TOTAL KNEE REPLACEMENT OVERVIEW OF 40 CASES IN NURSING HOME HOSPITAL IS IT ENCOURAGING SURGEERY?

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الخلاصة

إن عملية تبديل مفصل الركبة الصناعي كان ولزمن طويل موضع تحد من ناحية الضرورات السريرية لهذه العملية وناحية اختيار الجهاز المناسب لكل مريض وذلك لتحسين معدل حركة مفصل الركبة مع تقليل أو إزالة الألم من المريض مما يؤدي إلى تحسين نوعية حياة المريض.

الهدف من دراستنا هو لتقييم حالة المريض من ناحية زيادة معدل الحركة لمفصل الركبة وإزالة أو تقليل الألم للمريض وقد أجريت هذه الدراسة على ثلاثة أنواع من المرضى انقسم والى مرضى المصابين بالتهاب الرثوي المزمن لمفصل الركبة والمجموعة الثانية المرضى المصابين بسوفان متقدم لمفصل الركبة والمجموعة الثالثة المصابين بتدمر مفصل الركبة الناتج عن حوادث.

لقد استخدمنا في هذه الدراسة نوعين من مفصل الركبة الصناعي:

الأول: مفصل يحافظ على الرباط الصليبي الخلفي.

الثاني: مفصل يعوض الرباط الصليبي الخلفي.

من متابعتنا للمرضى وعلى امتداد سنة لاحظنا تحسن معدل الحركة وزوال الألم من المرضى ولا يوجد اختلاف بين نتائج المرضى المستخدم لهم النوع الأول أو الثاني لمفصل الركبة الصناعي.

Abstract

Total knee replacement is challenging issue for long time under multiple indications and different designs of prosthesis used for improving range of motions in flexion and cancellation or decreasing pain aiming to change of quality of life in better progress.

Objective of our study to evaluate the introduction of TKR (fixed bearing) in osteoarthritis and rheumatoid arthritis and post traumatic cases with correlation its effectiveness for cancellation of the pain and increase range of motion with few technical highlighting this procedure for orthopedic surgeon and postgraduate student in Iraq. Two models of TKR design were used (PS&CR).Our observation demonstrate significant decrease in the pain in selected cases and significant improving in the range of he motion in flexion and extension with no significant difference in the type of the prostheses used. This study showed that TKR is encouraging and gratifying surgery for selected cases for he future in the Iraq.

Key words: TKR: total knee replacement. PS: posterior cruitiate scarifying. CR: cruitiate retaining.

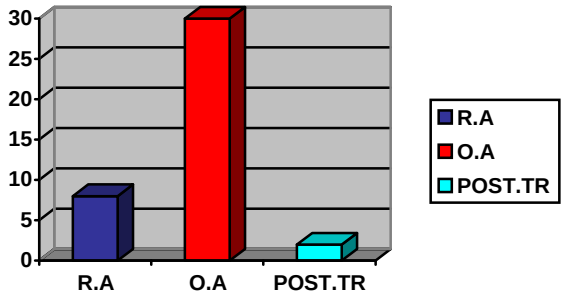
Introduction

Over the past two decades (TKR) has become one of the most successful and cost effective treatment for alleviating knee pain and restoration of physical activity

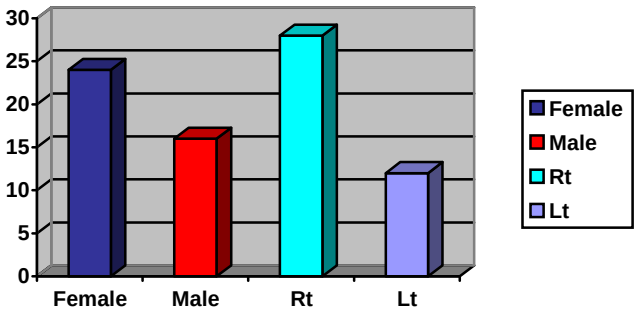
particularly in patients who do not respond to medical therapies. Variations in patient's health status at the time of surgery, type of prosthesis and training of the orthopedic surgeon affects the overall outcome of the procedure. Further improvements in intraoperative and postoperative care are required in order to improve the functional outcome of the procedure. As more and more patients are undergoing this complex procedure in Iraq, the technical details need to be highlighted for orthopedic surgeons and our postgraduate students. This article describes the general indications and brief surgical procedure and outcome of 40 cases treated in nursing home hospital (medical city) as primary Total knee replacement. Total knee replacement is surgical approach or operation that decrease pain and improved quality of life in patient with sever arthritic changes in the knee joint associated with pain, stiffness ,and sever crepits whether this arthritic changes inflammatory (rheumatoid) or degenerative (osteoarthritic) or post – traumatic.

Material and method

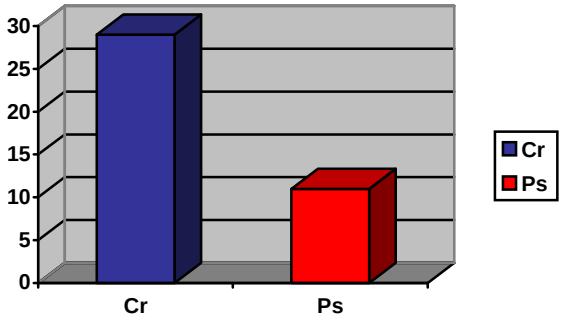
From Sep 2008 till jan2010 48 cases with sever rheumatoid (8 cases) or degenerative(30 cases) changes (diagram 1), primary or post traumatic (2 cases) changes in the knee joint selected for TKR in nursing home hospital. The sex of the patients were 24 female and 16 male, 28 Rt and 12 Lt (diagram 2). The mean age is 59 years. All the surgeries done by the same team with same prosthesis design Nexgen zimmer prosthesis. Both type of modality used, crutaite retaining(29 cases) and scarifying(11cases) (diagram 3).



Cases **(diagram 1)**



Cases **(diagram 2)**



Cases **(diagram 3)**

Methods

All the patients admitted before one day of the surgery and these steps were carried:

1- Labrotary investigations which includes:

A- Complete blood picture and erythrocyte sedimentation rate.

B- p.t and p.t.t.

C- Renal function tests.

D- Liver function tests.

E- Hi virus and Hb virus

2- Radiological investigation:

A- Chest x-ray.

B- Spine x-ray.

C- Pelvis x-ray.

D- Bilateral knee x-ray.

3- Preoperative orders.

1- Nothing by mouth.

2- Concent to be taken.

3- Part preparation shaving from umbilicus to toes.

5- Betadine painting 3 times in day.

6- One unites of blood prepared.

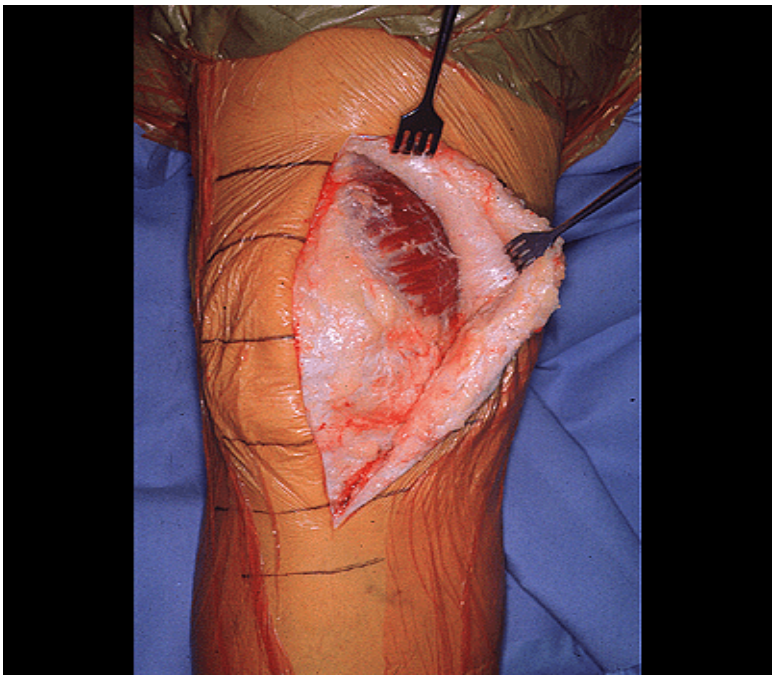
7- Shift to theater.

THE PROCEDURE

1-Tournique is used.

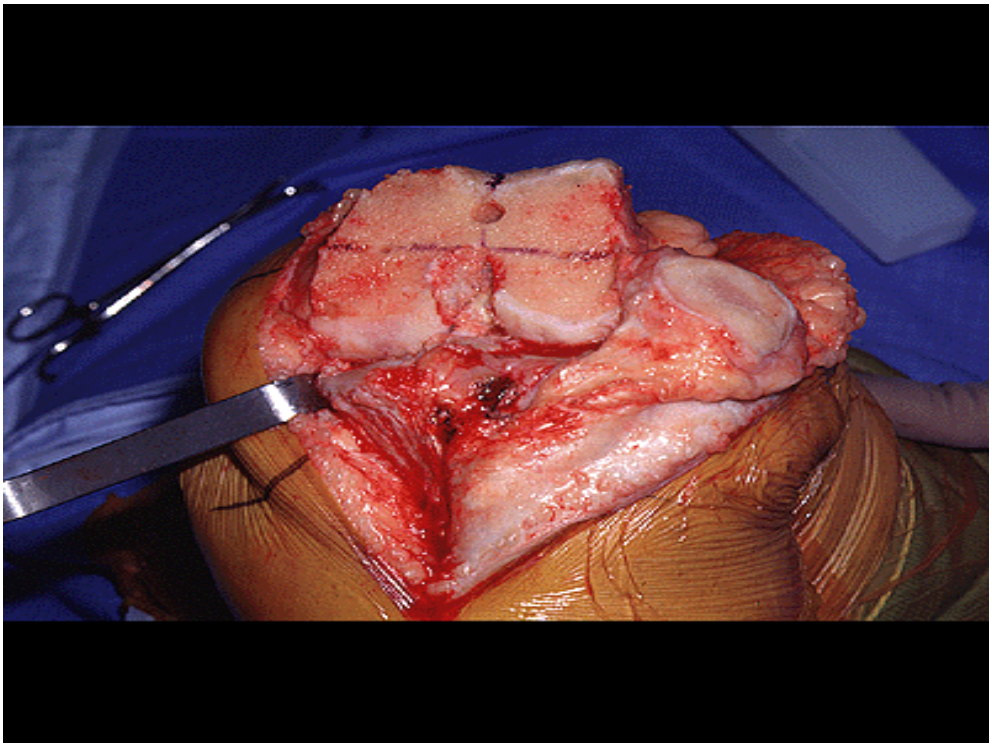
2-Mid vertical or central incision via 10cm proximal and distal to the patella.

3-Medial Para patellar incision.



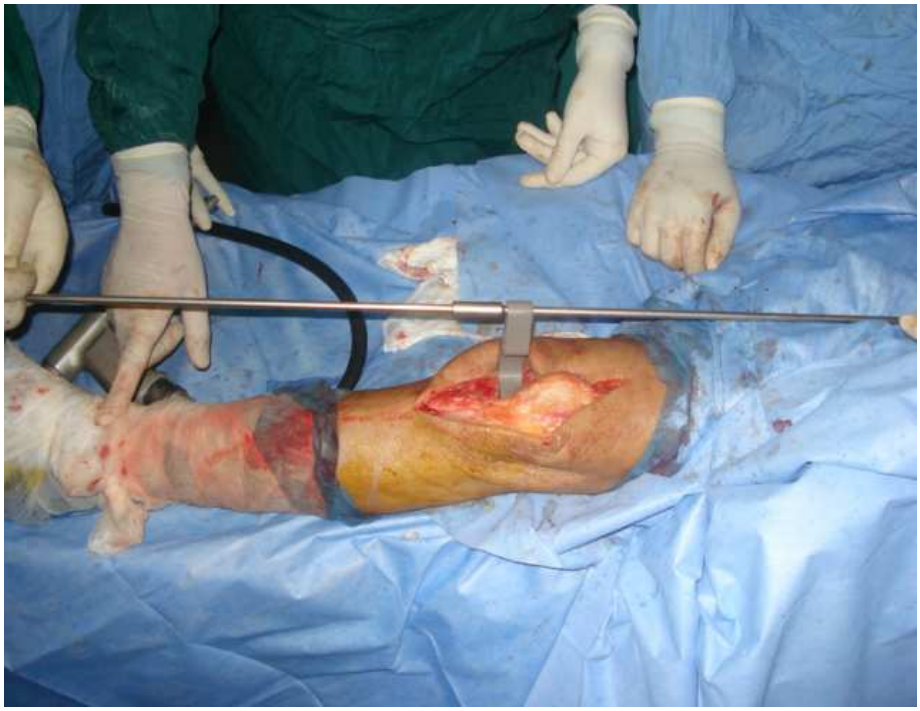
4- Joint debriment.

5-Distal femoral cutting.

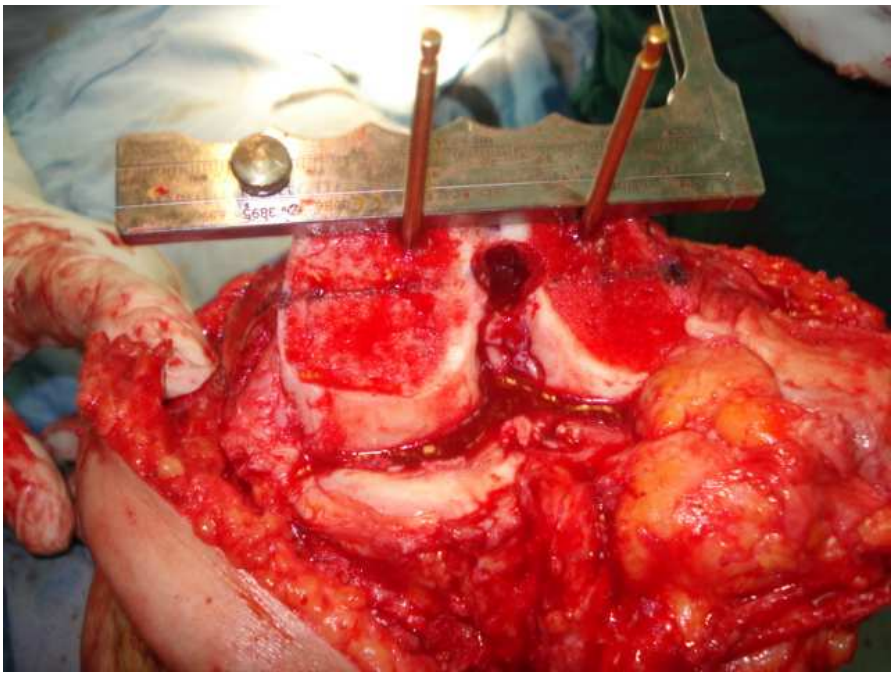


6-Proximal tibial cutting. Extension gap to be checked.

7- Extension gap chicked.



8-Distal finishing cut with 3 degree external rotation, then flexion gap to be checked.

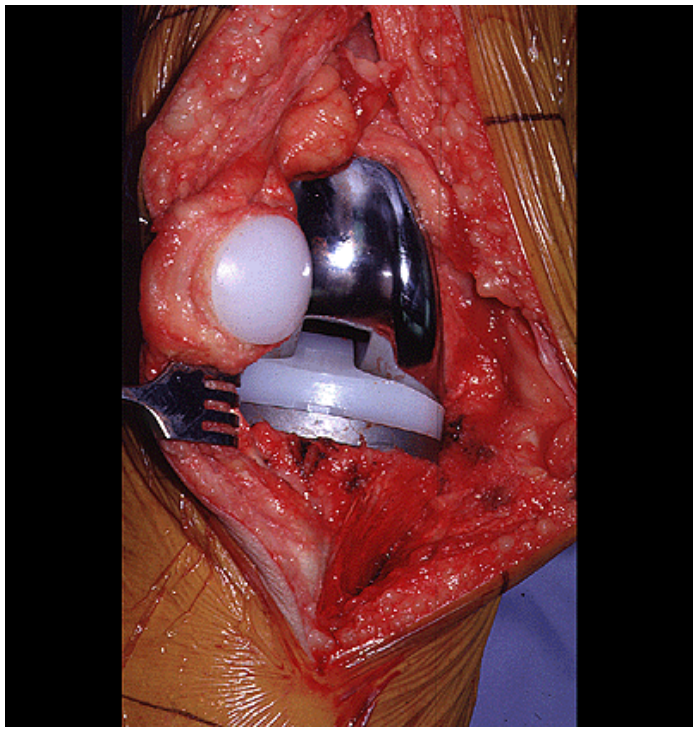


9- Flexion gap checked

10-Preparation of tibia.

11- Trial reduction.

12-Application of the prosthesis.



13-Closure with drain.

POST OPERATIVE ORDERS

1- Nill orally.
2- Antiboitic injections to be continued. For 3 days.
3- No glutial injection.
4- No message around the knee joint.
5- Close watch.

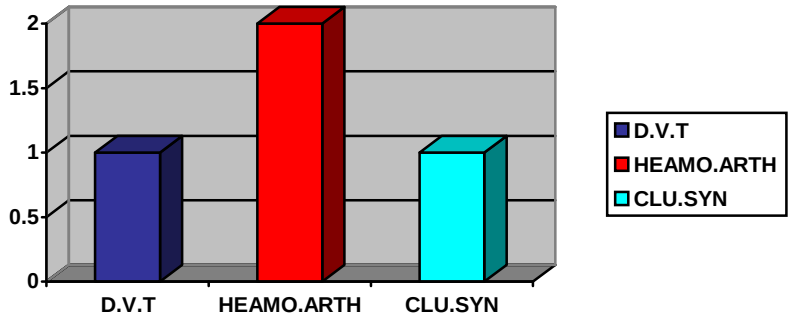
POST OPERATIV PHYSIOTHERAPY

Organized program for training of the patients for standing, walking via aids, then without aids to be carried for 6 weeks in the word from second day post operatively, with regular follow-up in the outpatient.

Results

All 40 cases treated under general anesthesia by fixed bearing Total knee prosthesis with varus deformity variable degrees between(2-10) due to degenerative or inflammatory cause(primary or secondary). the average period of admission 5 days, all of them start standing 2nd day and walking by the aids on 3rd day. All the cases managed without patellar resurfacing.

All the cases free of pain with in 4-6 weeks post operatively. The mean rang of passive motion post operatively between 90-135 degree and loading flexion 90 degree, No obvious difference as outcome on both crutiate retaining or scarifying. One case developed deep venous thrombosis which managed conservatively, 2 cases developed heamoarthrosis which managed by palliative measures, One case had clunk syndrome. 36 cases give up the crutches after 14 weeks. No wound infection as complication occurred in this study. All cases required soft tissue balance medially according to the degree of varus deformity.



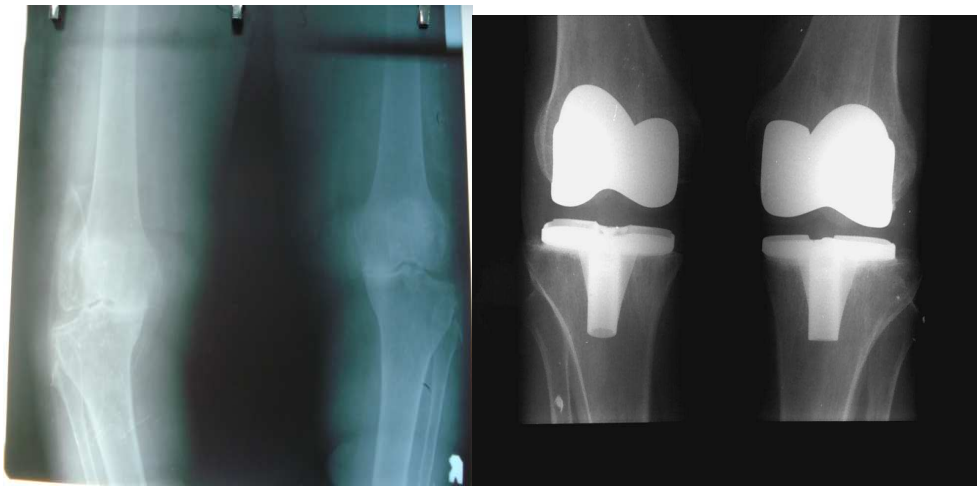
Cases
COMPLICATIONS

Conclusion

The object of our study to evaluate the general indications of TKR in inflammatory and degenerative disease of the knee joint. (Primary or secondary), associated with moderate to sever pain and comparison of rang of motion pre and post operatively with variable degree of varus deformity . As progress and experience with TKR has occur over years. The procedure has a clinical better functional result and brought greater satisfaction to the patient free of pain. The average passive flexion for the patient who have under TKR is 100-125 without pain. So the patient can resume their lifestyle as after TKR and do not give up their cultural or religious recreational or work activities. Preoperatively the patient may be able to achieve range of motion as high as 130 degree. But with moderate to sever pain. Post opertivly, these flexion achieved painless or mild pain with ability for walking average distance independly with climbing the stairs. Especially nexgen knee designed to accommodate this range of motion, both cruitiates retaining or

scarifying. (Fixed bearing), without obvious difference. TKR in our study achieved for the all selected degenerative and inflammatory disease even for those doesn't need high flexion, The over view 40 cases done in nursing home hospital with in 14 monthes with average follow up 6 months. Very few complications which treated conservatively and no one needs revision arthroplasty. in old patient whom suffering too much brisk pain and restriction of activity of the knee joint ,TKR clue our evaluation as encouraging and safe and gratifying surgery to be achieved more and more in Iraq with view in horizon to carry more researches and studies on individual aspects for particular issues in these surgeries because of grater advantages of TKR over classical non operative treatment in terms of clinical and radiological outcome for Osteo and rheumatoid arthritis.

So lastly TKR is safe method for proper selected indications with outcome of good range of motion free of pain or trivial pain post operatively.



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