Primary melanoma of the gallbladder

Dear Editor,

A 69-year-old man presented with right upper quadrant fullness, epigastric pain and abdominal discomfort in May 2008. Ultrasonography of the abdomen showed that the gallbladder was twice the size of the normal with presence of increased segmental wall thickness. Subsequent MRI and MRCP revealed a hydropic gallbladder and in the junction of fundus-corpus of the gallbladder there was asymmetrically increased wall thickness and protrusion of a 3 cm mass with cystic necrotic areas. The patient underwent laparotomy and cholecystectomy. The microscopic examination of the gallbladder showed solid nests of neoplastic cells with frequent mitotic figures. Immunohistochemical analysis showed strong positivity for vimentin, HMB 45 and S100, while desmin, cytokeratin and AFP were negative. The diagnosis was malignant melanoma. A thorough search was made for an alternative primary site which included examination of the skin, proctoscopy, nasopharyngoscopy, and fundoscopy, all of which showed no abnormality. The patient did not have any history of cutaneous pigmented lesions. MRI of the brain was normal and a PET-CT to rule out metastatic disease was unremarkable. Follow up PET-CT in January 2009 showed bone metastasis. The patient started temozolomide 200 mg/m^2/day for 5 days every 4 weeks. PET-CT in May 2009, after 3 cycles, showed multiple new metastatic lesions located intraabdominally. Treatment was switched to fotemustine 100 mg/m^2 once weekly, every 3 weeks. After 3 cycles of chemotherapy PET-CT scan in August 2009 showed new metastatic lesions in the liver. He died on 1 January 2010.

Primary malignant melanoma of the gallbladder is a rare diagnosis. In gallbladder there are melanocytes because of the migration of melanin-producing cells from the neural crest during embryological development in the gallbladder mucosa. This makes the development of primary gallbladder melanoma theoretically possible [1]. In addition, junctional activity, which is frequently seen in primary melanoma of mucous membranes [2,3], was also shown to be present in primary melanoma of the gallbladder [3]. The distinction between primary and metastatic lesions can be difficult in terms of the histopathological features alone. Metastatic disease tends to present as multiple, flat and infiltrative lesions, whereas primary lesions tend to be solitary and polypoid as in our case. Literature suggests that the following criteria must be met before a diagnosis of primary malignant melanoma of the gallbladder can be made: (i) tumors must be solitary and arise from the mucosal surface of the gallbladder; (ii) be either papillary or polypoid; (iii) must have a presence of junctional melanocitary component; (iv) other primary sites should be excluded by thorough history taking, examination, and investigation [1].

Although junctional melanocitary component has been associated with primary lesions, junctional activity in metastatic tumors have been previously reported in the literature [2,4]. In our case melanocitary activity in the junctional region was not observed. This finding could be the due to relatively late presentation of the case to the clinic which resulted in destruction of junctional changes by the growth of the tumor [2]. Prognosis remains poor and the mean survival time is a mere 8.4 months with metastatic lesions; the prognosis of primary malignant melanoma of the gallbladder is 20.1 months with curative surgical treatment [5]. In our case, after removal of the primary lesion, the disease-free survival was about 7 months. Following diagnosis of metastatic disease temozolomide was initiated because of proven activity in metastatic melanoma. Further studies are needed for evaluation of the best treatment options in the adjuvant setting of this rare disease.

References

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