仁安醫院
UNION HOSPITAL

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Operation Information

Holmium Laser Enucleation of the Prostate (HOLEP)

Introduction

Transurethral Holmium Laser Enucleation of the Prostate (HOLEP) is an effective minimally invasive surgery for treating lower urinary tract symptoms caused by benign prostatic hyperplasia (BPH). HOLEP is suitable for most patients with enlarged prostates, especially those with very large prostates (>80cc). HOLEP is recommended by international urological guidelines. Among various prostate surgeries, HOLEP offers the most durable results, with the best improvement in symptoms and urine flow after the operation.

HOLEP uses a Holmium (Ho:YAG) laser (wavelength 2,140 nm), which is a pulsed solid-state laser absorbed by water and water-containing tissues. The range of tissue coagulation and necrosis is limited to 3–4 mm, which is sufficient for hemostasis.

Outcomes

Through this operation, it can alleviate urethral obstruction and lower urinary tract symptoms caused by benign prostatic hyperplasia by using a holmium laser.

Procedures

1. The operation is performed endoscopically through the urethra, with no external wounds.
2. The operation is conducted under general or spinal anaesthesia.
3. The obstructive part of the prostate due to BPH is enucleated, fragmented, and immediately controlled for bleeding.
4. A urinary catheter is placed through the urethra to facilitate urination and irrigation.

Possible Risks and Complications

1. Complications of general anaesthesia (Permanent disability or death is rare, <1%)
   - Cardiovascular complications: acute myocardial infarction, stroke, deep vein thrombosis, severe pulmonary embolism
   - Respiratory complications: atelectasis, pneumonia, asthma attack, exacerbation of chronic bronchitis
   - Allergic reactions and shock
2. Complications related to the surgical procedure
   - Urinary tract infection
   - Prostate bleeding requiring transfusion
   - Blood clot retention
   - Inability to urinate
   - Retrograde ejaculation
   - Urethral stricture
   - Erectile dysfunction
   - Urinary incontinence
   - Injury to adjacent organs, including bladder perforation or injury to the urethra or rectum

(<1%)
- Death (<1%)

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all procedures are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

Pre-operative Preparations

1. Good hygiene can prevent surgical wound infection. Therefore, we advise you to clean up yourself on the day of the operation.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia. Please inform the doctor if you are taking medications that affect blood coagulation, such as Aspirin, Warfarin, Xarelto or Pradaxa and Chinese medicine.
4. You are required to have physical examination, blood tests, urine tests, chest X-ray test and electrocardiogram if needed. If any abnormality is indicated, you will be arranged to visit the specialist(s) before the operation.
5. No food or drink six hours before the operation.
6. Please change into a surgical gown after removing all belongings including undergarments, dentures, jewellery and contact lenses.
7. Please empty your bladder before the operation.

Post-operative Preparations

General

1. After general anaesthesia, you may:
   - experience discomfort in the throat after tracheal intubation.
   - experience side effects of anaesthesia including feeling tired, drowsy, nausea or vomiting. Inform the nurse if symptoms persist or worsen.
2. You should rest in bed on the first day after the operation.
3. The urinary catheter will be removed two days after the operation.
4. Mild pain or blood in urine may occur during urination in the first week after the operation, which can be managed with medication and hydration.
5. During the first week after the operation, there may be frequent urination, urgency, and light haematuria.
6. Occasionally there could be mild to moderate urinary incontinence, usually up to 2-4 weeks.

Diet

1. A normal diet may be resumed as instructed after recovery from anaesthesia.
2. Try to drink 8 cups of water daily (if not contraindicated).
3. Eat high-fiber foods and whole grains to prevent constipation.

Advice on Discharge

1. The medications should be taken as prescribed by the doctor. Please consult the doctor before resuming blood-thinning medications (e.g. Aspirin, Warfarin, Xarelto, Pradaxa) or Chinese medicine.
2. Avoid vigorous exercise for at least 4 weeks.
3. Avoid sexual activity for at least 4 weeks.
4. Usually, you can return to work 2–6 weeks after the operation, depending on the nature of your work.
5. Immediately consult your doctor or return to the hospital for professional attention in the event of difficulty to passing urine, shivering, high fever over 38^{o}C or 100.4^{o}F, or any other unusual symptoms, etc.
6. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

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Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification