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## Multicystic peritoneal mesothelioma

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### Summary

- Background:** Multicystic peritoneal mesothelioma is a rare disease. It is not certain if it is a benign or a borderline tumor. Although many therapeutic approaches have been used, complete cytoreductive surgery in combination with hyperthermic intraoperative intraperitoneal chemotherapy has gained acceptance.
- Case Report:** A case of multicystic peritoneal mesothelioma in a 16-year old patient is reported. The patient underwent complete cytoreduction and received intraoperative hyperthermic intraperitoneal chemotherapy. The patient is disease-free one year after surgery.
- Conclusions:** Complete cytoreductive surgery in combination with hyperthermic intraoperative intraperitoneal chemotherapy appears to be a rational therapeutic approach in multicystic peritoneal mesothelioma.
- key words:** **peritoneal mesothelioma • cytoreductive surgery • hyperthermic intraoperative intraperitoneal chemotherapy (HIPEC)**

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## BACKGROUND

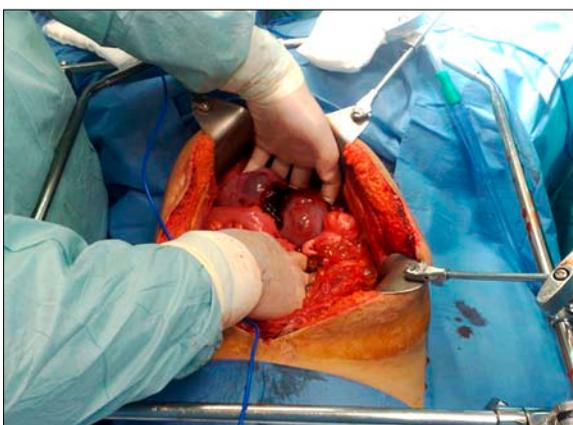
Multi-cystic peritoneal mesothelioma is a rare disease and less than 200 cases have been reported in the literature [1,2]. The short-term survival seems to be favorable but after debulking surgery the incidence of recurrence is high [3]. Long-term clinical study has not been reported so far. The disease generally affects women in reproductive age and is not related to asbestos exposure [1,2]. Cytoreductive surgery combined with hyperthermic intraperitoneal intraoperative chemotherapy (HIPEC) has been considered the standard of care for diffuse malignant peritoneal mesothelioma [4–6] and currently has gained acceptance for the treatment of multicystic peritoneal mesothelioma [7]. A rare case of multicystic peritoneal mesothelioma in a 16-year old patient is reported.

## CASE REPORT

A 16-year old female patient presented with vague abdominal discomfort and abdominal distention for the last two months. Ultrasound revealed the presence of ascites. Abdominal CT-scan confirmed the presence of ascites with peritoneal implants at the pelvis. Laparoscopy and biopsies showed the presence of multicystic peritoneal mesothelioma. The patient (Figure 1) underwent complete cytoreductive surgery and hyperthermic intraperitoneal intraoperative chemotherapy (Figure 2). Cytoreductive surgery was possible



**Figure 1.** Greater omentum of the patient with multicystic peritoneal mesothelioma.



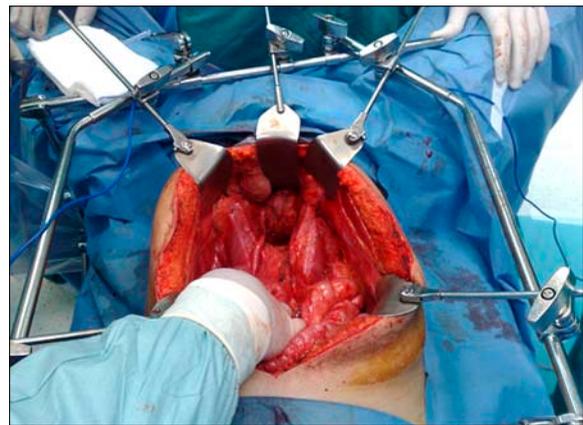
**Figure 2.** The pelvis of the patient with multicystic peritoneal mesothelioma.

by pelvic peritonectomy procedure (resection of the pelvic peritoneum en bloc with the internal female genitalia, and low anterior resection), greater and lesser omentectomy (Figure 3). The patient had an uneventful recovery and one year after initial treatment remains disease free. Final histopathology confirmed the initial diagnosis (Figure 4).

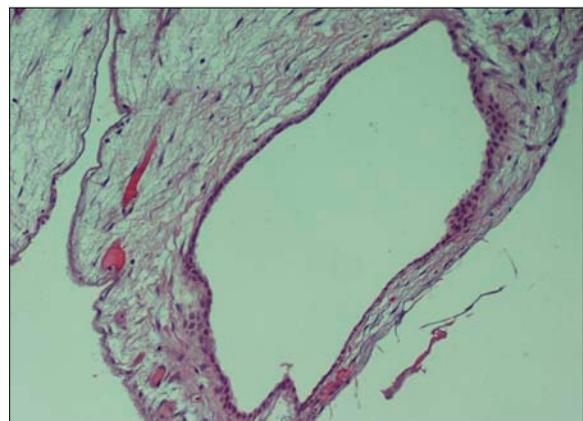
## DISCUSSION

Multicystic peritoneal mesothelioma is an intermediate between benign adenomatoid tumor and diffuse malignant peritoneal mesothelioma [2]. The natural history of the disease is still an issue of disagreement [1,2,8]. It is still discussed whether this is a benign or a border-line malignant neoplasm [2]. The recurrence rate in patients that underwent traditional debulking surgery is high [8,9]. A few patients with multicystic peritoneal mesothelioma have been reported to develop diffuse malignant peritoneal mesothelioma after treatment [10,11]. Complete surgical resection has been advocated by most authors as the treatment of choice. More conservative treatments have also been recommended such as laparoscopic debulking, irradiation, systemic or intraperitoneal chemotherapy, laser vaporization, percutaneous cyst drainage, hormone-therapy, sclero-therapy with anthracycline or simple observation with uncertain results [1,2].

The recurrence rate even after complete surgical resection is approximately 50% after 3–27 months [12,13]. Cytoreductive surgery with standard peritonectomy



**Figure 3.** The pelvis of the patient after pelvic peritonectomy.



**Figure 4.** Low grade peritoneal mesothelioma.

procedures in combination with HIPEC seems to be a rationale approach for the definitive treatment of this disease. Cytoreductive surgery makes possible complete resection of the tumor. The eradication of microscopic residual tumor is possible by heated intraperitoneal chemotherapy thus minimizing the risk of recurrence [14]. Modified cytoreductive surgery combined with HIPEC has been safely and effectively used in patients with recurrent multicystic peritoneal mesothelioma [7].

## CONCLUSIONS

Complete cytoreductive surgery in combination with hyperthermic intraoperative intraperitoneal chemotherapy appears to be a rational therapeutic approach in multicystic peritoneal mesothelioma.

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