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Case Report

Hepatic and Peritoneal Melanoma Metastasis of Unknown Primary Origin: One Case Report and Literature Review

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Abstract

Metastatic melanoma with an unknown primary site (MUP) is a rare disease and accounts for approximately 2 - 9% of all melanomas. The most frequently observed areas of metastatic melanoma of unknown origin are regional lymph nodes, abdominal viscera, subcutaneous areas and tissues such as the brain and lungs. Quite severe cases of MUP have been reported especially in the liver but the double localization both in the liver and in the peritoneum is a first in our case.

Keywords: *Metastatic Melanoma; MUP; Liver*

Introduction

Most patients with melanoma have a primary site. The most frequently observed primary lesion site in order of frequency is the skin followed by the eyes and mucous membranes [1]. It is rare when we diagnose a melanoma without a primary site; and when it is the case, we call it MUP [2].

Das Gupta in the sixties defined MUP as a melanoma found in, lymph nodes (LNs), subcutaneous tissue, or visceral organs without a primary ocular, mucous or skin site [2]. Metastatic melanoma of unknown origin (MUP) is characterized by the presence of melanoma metastases to the lymph nodes, visceral sites or subcutaneous tissue in the absence of evidence of primary tumor despite careful skin examination and several others additional examinations in each part of the body [3].

Despite the evidence that the prognosis is similar or more favorable compared to melanoma with a known primary; MUPs often cause more stress and may require different approaches [4]. In this case, we presented a 30-year-old woman with diffuse hepatic and peritoneal infiltration related to malignant melanoma of unknown primary origin.

Case Report

A 30-year-old woman was referred to our hospital for abdominal distension and atypical diffused abdominal pain of 7 months duration associated with late postprandial vomiting. Abdominal ultrasound examination showed liver masses with perihepatic ascites. She was

apyretic, nonalcoholic and had no history of liver disease Physical examination showed an enlarged abdomen with a mass of the liver, and no skin abnormalities were observed. concerning biology: aspartate aminotransferase (AST), 41 IU/L (normal < 37); alanine aminotransferase (ALT), 10 IU/L (normal), alkaline phosphatase (ALP): 200 IU/L (normal Serum tumor markers of < 335); total bilirubin (TBIL): 3 mg/dL; γ-glutamyl transferase (γGTP): 117 IU/L (normal < 49) and C-reactive protein: 137 mg/dL.

All tumor markers: alpha-fetoprotein (AFP), carcinoembryonic antigen (CEA) and cancer antigen 199 (CA199) were all negative. an abdominopelvic Computed tomography (CT) scan showed multiple bi-lobar hepatic masses, enhanced early and heterogeneous in arterial phase after injection of contrast product, the largest of which are located in the left liver encompassing and invading the left hepatic vein, the portal trunk, and the inferior vena cava which is the seat of a tumor thrombus arriving in close contact with the median hepatic vein and the right portal branch which remain permeable, and the right liver, the largest of which is at the level of segment VII. On the pelvic floor, we note the presence of peritoneal tissue masses enhanced in a heterogeneous way, the most voluminous of which is located at the left sub-diaphragmatic level and of the left parieto-colic gutter measuring respectively 78 * 39 mm and 38 * 26 mm. A percutaneous liver biopsy was performed showing malignant cellular liver infiltration by the melanoma. Immunohistochemically, the results were positive in favor of malignant melanoma (HMB-45 +, Melan-A +). Careful examination of the patient's body revealed no primary lesion.

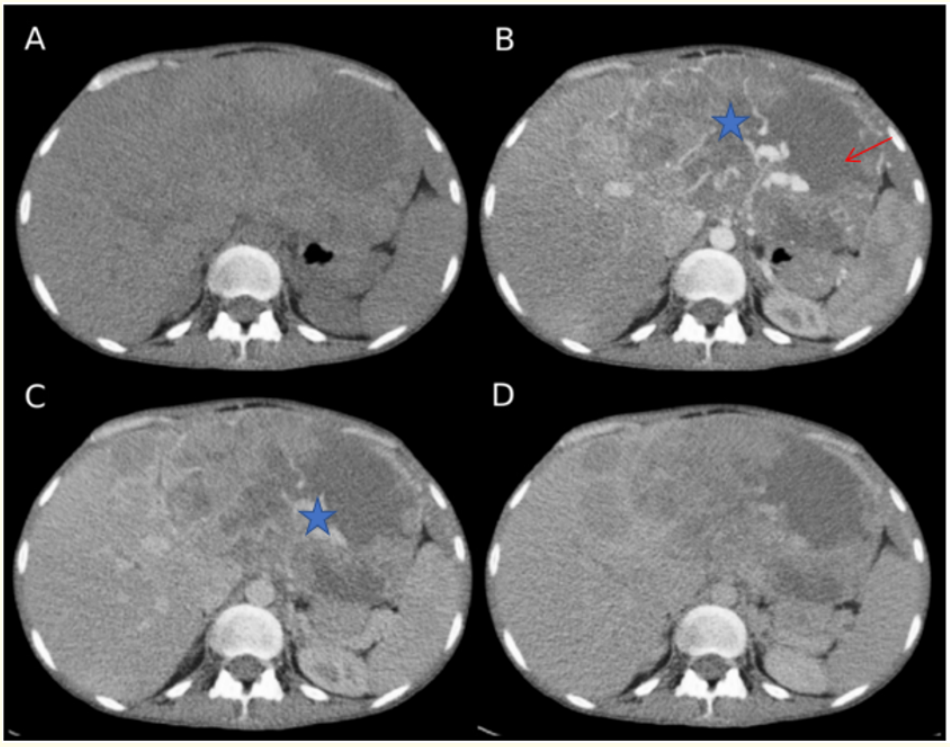

Figure 1: *Abdominal CT, axial slices (A: without injection of contrast medium, B: C + arterial phase, C: portal phase and D: late phase at 3 min): the most voluminous hepatic masses occupied the left liver (star), oval, well limited, heterogeneous density enhanced early in arterial phase (arrow), metastatic appearance.*

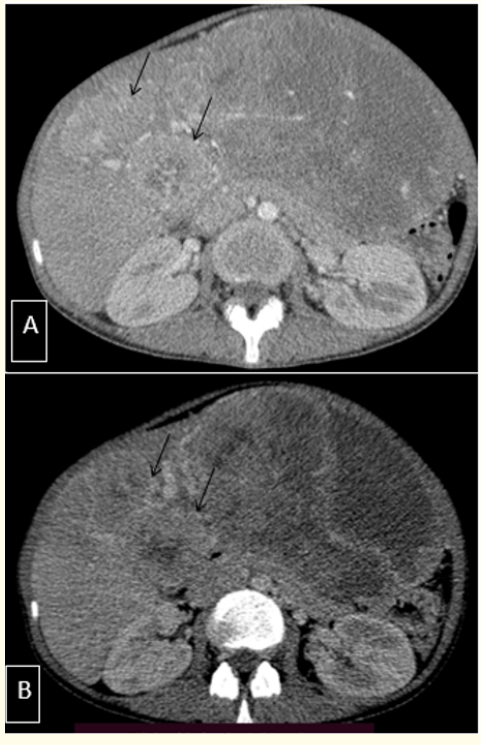

Figure 2: *Abdominal C + CT, arterial phase (A) and portal phase (B): other hepatic localization in segment V (arrows) similar to the hepatic mass of the left liver.*

Discussion

Malignant melanoma is cancer of melanocytic cells, usually of the skin. It can be very aggressive and responsible for metastases in up to 20% of patients [5]. Melanoma sometimes presents as an apparent metastasis to the viscera or lymph nodes without a known or identified primary lesion. It is estimated that these melanomas of unknown primary origin (MUP) represent between 3.7% and 6% of all incident melanomas [6].

Dasgupta., *et al*. proposed diagnostic criteria [2]: first, clinical, histological and immunohistochemical confirmation of metastatic melanoma, second, no history of excision of pigmented melanocytic lesions without histological examination, and finally, exclusion of unusual primary sites, including the oral, otolaryngological, urogenital ophthalmological and anal areas. The diagnosis of MUP in our case was based on the patient's clinical history, physical and biological examinations, morphological exploration and pathological findings. A gastroduodenal fibroscopy and a colonoscopy excluded any primary lesion [7].

According to a prevailing hypothesis, MUP has been suggested to result from spontaneous regression of melanoma in a known primary region associated with cell- and humoral-mediated immune mechanisms. [8].

Metastatic malignant melanoma causes dysfunction of hepatocyte cells which is usually not severe responsible for a moderate elevation of liver enzymes. Te., *et al*. [9] reported a case in which the patient's aminotransferase and LDH levels exceeded normal values by 100 times. Although the levels of aminotransferases and LDH in our patient were only slightly elevated.

According to the American Joint Committee on Cancer eighth edition cancer staging manual [10], MUP in LN indicates stage III disease, and MUP in visceral organs, soft tissues, including muscle and non-regional lymph nodes, indicates stage IV disease. Our patient had multiple melanomas in the liver and peritoneum, confirming the diagnosis of stage IV disease. In general, treatment options for metastatic malignant melanoma in the liver include hepatic resection, chemoembolization, hepatic intra-arterial chemotherapy, and systemic chemotherapy [8].

In patients with inoperable melanoma, the best treatment option is empirical systemic chemotherapy, taking into consideration their performance status. In the present case, our patient had multiple unresectable liver and peritoneal metastases. The decision was to send her to oncology for further treatment, unfortunately she passed away a month later.

Conclusion

In conclusion, we report here an unusual case in addition to hepatic infiltration, a metastatic peritoneal localization of melanoma of unknown primary origin. The predominant hypothesis for MUP involves spontaneous regression of melanoma from a known primary site.

This case testifies to the difficulty in making the diagnosis of hepatic infiltration with peritoneal metastasis due to melanoma of unknown primary origin.

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