

SIMULTANEOUS BILATERAL TOTAL KNEE REPLACEMENT

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Bilateral Total knee replacement was done one after the other with a gap of few days. Later on Total knee replacement was done one after the other in same sitting, which is now routinely carried out at Apollo Health City. We have done simultaneous bilateral TKR in 126 patients (252 Knees). Duration of procedure is less (2½ hrs) and hospital stay is also less. Gait training and physiotherapy were easier. No incidence of complications such as DVT and deep infection were observed. This method is cost effective.

Key words: Bilateral total knee replacement.

INTRODUCTION

BILATERAL total knee replacement is a routine procedure done in our institute. Initially bilateral total knee replacement was performed in 2 stages with a gap of few days. Then we have done bilateral TKR, one knee after the other in single sitting of anaesthesia. Now we are doing bilateral TKR simultaneously in same sitting.

MATERIALS AND METHODS

We have done simultaneous bilateral TKR in 126 patients (252 knees) in our institute. All these cases were done from September 2005 to Jan 2009. And we have assessed this procedure in respect of duration of surgery, blood loss, intra operative and post operative complications, postoperative recovery, gait training and cost effectiveness (*Figs. 1-5*). Outcome is assessed using Knee society scoring system.

PROCEDURE

Under epidural anaesthesia/general anaesthesia, both knees painted and draped simultaneously.

Tourniquet applied to both knees simultaneously. Opening and soft tissue balancing done simultaneously in both knees.

Bone cuts at each step done one after the other with single set of instrumentation. Cementing and prosthetic fitting done one after the other allowing the cement to set. Tourniquet removed one after the other with 15 min gap. Closure done simultaneously in routine manner. Post operative care in intensive care unit for 24 to 48 hrs.

All patients received inj Fragmin (LMWH) as a prophylactic treatment for DVT.

Recovery time is same as single side TKR.

After surgery each patient was observed and assessed in terms of duration of surgery, blood loss, intra operative and post operative complications, post operative recovery, gait training and cost effectiveness.

RESULTS

In our study we have done simultaneous bilateral TKR in 126 patients 252 knees.

Duration of surgery – 2 hrs 30 min

Blood loss – 550 mL on an average

Intra operative and post operative complications

Infection	-	Superficial infection - 2 Deep infection - 0
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DVT	-	0%
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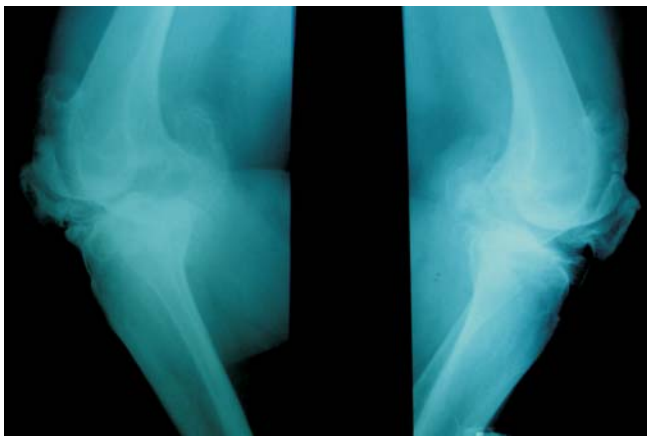
Hypotension	-	0%
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Overall hospitals stay – 6 days.

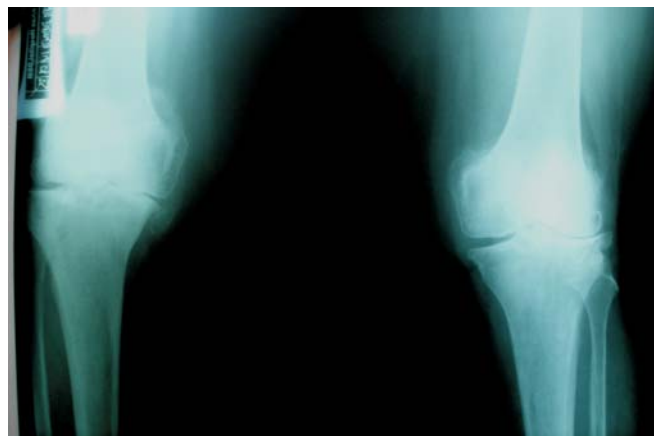
Knee bending to more than 90 degrees achieved by 4 to 5 days post operatively.

Gait training was found to be easier.

This procedure is cost effective compared to the staged bilateral TKR.



(a)



(b)

Fig.1. Preoperative



Fig.2. Intraoperative



Fig.3. Post operative

Average knee scores before the surgery: 34

Average knee scores at the latest follow up (6 months postop): 88

DISCUSSION

The advantages of having a simultaneous procedure include: only one surgical event, single anesthesia, total anaesthetic duration is less (2½ hrs), shorter overall hospital stay and early rehabilitation of the patient. Procedure is cost effective. Patient compliance is good.

No evidence of increased incidence of DVT. No evidence of increased risk of infection. Superficial infection in two patients in surgical wound on one side.

The disadvantages of having a simultaneous procedure

include a probable risk increase in cardiovascular complications and a higher possibility of requiring banked blood after surgery. This procedure is not available to every patient with problems in both knees, because it implies a high stress for the cardiovascular system. Only patients in a good health condition are appropriate candidates, and special emphasis should be made for an adequate patient selection. In our study there was no incidence of cardiovascular complications.

With proper assessment and care this procedure can be performed safely.

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Fig.4. On 14th day



Fig.5. Good range of knee bending

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