Regionaalhaigla

SELECTIVE INTRALESIONAL ISOTOPE THERAPY

Liver tumours are often treated with selective intralesional isotope therapy according to a particular case. The use of the therapeutic approach is decided by a team of doctors. During the treatment procedure, resin microspheres (20 to 60 micrometers in diameter) containing the radioactive isotope ^{90}Y are delivered into the blood vessels of the tumour via the artery that supplies the tumour with blood. This causes intense local irradiation and destruction of tumour cells. Local irradiation minimises damage to surrounding tissues.
During treatment the patient usually spends in-patient care in a single room with a toilet, sink and shower, but also TV, Internet (with and without a cable), phone, refrigerator, microwave oven and hairdryer.

Therapeutic indications mostly include liver tumours that are not surgically removable.

Contraindications:
- pregnancy;
- breast-feeding;
- severe damage to the liver or lungs;
- blood clotting disorders;
- severe general condition.

Notify your attending physician and study personnel if:
- you are pregnant;
- you are breastfeeding;
- you have experienced claustrophobia – the fear of enclosed spaces.

Preparation for treatment
During pre-treatment consultation, the details of the treatment procedure, the course of the treatment, the expected benefits and possible side-effects are explained and you are given individual guidelines for pre-treatment and post-treatment care.

Breast-feeding should be discontinued right before treatment.
Since pregnancy is a contraindication, a pregnancy test will be performed before the treatment procedure, if necessary. After treatment, avoid conception for at least six months.

If necessary, your treatment regimen will be adjusted and premedication will be prescribed before the treatment procedure.

Administration of treatment
On the day of treatment, the details of the treatment procedure, the course of treatment and radiation safety requirements will be explained again, and your medical history and blood samples will be collected. You must sign a consent form before proceeding with the treatment procedure.

At the planning stage of treatment, the volumes of the liver and the lesions will be measured using magnetic resonance imaging or computed tomography. The type of arterial blood supply to the lesion (or lesions) located in the liver will be examined and the branches of the hepatic arteries supplying the tumour will be occluded under angiographic control. 99mTc-labelled macroaggregated albumin will be injected into the prepared artery that supplies the tumour with blood. The distribution of the macroaggregated albumin in the body will be evaluated using scintigraphy.
Subsequently, ^{90}Y microspheres will be administered via the prepared artery into the target lesion under angiographic control. Administration is performed for 1 to 7 days according to the treatment regimen.

Following angiographic procedures, you should stay in bed until the next morning and you will be monitored for possible complications of puncture. A sandbag will be placed on the puncture site of the femoral artery for 2 to 6 hours, as necessary.
The day after administration of ^{90}Y microspheres, scintigraphy will be performed to determine the location of the administered radiopharmaceutical and necessary blood samples will be collected.

After the treatment procedure:

- the most common side effects of the procedure include: fatigue, abdominal pain, diarrhoea, nausea and vomiting, fever, temporary dysfunction of the liver, temporary decrease in haemoglobin in the blood;
- less common (2–8%) side effects may include: chronic abdominal pain, radiation damage due to the migration of microspheres (gastritis, pancreatitis, cholecystitis, gastrointestinal ulcer, gastrointestinal bleeding, pneumonitis, liver damage that may occur as hepatitis, liver fibrosis, portal hypertension, liver necrosis or acute liver failure);
- use oral analgesics for procedure-related pain (distension of the hepatic capsule due to swelling of the tumour);
- continue to take gastrointestinal protectants for at least 4 weeks;
- after treatment, you will receive medical follow-up; The first outpatient follow-up visit to assess the side effects and treatment response will take place in one month. Reassessments will take place every 2 to 3 months.

For additional information, please call 617 1221, 617 1216 or 617 1085.

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