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Radical Prostatectomy

A radical prostatectomy is an operation to totally remove the prostate gland usually in an attempt to cure localised prostate cancer. It is only recommended when the prostate cancer is thought to pose a significant risk to health in the future in men whose general health and life expectancy is thought sufficient to benefit from this.

The operation

It is common to lose a significant amount of blood during the operation but transfusion with donated blood can usually be avoided. This can be done by the anaesthetist collecting 3-4 units of your blood once anaesthetised and replacing this with synthetic plasma expanders. Dilute blood is then lost during surgery and can be replaced with the fresh concentrated previously collected blood after the bleeding stops. Aspirin, clopidogrel and other related blood thinning drugs should be stopped for 10 days pre-operatively.

A limited lower abdominal shave is performed when anaesthetised. Prophylactic intravenous antibiotics are administered. Anti-embolic stockings, sequential compression devices and subcutaneous blood thinning injections are used to minimise the risk of deep vein thromboses and pulmonary emboli.

The operation is performed under a general anaesthetic sometimes with an epidural catheter placed pre-operatively to be used for post-operative analgesia. The operation is performed through a lower abdominal vertical or horizontal incision. The first part of the operation usually involves removal of lymph glands from either side of the prostate. These may be examined immediately by a pathologist in theatre to exclude spread to the lymphatic system if there is suspicion of this. If lymphatic spread is found the operation is usually stopped as the disease is surgically incurable. Post-operatively hormonal treatment is usually instituted.

The prostate is removed by dissecting it from the bladder neck and urethra avoiding the erectile nerves when possible. The bladder neck is then joined to the urethral stump and a urethral catheter is left in through the penis into the bladder. A wound drain is left.

Post-operative progress

The epidural catheter if inserted is usually left for 48 hours. Oral fluids and diet are resumed early, sometimes even the same day. The abdominal wound drain is usually removed after several days. The urinary catheter usually remains in place for 5 - 7 days. This is then removed, sometimes following a cystogram (dye x-ray through the catheter) if no leak is shown from where the urethra was joined to the bladder. Discharge from hospital is usually between the 5th and 7th days post-operatively.

Most men would require 3 to 6 weeks off work depending on their occupation and progress.

Continence

Most patients experience initial incontinence due to the fact that the external urethral sphincter, that is responsible for normal control, is right at the site of the anastomosis between the bladder neck and urethra. Usually the control improves quickly although on occasions it may be quite a problem for some months. About 95% of people achieve about 95% continence eventually though this may take over 12 months. It is usual to require incontinence pads in the early post-operative period but 50% of men are down to one pad or less at a month.

Potency

A significant percentage of men lose their erections as a result of damage to the erectile nerves. This is an often unavoidable consequence of the operation as the nerves run so close to the prostate. Return of maximal erectile function can take a couple of years.

Post-operatively, help is available with the PDE5 agents Viagra, Cialis and Levitra, the use of intra-penile injections or the surgical insertion of a penile prosthesis.

Post-operative complications

Firstly there are the uncommon potential medical problems associated with any operation. These include the risk of cardiac or respiratory problems and deep vein thromboses, sometimes leading to pulmonary emboli. As well as the prophylactic measures described above, early mobilisation is important to reduce the risk of deep vein thromboses.

Early surgical complications include uncommon rectal injury, prolonged anastomotic leakage, and prolonged lymphatic drainage from the lymph node dissection and wound infection.

Late surgical complications include long term urinary incontinence. This is uncommon but can be treated by the simple injection of a paste around the urethral sphincter to improve the seal, male sling procedures or with the surgical implantation of an artificial urinary sphincter.

Follow-up

By 4-6 weeks after the operation, the serum PSA (prostate specific antigen) should have fallen to an unrecordable level if there is no residual disease. This simple blood test will therefore be repeated at intervals post-operatively and any elevation usually indicates recurrent disease. With the new ultra-sensitive PSA assays levels between 0.01 and 0.10 can be detected but these levels do not always indicate residual or recurrent disease.