Update on the management of malignant peritoneal mesothelioma

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- Majority of patients: receive only palliative care or systemic chemotherapy with cisplatin and pemetrexed or cisplatin and gemcitabine
- The opportunity to improve patient survival with surgical therapy was lost in a significant number of patients with MPM.
- Recommendations for intervention with CRS accompanied by HIPEC as the first line of treatment whenever possible
- Supplemented by adjuvant normothermic intraperitoneal chemotherapy long-term (NIPEC-LT) shown to be successful in single institution studies

Diagnosis and patient selection

- The most common symptoms of MPM are pain (dry type) and/or ascites (wet type).
- In most cases, histopathology of the tumor shows epithelioid features, although it is difficult to predict biologic behavior (aggressive vs. indolent) based on histopathology alone.
- Sarcomatoid or biphasic histologic types are usually excluded from CRS and HIPEC.

CRS

- Baratti et al. (37) reported a 5-year survival rate with selective peritonectomy of 40%, as compared with a survival rate of 63.9% with complete parietal peritonectomy (P=0.0269).
- MPM has a pattern of intraperitoneal dissemination considerably different from that of other malignancies with metastases to peritoneal surfaces.
- The redistribution characteristic of mucinous appendiceal tumor with relative sparing of small bowel and its mesentery is rarely observed.
- Parietal peritoneal surfaces are typically diffusely involved, and extensive peritonectomy is usually required.

A unique finding in MPM is extensive involvement of small- and large-bowel mesenteries, with sparing of the surface of the bowel.

HIPEC

- Standard recommendations include the use of a platinum-based agent such as cisplatin if renal function is adequate
- Different chemotherapeutic options have been explored, including high-dose **cisplatin (250 mg/m2)**, cisplatin plus doxorubicin, cisplatin plus mitomycin, and mitomycin alone
- One option is to use bidirectional chemotherapy by adding systemic ifosfamide plus mesna disulfide by continuous infusion for the 90 minutes of HIPEC with doxorubicin and cisplatin

NIPEC-LT

- CRS plus HIPEC plus NIPEC-LT
- The adjuvant treatment was delivered through an intraperitoneal port placed at the time of CRS.

Pemetrexed at 500 mg/m2 intraperitoneal was combined with cisplatin 75 mg/m2 intravenously every 3 weeks for 6 cycles.

- This non-randomized trial showed a statistically beneficial effect with a P value of 0.01.

Contrast of CRS for MPM versus gastrointestinal cancer

- Data would suggest that patients with MPM with significant debulking yet incomplete cytoreduction, significantly benefit from the use of HIPEC.
- *CC-0 to CC-1 cytoreduction is always the goal, an incomplete cytoreduction plus HIPEC is a rationale management plan in MPM*