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What's total knee replacement?

TOTAL KNEE replacement is a surgical method in which a diseased knee joint is excised and replaced with an assembly of metal-plastic components. This new joint is designed in such a way that it works like a painless knee joint. The knee joint becomes painful and deformed due to degenerative changes resulting from age or inflammatory diseases etc. Over time, the movement of the diseased knee joint becomes restricted and painful, denying the patient mobility.

The replacement of the painful knee joint with artificial prosthetic material brings about relief in pain, improves the alignment of the lower limb, and can also correct the various deformities of the knee. Generally, patients with severely painful osteoarthritic knee joints not reacting to long time conservative treatment should seek the surgery. In other inflammatory joint diseases like Rheumatoid arthritis, post-traumatic arthritis, total knee replacement is a good alternative.

It's very important to know that the patient who is undergoing surgery should have the ability to walk. Bed-ridden or wheel-chair bound patients are not good candidates for the surgery. If the pain is severe and there is no reaction to conservative surgical methods, then a patient should seriously consider undergoing this surgery.

Why is knee joint replacement a good alternative?

Long term use of analgesics or painkillers is not only ineffective in relieving knee pain but also dangerous to the body.

Knee replacement abolishes the need of analgesics and thus protects the body from their harmful consequences. The joint replacement surgery corrects the deformities of the leg — a bent or curved leg becomes straight due to improvement in alignment of the lower limb. The patient becomes more mobile, more active, more independent, and enjoys a better life post surgery.

What are the risks while undergoing a total knee replacement?

With necessary surgical precautions, the risks or complications of surgery are negligible. The danger of life threatening complications like pulmonary embolism, caused by blood clots in the blood vessels is low if preventive measures are undertaken in high risk patients.

KNEE REPLACED: A physical therapist measures the range of the knee with a goniometer, at a orthopaedic care centre. The patient who had a total knee replacement is already walking on his own.

Urinary tract infection, loosening of implants, delay in wound healing, infection, chronic pain and stiffness are the other sporadic complications. With the advancement of current technology, the risk of general and regional anaesthesia is rare.

What are the preparations pre-surgery?

Routine assessment of heart, lungs and blood is done to rule out or treat the diseases compromising the functional capacity of vital organs and putting the patient's life at risk.

Haemoglobin, complete blood count, urine routine tests and culture, chest x-ray and ECG etc. are the required tests. Renal and liver function test may become necessary in high risk patients.

What happens next when the patient is fully awake post-surgery?

Depending on the patient, active or passive physiotherapy is initiated to prevent stiffness and swelling. The patient is encouraged to perform the various exercises as taught before surgery. Physical therapy is an extremely crucial part of rehabilitation, requiring the patient's full participation for optimal outcome. Exercise includes gentle knee mobilisation, quadriceps-strengthening exercises; calf exercise and knee bending depending on the tolerance for pain.

It is important to make it sure that the wound is healing satisfactorily and there is no danger of infection. After the surgeon is assured of the adequate wound healing, and the danger of infection is averted, a patient may be sent home with the advice of physiotherapy and necessary precautions. Patients will be called 10-12 days post-surgery for the removal of sutures. Thereafter the progress of recovery should be assessed.

What precautions should the patient take at home?

Patients are advised to be extremely cautious while walking at home. Activities for the initial few weeks are limited to active knee exercises, walking inside the home, or climbing a few steps.

Swimming is a good exercise to strengthen muscle power and to free the joint from post-operative stiffness. Patient should not sit on the floor and should use western type of commode for the toilet. An attendant should always be around to make sure that patient does not loose balance and fall. Patients may need analgesics for the initial few days for relief from residual surgical pain.

What is the lifespan of TKR?

With proper design and normal lower limb alignment, the new joint lasts for fifteen years. After that, revision of the surgery may become necessary. Loosening of implants, infection or chronic pain and instability etc. may require repeat surgery earlier than the expected time.

Surgical results are marvellous provided proper care is taken before and after the surgery and the surgery is performed by experienced surgeons.

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