

PIPAC : Pressurized IntraPeritoneal Aerosol Chemotherapy

Dear Patient,

You are suffering from an advanced malignant tumor spreading within the abdominal cavity (peritoneal carcinosis). To date, only limited treatment options for peritoneal carcinosis are available, and the prognosis remains dismal.

In most patients, standard palliative chemotherapy has only modest response rates entailing only moderate improvements in prognosis. Further, adverse effects are frequently observed as a consequence of such therapies. An alternative to *systemic* chemotherapy consists of surgical removal of affected tissue combined with *intraoperative* administration of chemotherapy (HIPEC). This method can be very effective in selected patients. On the other hand, severe complications might result from this aggressive approach. As a consequence, elderly or very sick patients are not eligible for this treatment option.

Thanks to recent research efforts, we dispose nowadays of an efficient alternative therapy with less surgical risks and only little impact on quality of life. The method of Pressurized IntraPeritoneal Aerosol Chemotherapy (PIPAC) allows the dispersion of chemotherapeutic agents within the peritoneal cavity by means of minimal-invasive techniques („keyhole“-surgery, laparoscopy).

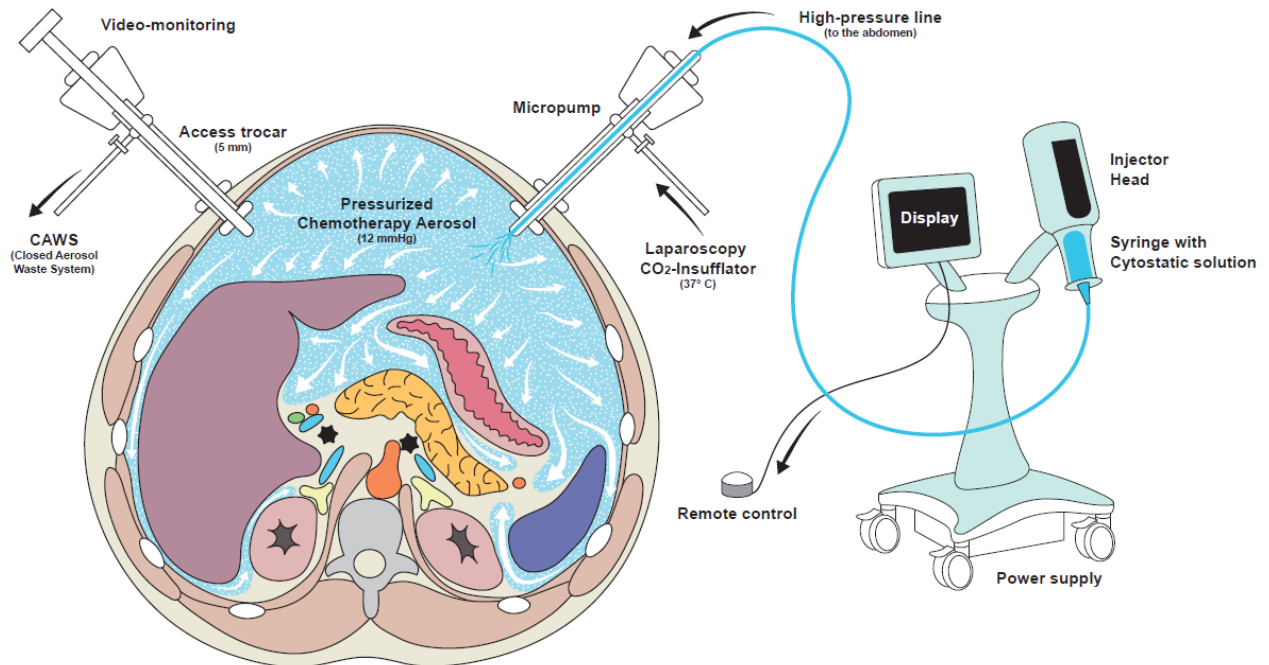
Even if PIPAC represents a new treatment modality, it is not an experimental treatment. Over a thousand applications have been performed in few specialized centers in Europe rendering promising results. An objective response to treatment, as well as slowing-down of tumor progression could be demonstrated, which in consequence might improve survival. Fortunately, only few adverse effects have been described thanks to the minimally-invasive surgical approach, and the risks of the surgical intervention are altogether marginal.

After in-depth discussion with other specialists for the treatment of cancer (tumorboard), we are convinced that you might benefit of this innovative treatment option.

Description of the procedure

PIPAC can only be applied by laparoscopy. The fumigation as a gas allows a homogeneous dispersion of chemotherapy within the peritoneal cavity; the administration under pressure (standard in laparoscopic surgery) increases the local tissue penetration of the molecules allowing high intratumoral concentrations. The procedure is performed under general anesthesia. Two trocars are inserted via two small incisions (5-12 mm) into the peritoneal cavity; the subsequent air insufflation grants the necessary workspace (**schema**). First, small tissue samples of the tumor knots are retrieved (biopsy). Then, the chemotherapy is dispersed as pressurized aerosol inside the peritoneal cavity, acting during 30 minutes. At the end of the procedure, the pressure is released and the gas aspirated, and the skin incisions are closed. The whole procedure lasts about 90 minutes. The length of hospital stay is usually 3 days. Today, 3 applications are recommended within 3 months (delay between the applications: 6 weeks). All patients are observed closely during the therapeutic cycle, and data is recorded in a secured and encrypted dedicated database.

PIPAC schema



Expected benefits

To date, the promising early results demonstrated encouraging response rates to PIPAC therapy, which came along with a reduction of disease symptoms and an expected survival benefit. Thanks to the gentle minimally-invasive procedure, complications (infections, hernia, adhesions) remain uncommon and quality of life is not or only little affected by the treatment. The repeated application of the therapy enhances its efficacy. We only plan for a short hospital stay (usually < 5 days).

Potential complications

- Frequent (50%) : Fever, abdominal pain, nausea.
- Rare (1%) : Intestinal lesion during the insertion of the trocars or the biopsies.
- Very rare : Toxic skin reaction, tumor metastases at the site of skin incision.

If you have any questions, please address yourself to the responsible physician and his team.

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