

Original Research Article

A Study of Postoperative Numbness of the Knee Following Total Knee ArthroplastyAjay S Panakkal¹, Aneesh Kumar K V²¹Assistant Professor, Department of Orthopaedics, Malabar Medical College, Modakkallur, Calicut, India²Assistant Professor, Department of Orthopaedics, Malabar Medical College, Modakkallur, Calicut, India

Received: 08-10-2021 / Revised: 20-11-2021 / Accepted: 07-12-2021

Abstract

Background: Around 85000 cases were performed in England. When compared to the previous year's data, it had increased around four percent. The commonest approach to the knee is the midline or medial para-patellar. The problem is it usually injures the saphenous nerve especially the infra patellar branch of it. This results in an objective numbness of skin in the lateral wall of knee in majority of the patients who undergo total knee arthroplasty. This study puts in an effort to find the postoperative numbness of the knee following total knee arthroplasty. **Aims and Objectives:** To study the postoperative numbness of the knee in total knee arthroplasty. **Materials and Methods:** This study was done in the Department of Orthopaedics, Malabar Medical College, Modakkallur, Calicut, India. **Results:** Incidence of numbness is seen in 83.3 percent. During consent only 63.3 percent remembered the mentioning of postoperative numbness. **Conclusion:** Benefits and risks of total knee arthroplasty are essential and the while taking the consent proper information needs to be passed on to the patients.

Keywords: Postoperative, Numbness, Knee, Arthroplasty.

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Introduction

The end stage treatment that is the last resort of the osteoarthritis is the total knee arthroplasty[1]. Around 85000 cases were performed in England. When compared to the previous year's data, it had increased around four percent[2]. The commonest approach to the knee is the midline or medial para-patellar. The problem is it usually injures the saphenous nerve especially the infra patellar branch of it. This results in an objective numbness of skin in the lateral wall of knee in majority of the patients who undergo total knee arthroplasty[3-5].But subjective reporting of these are very low and its around 55 percent. The informed consent should include this point and it's better to do this rather than facing the patients wrath afterwards[6-8].An example of this is based on case such as Chester v Afshar, in which the House of Lords concluded that it is the duty of a doctor to inform a patient of all inherent risks of surgery[9].Even though many cases happen in India also, but we do not have an official study which has reported the statistics in our country. This study puts in an effort to find the same.

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E-mail: kumarkvaneesh8@gmail.com**Aims and Objectives**

To study the postoperative numbness of the knee following the total knee arthroplasty.

Materials and Methods

This study was done in the Department of Orthopedics, Malabar Medical College, Modakkallur, Calicut, India. Patients who had undergone a primary TKA from July 2018 to June 2020 were invited to take part in the study. Each patient signed a consent form prior to participation and they were asked whether they experienced pain or numbness. Pain was quantified using a visual analogue scale (VAS) ranging from zero (no pain) to ten (excruciating pain). Similarly, numbness or altered sensation across the knee was measured using a VAS score of between zero (no effect) and ten (severely affected). Patients were also asked whether they recalled the doctor mentioning numbness as a possible complication prior to TKA.

A database was created using Excel and the statistical analysis was done using R software.

Results**Table 1: Mean age of the subjects**

| Total | Mean age | Std deviation |
|-------|-------------|---------------|
| 30 | 74.82 years | 4.38 years |

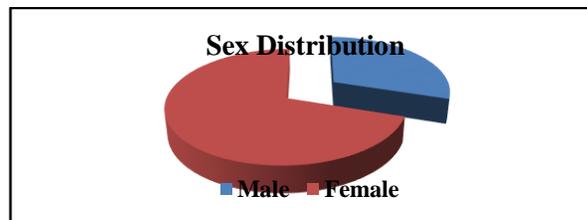
**Fig 1: Sex Distribution**

Table 2: Mean age after arthroplasty

| | |
|------------------------------|----|
| Less than or equal to 1 year | 07 |
| 1-2 years | 23 |

Table 3: Incidence of numbness

| | |
|------------|----|
| Objective | 21 |
| Subjective | 04 |
| Total | 25 |

- No cases of motor deficits.

Table 4: Mentioning of the post-operative numbness during consent

| | |
|-----|----|
| Yes | No |
| 19 | 11 |

**Fig 1: Images of the surgery (Left to right). A. Midline incision. B. medial para-patellar incision C. Another Midline incision**

Discussion

It's a known fact that during any surgeries neuro-vascular injuries occur and has been extensively reported in case presentations and other original studies. One study in total knee arthroplasty reported a staggering 57 percent of neurovascular involvement in the procedure [10]. In another study it was documented in either the consent form or clinic notes in 67 of 88 patients (76.1%) developed numbness[12]. Another study reported the motor nerve involvement in approximately one percent of the patients who underwent the total knee replacement[13]. One percent risk seems to be very low when compared to the sensory involvement but this also should be informed during taking an informed consent. According to other studies around 86–100% of patients exhibit objective numbness of the lateral aspect of the knee following TKA due to injury to the infrapatellar branch of the saphenous nerve, which is a purely sensory nerve. This made some authors to group the injuries into motor, sensory and vascular and in fact advocated the use of such classification. Postoperative analgesia in the form of femoral and saphenous nerve block can be used. This has shown promising results for post-operative analgesia. Low risk of complications including short-term quadriceps dysfunction, femoral neuritis and residual numbness has been reported in femoral nerve block[13-15]. Saphenous nerve blockade has to date only been assessed in patients treated by arthroscopic partial meniscectomy[16].

Conclusion

Benefits and risks of total knee arthroplasty must be explained clearly to the patients and proper informed consent including the risk of post operative numbness must be taken.

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Conflict of Interest: Nil Source of support:Nil