

PROSTATE CANCER

Introduction:-

Prostate is a glandular organ present only in males. It surrounds the neck of bladder & the first part of urethra and contributes a secretion to the semen. The gland is conical in shape and measures 3 cm in vertical diameter and 4 cm in transverse diameter. It has got five lobes anterior, posterior, two lateral and a median lobe. Since the first part of the urethra pass through it any lesion in the prostate will produce difficulty in passing urine.

Diseases of the prostate gland:-

1) Prostatitis:-

This is the inflammation of the prostate gland due to bacterial infection.

2) Benign enlargement of the prostate:-

This is a non cancerous tumour of the prostate seen after the age of 50.
3, Cancer of the prostate:- This is the 4th most common cause of death from malignant diseases in males.

Cancer of the prostate.

Cancer of the prostate is directly linked with the male sex hormones (androgens). If the levels of sex hormone increases the growth rate of cancer also increases. It is found that after the removal of testes there is marked reduction in the size of tumour.

Site of tumour:-

Prostate cancer is seen mainly in the posterior lobe. Non cancerous enlargement is seen in other lobes.

Changes in the gland in cancer:-

The gland becomes hard with irregular surface with loss of normal lobulation. Histologically prostate cancer is an adeno carcinoma (cancer of the epithelial cells in the gland)

Growth :-

Growth rate is very fast in prostate cancer. The tumour compresses the urethra

and produce difficulty in urination.

Spread of tumour:-

Metastasis in cancer of prostate is very early.

1) Local spread:-

From the posterior lobe the cancer cells go to the lateral lobes and seminal vesicles. Tumour cells also move to the neck and base of the urinary bladder.

2) Lymphatic spread:-

Through the lymph vessels cancer cells reach the internal and external iliac group of lymph nodes. From there cells move to retroperitoneal (Behind the peritoneum) and mediastinal lymph nodes (in the chest)

3) Spread through the blood:-

Spread of cancer cells take place through the periprostatic venous plexus and reaches the vertebral veins while coughing and sneezing and finally enters the vertebral bodies of the lumbar vertebrae.

Signs and symptoms of prostate cancer:--

Signs and symptoms depend upon the stage of the cancer. The following symptoms may be seen.

1) No symptoms:-

Tumour is small and only in the posterior lobe. This is diagnosed accidentally.

2) Slight difficulty in urination:-

Here the tumour is enlarged and urethra is slightly compressed. Shortly there will be frequent urge for urination with difficult urination.

3) When the tumour spread to all nearby areas including neck of bladder and urethra there will be painful urination with bleeding. Urine comes drop by drop.

4) Retention of urine:-

When the urethra is completely compressed there will be retention of urine. This

can lead to hydronephrosis, renal failure ect. In this condition patient may get convulsions due to renal failure and finally coma.

5) Signs of metastasis:-

Some patients come with the signs and symptoms of metastasis.

- a) Lumbo sacral pain due to spread of cancer cells to lumbar and sacral vertebrae.
- b) Fracture of spine due to cancerous growth in the spine.
- c) Swelling, pain and fluid collection in the abdomen due to lesion in the abdomen.
- d) Respiratory complaints due to cancer of mediastinal lymphnodes and lungs.
- e) General weakness due to spread of cancer to different parts of the body.
- f) Anaemia due to involvement of bone marrow and increased destruction of RBCs.

Clinical examination :-

Includes per rectal examination to feel the prostate gland, palpation of abdomen to feel the swelling in kidneys and any tumours. Patient is examined from head to foot to find out any lesions.

Investigations:-

1) Complete blood investigations;-

RBC, WBC, Platelets, ESR, bleeding time, clotting time ect.

2) Urine analysis:-

Microscopic examination to detect pus cells, occult blood, casts, Crystals ect.

3) Renal function tests:-

Blood urea level, serum creatinine level, electrolyte level ect.

4) Serum acid phosphatase:-

Increased in cancer of prostate.

5) x-ray of the spine:-

To detect any tumour or fracture.

6) Ultra sonography:-

Gives idea about prostate,bladder,kidney ect.

7) C T scan:-

More detailed information about organs and tumour.

8) MRI of the spine:-

Gives detailed information about spine ,disc and nearby soft tissues.

9) Lymphangiography:-

Gives idea about lymphatic spread of cancer.

10) Biopsy to confirm cancer:-

Biopsy is taken from the tumour and is send for histopathological examination under the microscope.This will detect the presence of cancer cells.

Treatment:-

- 1) If there is retention of urine catheterisation is needed.
- 2) Dialysis if kidney failure.
- 3) If there is coma monitoring of all vital functions along with parenteral nutrition and electrolyte supply.
- 4) Specific treatment is prostatectomy(removal of prostate)

Partial prostatectomy :-

Here only the affected lobe is removed.

Radical prostatectomy :-

Total removal of prostate along with nearby lymphnodes.

5, Hormone therapy :-

Stilbestrol is given to reduce tumour growth. Since this treatment increases the chance for cardiovascular disease phosphorylated diethyle stilbesterol is used nowadays.

6) Chemotherapy:- Drugs like cyclophosphamide, cisoplatim ect are given.

7) Radiotherapy is also done for some cases.

8) Homoeopathy:-

Homoeopathic drugs like carcinocin, conium, sabal, crotalus, thuja, iodum, selinium, staphysagria, sulphur ect can be given according to symptoms. Constitutional homoeopathic medicine will give great relief and can increase the life span.

9) Yoga and meditation is also healpful.