# THE CHALLENGES IN SCIENCE OF NOWADAYS

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## INCIDENTALLY DIAGNOSED MALIGNANT PERITONEAL MESOTHELIOMA: A CASE REPORT

## Introduction.

Malignant peritoneal mesothelioma (MPM) is a rare and aggressive primary peritoneal malignancy. It is characterized by widespread multiple metastatic tumors originating from the mesothelial cells of the peritoneum. Malignant peritoneal mesothelioma (DMPM) accounts for 7-30% of all cases [1]. The incidence of MPM is 800 cases/year in the United States, the prevalence is similar in men and women [2]. The diagnosis is incidental in many patients, detected during abdominal operations in patients with indolent disease and may be co-incidental to other pathology. MPM is divided into 3 main histologic subtypes: epithelioid (50-70%), sarcomatoid (7-20%) and mixed (20-35%) forms [1].

Median survival for the whole group does not exceed 12 months. If surgical treatment is impossible, the overall survival after first-line chemotherapy is about 7 months. In oncological centers cytoreductive surgery with hyperthermic intraperitoneal chemotherapy (HIPEC) allows to achieve a median of survival from 3 to 5 years [3].

### Case report.

Patient D. was admitted to the Center of Reconstructive and Restorative Medicine (University Clinic) of Odessa National Medical University (UCONMedU) on September 15, 2016. On admission the patient reported having a hernial protrusion in the right inguinal area. Laparoscopic transabdominal preperitoneal repair of the right inguinal canal with a polypropylene implant was expected to perform. His medical history involved laparoscopic cholecystectomy 12 months ago for the gallstone disease, chronic calculous cholecystitis. 09/16/16 intraoperatively during laparoscopic revision of the abdominal cavity there were determined nodules up to 6 mm in diameter, rising above the surface of the peritoneum on the parietal peritoneum in the pelvis. Similar masses up to 5 mm in diameter were visualizated in the tissue of the greater omentum. The expansion of the right inner inguinal ring up to 3 cm in diameter was determined with the presence of a hernial sac in the defect of the inguinal canal. Considering the presence of suspicious nodules on the peritoneum, it was decided to perform biopsy of the nodules to clarify further treatment tactics. Excisional biopsy of the lesions with fragments of the peritoneum (8) was performed. According to the data of the urgent histological examination, the malignant nature of the growth cannot be excluded. It was decided to refuse hernioplasty of the inguinal canal; in order to perform immunohistochemical

## THE CHALLENGES IN SCIENCE OF NOWADAYS

analyses, an additional excisional biopsy of 6 nodes of the parietal peritoneum of the pelvis was performed. According to the data of histological and immunohistochemical analyses there is growth of well-differentiated epithelioid malignant mesothelioma of the peritoneum of the papillary type in the material.

The patient was discharged three days after surgery. Recommendations were given, cytoreductive surgery + HIPEC was indicated.

Patient D. was further examined, according to multispiral computed tomography with intravenous contrasting (MSCT), signs of peritoneal carcinomatosis, right-sided inguinal hernia. The patient was admitted to UCONMedU, the operation was performed on November 22, 2016. Intraoperatively, during the revision of the abdominal cavity, mainly along the flanks and on the greater omentum, to a lesser extent along the mesentery of the small intestine there were determined small (up to 8 mm) tumor nodes of soft elastic density, similar to those biopsied during the previous laparoscopic intervention. Similar nodes are determined on the appendix. In the pelvic cavity, the formation of a dense elastic consistency on the surface of the peritoneum. The upper floor of the abdominal cavity is without macroscopic signs of tumor growth. There are no signs of focal lesions of the parenchymal organs, and no other pathology has been identified. Cytoreductive operation CC0 was performed total pelvic peritonectomy and subtotal peritonectomy of the abdominal cavity enblock, omentectomy, argon plasma coagulation of tumor nodules of the mesentery of the small intestine, appendectomy. HIPEC was performed using the "closed abdomen" technique (cisplatin 150 mg). The postoperative period was complicated by intra-abdominal bleeding on the second postoperative day. During the revision of the abdominal cavity, the sources of muscle and retroperitoneal tissue bleeding were revealed, mainly along the left flank, diffusely in the pelvis. Hemostasis was performed with bipolar coagulation. The patient was discharged on the eighth day after the operation in a stable health status.

Outpatient follow-up continued. Screening MSCT showed no signs of recurrence of the disease, postoperative ventral hernia SMW1R0, inguinal hernia on the right. 04.24.19, in consideration of the absence of the relapse signs, the patient's complaints of pain in hernial protrusions, the patient underwent herniotomy,

## SCIENTIFIC COLLECTION «INTERCONF» | № 48

hernioplasty of the anterior abdominal wall with a lightweight polypropylene implant, Lichtenstein hernioplasty of the right inguinal canal with a lightweight polypropylene implant. Intraoperatively, the hernial sac of the postoperative ventral hernia was opened, during revision the contents of the hernial sac was the loop of the small intestine. The hernial sac was ligated, resected. On the visceral peritoneum of the small intestine, a single suspicious nodule with a diameter of up to 0.5 cm was biopsied. According to the data of histological examination it was oleogranuloma without signs of malignant growth. Outpatient follow-up continues, at the moment there is a remission. According to MSCT, there are no signs of the relapse of the disease. From the moment of detection of the disease 55 months passed.

## **Conclusions.**

Malignant peritoneal mesothelioma creates a challenge for the medical profession in terms of rare silent disease, diagnosis, complex treatment and poor prognosis.

In this case it was demonstrated an accidental finding of MMP during laparoscopy. It is notable for the fact, that there were no signs of the disease during laparoscopy about a year ago. After further examination, the patient underwent complete cytoreductive surgery and HIPEC, which is the current standard of treatment for MMP. In this case, the prompt diagnosis and the possibility of performing optimal special treatment made it possible to achieve remission in the patient.

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