziness, fatigue, nausea, weakness and abdominal pain in the last 3 months.

Laboratory studies demonstrated low hemoglobin and hematocrit levels. Serum lactate dehydrogenase (LDH) level was 480 U/L (normal 120-243). The patient's serum carcinoembryonic antigen (CEA) and carbohydrate antigen CA 19-9 levels were normal. Physical examination revealed an irregular hard mass in the rectum. At colonoscopy a mass with bleeding and necrosis, 7 cm in diameter, almost obstructing the rectum was seen. Pathological examination of the rectal mass revealed tumor cells with pleomorphic hyperchromatic nuclei with distinct nucleoli and frequent mitotic figures. The tumor cells were present predominantly within the mucosa. Immunohistochemical stain for HMB 45 was strongly positive. The tumor cells were negative for LCA, pancytokeratin, cytokeratin 7, cytokeratin 20, CEA, synaptophysin and chromogranin. With the tumor been characterized as malignant melanoma, complete skin examination by a dermatologist and ocular examination by an ophthalmologist were performed and were negative. The patient was considered as suffering from primary malignant melanoma of the rectum.

Abdominopelvic computed tomography (CT) revealed a large (8 × 7 cm) rectal mass, splenic metastases (37 and 17 mm in diameter) and multiple liver metastases (the greatest 5×3 cm). Chest CT showed metastatic nodules in both lungs. Brain CT was normal.

The patient's performance status was 1. In January 2009, chemoimmunotherapy was started with cisplatin 75 mg/m^2 iv, day 1, temozolomide 150 mg/m^2 p.o., days 1-5 and interferon alpha 2b 5 million U/m^2 s.c. 3 times per week every 28 days. Re-evaluation after 2 cycles of treatment showed disease progression. Therefore, single-agent paclitaxel was administered as second-line treatment, again without response after 2 courses. The patient died 6 months after diagnosis.

The GI tract is not a recognized site of melanocyte migration during embryological development [3]. Therefore, the large bowel is assumed not to harbor a melanocyte population in adulthood. One hypothesis claims that primary melanomas of the GI tract arise from melanoblastic cells of the neural crest which migrate during embryogenesis [4]. Another hypothesis suggests that GI mucosal melanoma arises via the development of a heterotopic melanocyte population derived from primitive stem cells present within the gut [5].

In conclusion, primary malignant melanoma of the rectal region is rarely reported. Histological, immunohistochemical and ultrastructural features of our patient were consistent with malignant melanoma and, since there was no evidence of cutaneous and ocular primary melanoma, we concluded that the tumor was primary malignant melanoma originating from the rectum.

References

1. Malik A, Hull TL, Floruta C. What is the best surgical treatment for anorectal melanoma? Int J Colorectal Dis 2004; 19: 121-123.
2. Gutman M, Inbar M, Chaitchik S et al. Malignant melanoma of the mucous membranes. Eur J Surg Oncol 1992; 18: 307-312.
3. Jacobs-Cohen RJ, Wade PR, Gershon MD. Suppression of the melanogenic potential of migrating neural crest-derived cells by the branchial arches. Anat Rec 2002; 268: 16-26.
4. Bronner M, Cohen AM. Migratory patterns of cloned neural crest melanocytes injected into host chicken embryos. Proc Natl Acad Sci USA 1979; 76: 1843-1847.
5. Hong SS, Min YI, Yang SK et al. Melanosis of the colon and terminal ileum associated with primary malignant melanoma of the anorectum. Gastrointest Endosc 2006; 63: 886-888.

A.O. Kaya[1], H.S. Orhun-Yavuz[2], E. Ucgul[1], A. Kurt[3]

[1]Department of Medical Oncology, [2]Department of Pathology, [3]Department of Radiology, Ataturk Training and Research Hospital, Ankara, Turkey

Correspondence to: Ali Osman Kaya, MD. E-mail: aosmankaya@gmail.com