

PATIENT SATISFACTION WITH KNEE ARTHROSCOPY UNDER LOCAL ANAESTHESIA

Malik Javed Iqbal, Mohammad Inam

Department of Orthopedics, Khyber Girls Medical College and Hayatabad Medical Complex, Peshawar - Pakistan

ABSTRACT

Objective: To evaluate the level of patients' satisfaction with knee arthroscopy under local anaesthesia.

Material and Methods: This descriptive study was conducted in a private hospital setup from 2004 to 2008 on 30 consecutive patients who had knee arthroscopy under local anaesthesia. Bupivacaine (150 milligrams) was injected into the knee joint and lignocaine with adrenalin injected into skin portals. Intravenous sedation was also given to some anxious patients during the procedure. At first follow up visit we evaluated level of satisfaction in quarters 25, 50, 75 and 100% by parameters pain, anxiety, theater environment, recommendation of the same procedure to friends and overall experience about procedure.

Results: Three (10%) patients were 100 % satisfied, 20 (66.7%) patients were 75% satisfied, 5 (16.7%) patients were 50% satisfied and 2 (6.6%) patients were 25% satisfied. The overall satisfaction rate was 70%. Ten (33.3%) patients reported no pain, 19 (63.4%) reported mild pain and 1(3.3%) reported moderate degree of pain. Twenty four (80%) patients were anxious during the procedure. Twenty seven (90%) patients reported that the theater environment was not friendly. Twenty one (70%) patients recommended the same procedure to friends. The experience about the procedure was excellent in five (16.7%) patients, good in 24 (80%) and fair in 1 (3.3%) patient.

Conclusion: When patients are properly counseled and their anxiety alleviated; knee arthroscopy under local anaesthesia is well tolerated procedure.

Key Words: Local Anaesthesia, Knee, Arthroscopy, patient satisfaction.

INTRODUCTION

Arthroscopy is the gold standard procedure to diagnose and treat joint lesions.¹ Knee arthroscopy allows complete evaluation of the entire knee joint, can assess the articular surfaces of femur, tibia and patella; the menisci; laxity and rupture of the cruciate ligaments and diseases of synovium.²

Knee arthroscopy can be performed under general, regional or local anesthesia with or without sedation.³ Anaesthetic techniques that optimizes the intraoperative surgical conditions while providing rapid and early recovery have gained increasing popularity.⁴ The introduction of rapid and shorter-acting volatile anaesthetics, intravenous anaesthetics, opioids analgesics and muscle relaxants has made it possible to achieve

rapid recovery after the administration of general anesthesia.⁵ However there are pulmonary and cardiovascular complications in general anesthesia apart from overnight fasting provoking symptoms of dehydration.⁶ Nowadays the use of nonsteroidal anti-inflammatory drugs (NSAID) and local anaesthetics has become increasingly popular in ambulatory knee surgery.⁷

Knee arthroscopy can be safely performed under local anaesthesia (LA), which allows earlier discharge of the patient and excellent postoperative analgesia. The choice of an anaesthetic agent in routine knee arthroscopy varies considerably.⁸ The concerns about local anesthesia are that it may take longer to perform surgery and that the anaesthesia may be inadequate, leading to patient discomfort.⁸

SATISFACTION EVALUATION SCORING SYSTEM

Parameters	Characteristics	score
Pain	No pain	3
	Mild pain (requiring off and on oral medication)	2
	Moderate pain (requiring continuous oral medication)	1
	Severe pain (not controlled with oral medication)	0
Anxiety	Not anxious	1
	Anxious	0
Theater environment	Friendly	1
	Not Friendly	0
Recommends the same procedure to friends	Yes	1
	No	0
Overall experience about procedure	Excellent	3
	Good	2
	Fair	1
	Poor	0

- o Score: % satisfaction
- o 0-4: 25 %
- o 5-8: 50 %
- o 9-12: 75%
- o 13-15: 100%

Table 1

Many studies have reported that knee arthroscopy under local anaesthesia is reliable, well tolerated, safe alternative to general anesthesia and allows the patient to go home sooner.⁸⁻¹¹ Cooperation of the patient is essential during arthroscopy under local anaesthesia; from preparatory to recovery stage.^{12,13}

The objective of the study was to evaluate the level of satisfaction of patients after knee arthroscopy under local anaesthesia.

MATERIAL AND METHODS

This descriptive study was conducted on 30 consecutive patients in a private hospital in Peshawar from October 2004 to September 2008. All patients with history of trauma and knee joint pain were included in the study. A thorough clinical history was taken and complete physical examination performed. As a precaution all the investigations (for example haemoglobin

estimation, full blood count, blood urea/creatinine, random blood sugar) necessary for general anaesthesia were carried out. All the patients were counseled about their conditions and informed consent was taken. Preoperatively Cefuroxime 1.5 gram was given. Tourniquet was not used. After painting the knee with povidone-iodine and draping, 30 milliliter (ml) (150 mg) of Bupivacaine (Abocaine; Abbott) was injected into the knee joint of the patient by the surgeon before washing up. The patient was draped aseptically. Skin portal were infiltrated separately with 2% lignocaine with adrenalin 1:200,000 (Xylocaine; Glaxo) 5 ml at each skin portal upto the joint capsule. Most patients were comfortable once local anaesthetic was fixed to the tissues around the joint. Midazolam (Dormicum; Roche) 15 milligrams (mg) was also injected intravenously to some patients who were anxious during the procedure. After the procedure the portals were closed by non absorbable monofilament stitches and covered with dressings and a crepe bandage.

PATIENTS' SATISFACTION IN KNEE ARTHROSCOPY UNDER LA (n= 30)

Patients satisfaction Percent	No of patients	%GE of patients
100	3	10%
75	20	66.7%
50	5	16.6%
25	2	6.7%

Table 2

After arthroscopy, patients were closely monitored for vital signs in the post-anesthetic care room. When patients' condition was stable, they were discharged to the waiting area. There the patients were encouraged to begin exercises under supervision of a physiotherapist. In the afternoon, patients were assessed by the surgeon and subsequently discharged home accompanied by an attendant. Postoperative instructions about sitting, standing, walking and muscle strengthening including advice on how to take care of the wound was given. Pain medications were prescribed for a short period on as required basis.

On the first follow up visit after one week the patients were asked to fill a questionnaire describing pain, anxiety, theater environment, recommending the same procedure to friends with knee problems and overall experience about procedure. With the devised satisfaction evaluation scoring system, the level of satisfaction in quarters like 100%, 75%, 50%, and 25% was calculated (Table 1). Then the data was analyzed with the help of SPSS version 10.

RESULTS

Thirty patients were included in this study, amongst them 20 (66.7%) were male and 10 (33.3%) were female. Minimum age of the patients was 15 years and maximum 60 with an average age of 33.

Right knee arthroscopy was done in 16 (53.3%) patients and left in 14(46.7%). The findings were osteoarthritis in 9 (30%), synovitis in 13 (43.3%), medial meniscal tear in 24 (80%), lateral meniscal tear in 6 (20%), ACL tear in 7 (23.3%) and loose bodies in 5 (16.7%) patients. Pain experienced by fourteen (46.7%) patients, was more severe at the time of injection of the local anesthetic than during the surgical procedure.

Most of the patients were generally satisfied with local anesthesia. Three (10%) patients were 100 % satisfied, 20 (66.7%) patients were 75% satisfied, 5 (16.7%) patients were 50% satisfied and 2 (6.6%) patients were 25% satisfied (table 2). The overall satisfaction rate was 70%. In the first follow up visit 10 (33.3%) patients reported no pain, 19 (63.4%) reported mild pain and 1(3.3%) reported moderate degree of pain. Twenty four (80%) patients were anxious during the procedure. Twenty seven patients reported that the theater environment was not friendly. Twenty one (70%) patients recommended the same procedure to friends. The experience about the procedure was excellent in five (16.7%) patients, good in 24 (80%) and fair in 1 (3.3%) patient (table 3).

FREQUENCY OF DIFFERENT PARAMETER (n=30)

Parameters	Characteristics	No of patients
Pain	No pain	10
	Mild pain	19
	Moderate pain	1
Anxiety	Not anxious	6
	Anxious	24
Theater environment	Friendly	3
	Not Friendly	27
Recommends the same procedure to friends	Yes	21
	No	9
Overall experience about procedure	Excellent	5
	Good	24
	Pain	1

Table 3

DISCUSSION

No patient can be fully satisfied with any procedure under any anesthesia. Every patient expects that the procedure should be pain free and be able to do routine work immediately after surgery.⁷ Most of this criterion can be met in ambulatory surgery under local anesthesia.⁸ Forssblad et al¹⁴ reported that patients' discomfort was found in only 0.9% of local anesthesia arthroscopies as compared to our study in which the discomfort was 20%.

Iossifidis A¹¹ reported that 97 % of patients were satisfied with the procedure and only 6% patient were not comfortable while in our study the overall satisfaction was 70% Maldini et al¹⁵ showed that 96.6% patients were comfortable and 94% of patients were satisfied and preferred the same procedure in future under the same type of anesthesia. The visualization and access to intra-articular structures was found to be satisfactory.¹⁵

Seventy-seven percent were satisfied with local anesthesia in Eriksson et al¹⁶ study. There was no statistical difference between the degrees of satisfaction after local or spinal anesthesia.¹⁶ A retrospective study done by Kozłowski P et al¹⁷ showed higher patients satisfaction (93.5%) with local anesthesia. In Montenegro A¹⁸ et al study half of the patients(50%) were 100% satisfied while 138(44%) were 75% satisfied while in our study 3(10%)patients were 100% satisfied and 20(66.66%) were 75% satisfied.

The satisfaction rate in our study is 70% which is low as compared to other studies^{11,14-17}. This may be due to less number of the patients in the study. Poor communication skills of the ancillary operation theater personnel, poor discipline, noise, increased trafficking and untidy condition of the operation theater may be another possibility for low satisfaction rate in our study.

There is also concern about local anesthesia that in case of prolonged surgery, the patient may be uncomfortable but there is no difference in the satisfaction rate among different types of anesthesia.¹²

CONCLUSION

Arthroscopic knee surgery under local anaesthesia is safe and the recovery is fast. If the patients are properly counseled and operated in friendly environment; then most of them are satisfied with the procedure.

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Address for Correspondence:

Dr Malik Javed Iqbal

Assistant Professor,
Department of Orthopedic,
Khyber Girls Medical College,
Hayatabad Medical Complex,
Peshawar – Pakistan.