Mesothelioma is a neoplasm originating from the mesothelial surface cell lining of the serous body, like pleura and peritoneum. It is reported the case of a 60-year old man who was submitted to images and laboratories exams because of a light growth of the prostatic volume. These tests showed an abdominal mass. A diagnostic laparoscopy with biopsy was performed and later on a laparotomy to achieve a peritonectomy with intraperitoneal chemotherapy. 

**Keywords:** Mesothelioma; Peritoneal neoplasms; Abdominal neoplasms; Chemotherapy; Case reports 

**INTRODUCTION**

Mesothelioma is a rare primary tumor of serous membranes(1), which habitually carries a poor prognosis. It is generally discovered in the advanced phase of the disease, due to the variety of clinical and radiological findings, which worsens its prognosis even further. The incidence of malignant mesothelioma in the United States of America is of merely 2.2 cases per million, and of these, only 20 to 40% are of peritoneal origin(2).

Most patients affected by this tumor have ascitis, abdominal pain, weight loss and an abdominal mass(2). Diagnostic laparoscopy with biopsy and immunohistochemistry are considered the gold standard for the diagnostic’s confirmation. Due to the low incidence of this neoplasm in the present region as well as scarce international medical literature, it is presented a case recently treated at this institution.

**CASE REPORT**

A 60-year-old male patient, asymptomatic, was submitted to urological evaluation because of urinary tract infection symptoms – dysuria and polakyuria. The patient denied any epidemiological factor related to asbestos exposure. Upon physical examination, a slightly increased prostatic volume was detected. This prompted a computed tomography of the total abdomen and pelvis, which showed ascitis and diffuse peritoneal thickening, with a 2.4 cm nodule in the pelvis with retrosigmoid projection, thus characterizing abdominal carcinomatosis.

In light of these findings, hematology, biochemistry, and tumoral marker tests were ordered, such as...
carcinoembryogenic antigen (CEA), CA 19.9, and alpha fetoprotein, which were all within limits of normal.

A PET-CT was indicated confirming areas of hyperuptake located in the region of the mesogastrium and right and left parietocolic gutters. Due to this finding, diagnostic laparoscopy was indicated, with biopsy of the greater omentum in which thickening was noted, besides a small quantity of ascitis, diverse thickenings of the pelvic peritoneum and of the parietocolic gutters. Once frozen, this biopsy revealed a mesothelioma (Figure 1).

After diagnostic confirmation by immunohistochemical testing, the patient was readmitted to the hospital after three days and submitted to laparotomy with removal of all greater omentum, ample peritoneectomy of the cavity, with removal of all affected tissues. Intraperitoneal chemotherapy was associated with hyperthermia with a perfusion pump, using oxaliplatin in glucose solution by open perfusion at 40 °C for 40 minutes, associated with the intravenous infusion of 5 FU and leucovorin, one hour before the peritoneal lavage under the oncologist’s supervision (Figure 2). The patient experienced nausea and vomiting on the third postoperative day, with no other relevant clinical symptoms, and was released from the hospital on the fifth postoperative day with no additional complications. The patient is doing well in his 13th postoperative month with periodical follow-up, and no evidence, to date, of local or systemic recurrence.

**DISCUSSION**

Malignant mesothelioma is a rare neoplasm of mesenchymal cells of the serous membranes, with an incidence of about one to two cases in every million inhabitants per year\(^{(1)}\). Simultaneous pleural and peritoneal involvement occurs in 30 to 40% of cases, and the exclusively peritoneal disease occurs in 10 to 20% of patients and is related to inhalation of asbestos fibers\(^{(3)}\), although the patient in question denied prior exposure to asbestos. Its incidence is more common in men (2:1) aged between 40 and 70 years. This case coincided with what is reported in literature regarding age and gender. Benign peritoneal mesotheliomas are also more prevalent in men, develop in the same age bracket as malignant mesotheliomas\(^{(4)}\), and are not related to exposure to asbestos.

It is generally considered a fatal tumor, with mean survival of only six to ten months; however, with the use of surgical resection associated with intraoperative chemotherapy with hyperthermia, the mean survival can reach 5 to 34 months\(^{(2)}\).

Benign mesotheliomas should be accompanied periodically, since there is the possibility of transformation into a malignant tumor. Even though it progresses slowly, survival for more than 12 years is rare.

The clinical picture for both tumors is generally non-specific. It may manifest as abdominal pain, ascitis, and changes in bowel function, but in most cases, the main finding is an abdominal mass, when the disease is discovered in its advanced phase, which worsens the prognosis even further\(^{(4)}\).

Diagnosis is made by imaging methods, such as computed tomography, nuclear magnetic resonance of the abdomen, and PET-CT. The definitive diagnosis is given by pathological examination\(^{(5)}\). The present patient showed no changes in the abovementioned laboratory tests.

Gonçalves et al. reported that there are no characteristic laboratory modifications, but that these tests may be useful in making differential diagnoses\(^{(6)}\). The differential diagnosis refers primarily to metastases
of primary tumors of the colon, ovaries, kidneys, and mesothelial serous carcinoma(5).

Due to the rare nature of the disease, there are no large studies published which compare the different therapeutic modalities. It is known that mesotheliomas show resistance to various cytotoxic agents, and that systemic chemotherapy has no significant impact on the natural history of the disease(7).

At present, the most adequate therapeutic approach is the association of peritoneectomy and intraoperative chemotherapy(6), since most of the time, the malignant mesothelioma of the peritoneum is discovered in its advanced phase, precluding its complete exeresis.

Intraperitoneal hyperthermic chemotherapy allows uniform perfusion at a high concentration of cytotoxic agents in the peritoneal cavity, with reduced systemic toxicity. The use of drugs warmed to 41 to 42 °C also exerts a cytotoxic effect. Another advantage of this technique is that it does not imply prolonging the hospitalization, and therefore, does not interfere with the future quality of life of the patient(3).

REFERENCES