

“Is Joint Replacement Always the Answer?”

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COLUMN ARTICLE

Joint replacements have been deemed to be one of the most significant advances in the 21st century. Around 1 million joint replacements are performed in USA annually. Total Knee replacements (TKR) has increase 3 times in the past 20 years, and this is just projected to increase even further [1,2]. The majority of TKR (90%) are performed for knee osteoarthritis, affecting around 14% of people in USA [3]. Before TKR people with advanced knee osteoarthritis became housebound, now with the advent of TKR such patients can remain mobile. TKR per say has become a real game changer but still careful patient selection should be done and for that randomized controlled trials should be performed.

TKR is not without risks. Mortality in the first 3 months is about 0.5 to 1%. Other risks include DVT, pulmonary embolus, deep prosthetic infection, and periprosthetic fracture with an incidence ranging from 0.1 to 1% [4-6]. These risks increase with increasing age especially those with co morbid conditions [4,6]. Not only this, TKR is not universally successful with approximately 20% operated patients having residual pain 6 or more months postoperatively [7]. Then there are alternatives to TKR. Studies have shown that physical therapy can help the patient by diminishing pain and improving the functional status of the patients [8-10]. Although, well designed RCTs should be done for the comparison of TKR and its alternatives.

An ideal treatment should be tailor made for individual patient. Patients of OA knee differ in their primary complains from pain to functional impairment. Hence, an informed decision should be taken by the patient after weighing the pros and cons of the treatment modalities along with the risks involved. Skou., *et al.* [11] compared the outcome of 100 patients of OA knee treated by TKR followed by 12-weeks nonsurgical-treatment (TKR group) and patients receiving only nonsurgical treatment (nonsurgical-treatment group), consisting of exercise, education, dietary advice, insoles, and pain medication. The TKR group proved superior not only in providing pain relief but functional outcome also. It was also seen that 26% of patients in the nonsurgical-treatment group went ahead with TKR before the 12-month follow-up.

However, it was worth noting that more than two third of the patients of the nonsurgical-treatment group had significant improvement in the pain score without any significant risk of complications. In TKR group, several complications were seen which included 3 DVTs, 1 deep infection, 1 supracondylar fracture, and 3 patients ended up with stiffness requiring manipulation of knee under anesthesia. Only 1 patient of the nonsurgical-treatment group has stiffness requiring manipulation under anesthesia.

So TKR was proven to be superior in pain relief and functional improvement but this should not be taken as a blanket treatment for all the patients. Patients should weigh in the various treatment options along with the risks of such

procedures before making a choice to go ahead with such a procedure as although TKR is associated with higher levels of improvement but it is also associated with higher risk of adverse events. Also, long term studies should be designed to study the long-term effects of surgical as well as non-surgical treatment of OA knee.

In developing countries where everyone cannot afford personally or via insurance the exorbitant cost of the surgery, active conservative management should always be offered as the first line of treatment of OA knee. The life of the implant is limited and should be taken into account while considering a young patient for TKR. The surgery should be postponed by aggressive physical therapy as revision TKR surgeries have a poor outcome and are technically demanding.

The final decision should rest with the patients and studies to help make the patients an informed consent should be done. On one hand, for majority of patients the pain relief and improvement in the functional outcome provides a compelling reason to go ahead with TKR. On the other hand, patients who are not willing to take any risk for the above benefit should take up the non-surgical care.

The factors to be considered are

1. age of the patient
2. financial status
3. co morbid health conditions, and most importantly
4. severity of incapacitation of the patient before embarking on surgical management.

As the outlook and the priorities vary from patient to patient hence, it is essential that the treating doctor not only reveal all the treatment options to patient but also understand the requirements and respect the fears of the patient.

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