Special Session (Mon, 21 Sep, 14:00−15:00)
Management of peritoneal disease

43 INVITED

Present and future of HIPEC (hyperthermic intraperitoneal chemotherapy) in colorectal carcinomatosis

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In 2009, the treatment of colorectal peritoneal carcinomatosis (PC) with curative intent must be proposed in selected patients. More and more guidelines have included this therapy. The principle is to perform a complete cytoreductive surgery (CRS) to treat the visible tumour disease (>1 mm), and to use HIPEC to treat the non visible remaining tumour disease. HIPEC is contraindicated if the first step (complete cytoreductive surgery) is not reached. Postoperative mortality rate is acceptable, ranging from 4 to 8%. Two large multicenter registries including more than 500 patients treated with this combined approach reported median survival of more than 30 months and 5-year survival of more than 30% [1,2]. When considering the results of experimented centres, 5-year survival rate range between 40 and 50% [3−5]. This is similar to the results obtained with hepatectomy for liver metastases, leading us to consider that peritoneum is an organ like liver and that using the good therapy for each organ results in the same survival [6].
Indications of CRS plus HIPEC concerns the patients with a good general status, with no extraperitoneal localization and with a peritoneal score extent (Sugarbaker's index) lower than 20−24.Techniques of HIPEC are multiple and not yet standardized.
A randomized Dutch trial compared classical systemic chemotherapy to CRS + HIPEC with mitomycin C: 2-year survival rate was 16% in the control group versus 43% in the HIPEC group ($p = 0.01$) [7]. A non randomized study compared, for similar patients (PC was potentially resectable in both groups) recent sytemic chemotherapy to CRS +HIPEC with oxaliplatin: median survival was 24 months in the first group versus 63 months in the second [5]. So, the package CRS + HIPEC seems efficient, with a predominant impact of complete CRS. The next step is to appreciate the real impact of HIPEC by itself: a multicentric randomized trial is on going in France comparing, after complete CRS, HIPEC versus no HIPEC.
A new concept is to make effort to treat PC earlier. Treating PC at an early stage is less morbid and gives better survival. But the only way to early detect PC is to perform a second look. This was successfully proposed to patients presenting a high-risk to develop PC: asymptomatic PC was discovered and treated in 55% of the patients [8]. This study also showed that HIPEC should be performed even if no macroscopic PC was found. In these high-risk patients, a randomized trial comparing the classical attitude (adjuvant systemic chemotherapy alone) to the same plus second-look and HIPEC will begin soon.

References

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[5] Elias et al. J Clin Oncol 2009; 27: 681.
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44 INVITED

Comprehensive management of gastrointestinal cancer: Focus on appendiceal mucinous neoplasms, primary gastric cancer and gastric cancer with peritoneal seeding

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Appendiceal mucinous neoplasms with peritoneal metastases are currently treated as a standard of care using cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. In order to make this assessment of data regarding management of this disease long term (20 year) follow-up was necessary.
Advanced gastric cancer at stage III or resected stage IV has a poor prognosis. A recent meta-analysis included randomized studies testing all forms of intraperitoneal chemotherapy. Ten were appropriate for data extraction. A significant improvement in survival was seen when chemotherapy was added to gastrectomy (HR = 0.60; 95% CI = 0.43−0.83; $p = 0.002$). The use of chemotherapy was associated with an increased risk of intraabdominal abscess and neutropenia.
In treating gastric cancer with peritoneal seeding, perioperative intraperitoneal chemotherapy when added to gastrectomy will prolong survival if the treatments can be safely completed. Patient selection for these modest improvements in survival is important because the treatments are of necessity very aggressive. There are a few long term survivors (10%).

Special Session (Mon, 21 Sep, 14:00−15:00)
Advances in fertility preservation for children and adolescents with cancer

45 INVITED

Improving success rates of sperm banking in adolescents

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Adolescent boys are excellent candidates for banking sperm before their cancer treatment. They often have malignancies, such as testicular cancer or Hodgkin lymphoma that have high rates of long-term survival. Once they have reached the stage of puberty in which spermatogenesis occurs, a number of recent surveys show that most have semen quality quite adequate for cryopreservation, particularly with modern infertility treatments such as in vitro fertilization with intracytoplasmic sperm injection.
However, the percentage of eligible teens who bank sperm is far from optimal. In many cancer centers in the United States and Europe. Some of the lack is due to failure to provide education and referrals on the part of the oncology treatment team. Recent efforts have focused on improving oncologists' knowledge about the benefits of sperm banking, producing appropriate patient education materials, and encouraging the involvement of oncology nurses and social workers in the process of counseling the family. It is also important to have a sperm bank either within the oncology treatment center or in a convenient location nearby. In the United States, some sperm banks offer express mail kits so that semen can be collected at home, mixed with a cryopreservative, and sent to a more distant laboratory. Some loss of semen quality is likely, but it is a better option than foregoing fertility preservation.
Patient and family factors also can be barriers to banking sperm. In the United States, out-of-pocket costs may not be affordable for poor or working class families, although some subsidies and payment plans are available. In Europe and Japan, sperm banking is typically covered under national health plans. More, often psychosocial barriers include fear that banking sperm will delay cancer treatment (despite the fact that even one stored sample is worthwhile), difficulty for young men in producing a sample by masturbation when they feel ill and have little privacy, the emotional pressure of feeling that they could be losing their chance to have a biological child if they cannot produce a sample, cultural and/or religious beliefs about masturbation and assisted reproduction, difficulty envisioning wanting to be a father later on in life, and emotional pressure from parents that can exacerbate the young man's anxiety. In one British study, teens were less likely to produce a semen sample when a parent accompanied them to the sperm bank.
A number of solutions can overcome these psychosocial barriers. A professional or slightly older peer counselor can discuss the semen collection process and suggest ways to feel more comfortable. Having a sound-proofed, homelike collection room with erotic magazines or DVD's is highly desirable. Teens can be encouraged to bring a personal music player to shut out noise and help with the mood. Any erotic materials furnished in the collection room should be soft core and conventional, although for teens who are gay, same-sex materials could be provided. Teens who are more sexually experienced could also bring their own DVDs and even a small DVD player. Depending on the age of consent in a country, the patient's committed partner could help in semen collection by providing manual stimulation. Having a vibrator available may also help.
For teens who are too ill or anxious to provide a semen sample, options include a medical grade vibrator, electroejaculation under anesthesia, or sperm extraction from the epididymis by a urologist or andrologist.

46 INVITED

Advances in ovarian cryopreservation

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Advances in the diagnosis and treatment of childhood, adolescent and adult cancer have greatly increased the life expectancy of young women with cancer, but have resulted in a growing population of adolescent and adult long-term survivors of childhood malignancies, who may experience premature ovarian failure (POF) and infertility as a result of aggressive chemotherapy and radiotherapy treatments (indicated for both cancer and bone marrow transplantation (BMT)).