MELANOMA METASTASES TO THE SMALL INTESTINE MESENTERY, GREATER OMENTUM AND PARIETAL PERITONEUM – CASE REPORT

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We present a case of a 58-year old female patient with melanoma metastases to the greater omentum, small intestine mesentery and parietal peritoneum without detection of clear-cut primary lesion. Here we present a case of a female patient with melanoma metastases to the greater omentum, small intestine mesentery and parietal peritoneum without detection of clear-cut primary lesion.

CASE REPORT

A 58-year old female patient J.N. (no 3833/08) was admitted to the Department of General and Vascular Surgery, Voivodeship Hospital of Traumatic Surgery in Warsaw, in the emergency setting due to abdominal pain and nausea that persisted for several days. Significant coexisting diseases included hy-
polythryoidism treated with hormonal substitution. At admission the patient was euthyreotic. Physical examination did not demonstrate signs of cancer cachexia. Lymph nodes accessible by palpation were not enlarged. Auscultation demonstrated normal intestinal peristalsis. Palpation demonstrated soft abdomen, without peritoneal signs. Well palpable, painful mass localized in the left mesogastric region was noted. Apart from that, the physical examination was unremarkable. Results of laboratory tests were normal and provided no information with regard to diagnosis. The patient underwent complete set of radiological examination in the emergency department. Plain film of the abdomen did not reveal signs of gastrointestinal obstruction or perforation. Abdominal computed tomography did not provide a clear diagnosis. It demonstrated a polycyclic, cystic-solid mass, 11x6.2 cm in size, located in the left mesogastric region, below the pancreas, to the front of the left kidney, probably originating from the large intestine. The uterus with an adjacent cyst was visualized in the pelvis minor. Lymph nodes accessible with palpation were not enlarged. No free fluid was detected in the peritoneal cavity. The other abdominal organs looked normal in the computed tomography imaging. Due to unclear findings in radiological studies and requirement of histological verification, the patient was qualified for colonoscopy. The whole large intestine and terminal part of the small intestine were visualized and no abnormalities were detected. Due to inconsistent findings in the computed tomography imaging and endoscopy, the patient was qualified for exploratory laparotomy. After reviewing rationale behind surgical treatment, possible complications and possible extension of the procedure depending on intraoperative findings, the patient signed consent to undergo the proposed surgical procedure.

A medial laparotomy was performed under general, intratracheal anesthesia. The following findings were noted intraoperatively: numerous pedunculated nodules, of various sizes, of the greater omentum, loosely hanging in the peritoneal cavity, two nodules approximately 5x6 cm and 4x2 cm in size, located near the splenic flexure of the colon, connected via a vascular peduncle with the major omentum and a very large nodule, 25x15 cm in size, connected with the mesentery of the transverse colon (fig. 1, 2). These nodules did not infiltrate organs of the abdominal cavity. Other intraperitoneal organs were carefully monitored. Apart from a small nodule located in the parietal peritoneum of the pelvis minor, no significant pathologies were detected. Lymph nodes accessible by palpation were not enlarged. All the tumors were completely removed. The greater omentum was resected. A nodule from the pelvis minor was resected with a margin of healthy tissue. The specimens were sent for histopathological examination. The surgical procedure took 3 hours.

No significant drop of blood pressure or significant blood loss were recorded during the
surgical procedure. On postoperative day 1 the patient was monitored in a recovery room. On day 2 the patient was transferred to a general room and mobilized. On day 4 the patient was discharged home in good general and local condition. During the hospitalization there were no significant complications that would require repeated intervention. Histopathological examination of the specimens demonstrated that the nodules were composed of a solid, white-creamy tissue and numerous cysts filled with colloid and a spongy tissue with hemorrhages. Microscopic image suggested that melanoma metastases from epithelioid and spindle cells was the most probable diagnosis. Immunohistochemistry confirmed this suspicion, demonstrating a positive reaction to HMB45 antibody and CD117 receptor. Furthermore vimentin was found to be present and a reaction for keratin (CKAE 1/3) was negative.

**DISCUSSION**

In 5-15% of cases, melanoma metastases are detected without prior determination of location of the primary lesion (7). Numerous authors relate it to possible spontaneous regression of the initial melanoma lesion. According to the literature data, the phenomenon of partial regression of the initial lesion is not that uncommon and occurs in approximately 10-35% of cases (8). Nevertheless complete disappearance of a skin lesion was reported only in approximately 40 patients (7). Most commonly the primary lesion is located in the skin. It usually develops from the previously existing pigmented naevus or directly from a healthy skin (9). The malignant transformation is characterized by uneven margins, inhomogeneous pigmentation and rapid enlargement of the lesion (6). More advanced cases of the lesions are usually accompanied by clinical symptoms: burning, pruritus, pain. Ulceration with bloody discharge can develop within the lesion. When lesions are located in the skin, they are quite easy to visualize and sample for histopathological examination. They can be removed completely with a 2 mm margin of healthy tissues or in fragments, when complete resection of a lesion is impossible (6).

In sporadic cases the primary lesion can be located outside the skin. Then most commonly it is located in the eye structures: chorioid, iris or ciliary body (5.2%). Ophthalmological examination is required in patients with suspected disseminated melanoma (10). Melanoma occurs in the oral mucosa in 1.3% cases. Then most commonly it is detected in the head and neck structures, such as sinuses, oral and nasal cavity (10). Less commonly the malignant process occurs in the rectoanal and genitourinary mucosa. Very rarely the primary lesion is detected in the gastrointestinal tract (10).

Mucosal melanoma carries very poor prognosis. Due to lack of early signs and symptoms, they are detected late, when the disease is very advanced. The lesion is not visible with a naked eye, but required additional radiological or endoscopic diagnostic procedures (10). Attempts to find a location of the primary lesion in the reported case, were unsuccessful. The patient had few pigmented naevi. Despite a detailed examination, none of them demonstrated signs of malignant growth. Local lymph nodes were not enlarged. Imaging studies, endoscopy of the gastrointestinal tract and ophthalmological consultations did not contribute to finding of the location of the primary lesion. Lack of clear-cut primary lesion may support cases of regression of such lesion, reported in the literature. Maybe the malignancy originated from one of visible pigmented naevi, but the malignant process underwent subsequent involution. Not even one naevus with uneven structure and pigmentation was visualized. Neither naevus induced clinical symptoms. On the other hand, the primary lesion might have been located at a site with difficult diagnostic access and therefore might have been overlooked in imaging and endoscopic studies. Positron emission tomography is a valuable diagnostic tool that could be helpful in the detection of the primary lesion. Unfortunately it could not be used in this case due to difficult access to this diagnostic modality (11).

Malignant melanoma very commonly and rapidly leads to formation of hematogenic metastases. According to the American data, 85% of patients with melanoma die of distant metastases. 5-year survival rate is only 10 – 30%. The metastases are usually located in the skin, subcutaneous tissue, lymph nodes, lungs, liver, brain, bones and gastrointestinal tract. Metastases to lungs and brain account for majority of melanoma deaths (12). Intraperi-
tional metastases are most commonly located in the liver, less commonly in the stomach, small intestine, colon, rectum and esophagus. Gastrointestinal metastases are detected during an autopsy in almost 60% of patients, while they are symptomatic only in approximately 2% of patients, inducing abdominal pain, nausea (13). They can cause gastrointestinal obstruction and require emergency surgical treatment in extreme cases. Metastases may be present as soon as the diagnosis is made or appear within a few years of curative treatment of the primary lesion.

Information of metastases to the greater omentum, mesentery or parietal peritoneum have been occasionally reported in the literature. Opric et al. analyzed a group of 15 patients with melanoma metastases to the intraperitoneal organs. They detected tumors in the greater omentum only in one case (14). Shamim MS reported a melanoma metastasis in the intestinal mesentery that originated from the oral and nasal mucosa. The tumor compressed small intestine and induced signs and symptoms of intestinal obstruction that required surgical treatment (15). Hirota T et al. presented a case of melanoma metastasis to the mesentery of the small intestine that ruptured into the peritoneal cavity, causing acute abdomen and an abscess in the pelvis minor. The tumor had 10 cm in diameter and did not communicate with the intestine (16). Literature in the field of radiological diagnostics reported on detection of metastases in the mesentery of the small intestine or greater omentum. Oddson et al. report 3 such cases (17), Goldstein et al. published data on 12 patients (18), and Wenzel E. et Erbe 4 such cases (19).

When we confronted our case with available literature, we did not found any publication that would report melanoma metastases as numerous, isolated nodules located in the mesentery of the small intestine and greater omentum, without signs and symptoms of gastrointestinal obstruction or other features of advanced malignancy.

CONCLUSION

Detection of numerous, pedunculated intraperitoneal nodules without any other evidence of disseminated malignancy, requires extended imaging studies, detailed dermatological, ophthalmological, endoscopic examination to exclude the presence of malignant melanoma.

REFERENCES