High Intensity Focused Ultrasound (HIFU) for Renal Tumour
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Introduction

High intensity focused ultrasound (HIFU) is a new type of minimally invasive ablative therapy for renal cancer. Patients suffering from renal cancer may not be considered suitable for surgical procedures because of various reasons. HIFU is feasible as an ablative treatment for kidney lesions in these circumstances.

Benefits of HIFU

1. Minimally invasive nature. HIFU is produced by an extra-corporeal machine and targeted by ultrasound imaging towards the renal lesions. There is no need for any skin incision or puncture.

The procedure

Patients receiving HIFU will be anaesthetized and placed in a prone or decubitus position on the HIFU machine table. Anesthesia is needed to minimize excess bodily movement and to control ventilator effort during the HIFU procedure. HIFU is then administered using real-time ultrasonography guidance to achieve ablation of the renal lesion. Typically, the procedure lasts for 120 minutes.

Risk

Common risks:

1. The risk associated with anaesthesia
2. Skin erythema and discomfort at the site of contact with the HIFU energy transducer
3. Failure to completely ablate the tumour, requiring subsequent alternative therapies for the management of residual tumour

Uncommon risks:

1. Skin blistering at the site of contact with the HIFU energy

Preparation before the procedure

The patient should be fasted according to the suggestion of the anesthesiologist. Otherwise, no special preparation is necessary. The use of antiplatelet and/or anticoagulants should be stopped in the usual manner as before the surgical procedure.

Care after the procedure

The patient will be nursed in the ward or treatment centre after the procedure until the effect of anaesthesia wears off. Afterwards, he or she can be discharged. Reassessment imaging of the renal lesion will be performed 4 to 6 weeks later. Follow-up visits should be arranged 2 weeks after the procedure to observe for any untoward effects or complications.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.