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I DON'T FEEL PAIN AT ALL: A CASE OF TOTAL KNEE REPLACEMENT (TKR) DONE UNDER CONTINOUS EPIDURAL ANAESTHESIA (CEA)

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ABSTRACT This is a case report of 69 yrs old male who underwent knee joint replacement for chronic and advanced osteoarthritis of knee. The case was performed solely under continous epidural anaesthesia (CEA). Continous epidural anaesthesia(CEA) is a neuroaxial block performed for different types of lower limb and abdominal surgeries.

KEYWORDS : Total knee replacement, Epidural anaesthesia

INTRODUCTION

Total knee replacement (TKR) is a major orthopedic procedure in which the patient is seen to be over anxious regarding issues related to pain and perioperative blood loss. Also patient presents with numerous systemic co morbidities as well as age related problems. Regional anaesthesia effectively manages perioperative pain and allows early ambulation which reduces morbidity by decreasing chances of deep vein thrombosis (DVT).

CASE STUDY

A 68 years old male was posted for total knee replacement. Pre Anaesthetic evaluation revealed ASA I physical status. The patient denied any past history of anaesthesia and any coronary symptoms. His physical activity was limited due to her long standing knee joint pain. Spine (cervical, lumbar) was without deformity but airway assessment revealed MPG III. On examination of chest-air entry normal with no added sound, CVS-S1S2 normal, CNS patient well oriented to time place and person. BP = 90/60 mmHg, pulse rate 88/min. ECG-mild LAD (Left axis deviation), chest x-ray – within normal limit. Patient was not on any medication. There was no history of any chronic illness except addiction of tobacco chewing for last 10 years. Other preoperative biochemistry, haematology and coagulation profile were within normal limits. Night before surgery patient was premedicated with oral Diazepam 5 mg.

Patient was preloaded with Ringer lactate 500ml but BP remained 90/60mmHg so it was decided to go for CEA. Under strict aseptic measures epidural space was identified at L4-L5 sitting position. Epidural space was reached with LOR technique.

Insertion and fixation of epidural catheter was then done after the test dose and conforming the tip of catheter lying epidurally, but not intrathecally or intravascularly. Local anaesthetic was added via epidural catheter (lignocaine 2% 10ml and inj. Bupivacaine 0.5% 8ml) Intraoperatively patient was monitored for possible cardiopulmonary deviations and post bone cement complications. Perioperative monitoring of the patient was aided with ECG, SPO2, NIBP, CVP, and UO.

Preanaesthetics haemodynamic parameters were HR 88 beats per min, BP ranging from 110/92mmHg to 90/70 mmHg. The mean HR and BP intraoperatively were 72±10 per min and 115±15 mmHg systolic, 78±9 mmHg diastolic respectively. Epidural was continued for 3 consecutive days postoperatively. Total duration of surgery for left knee was 1 hr 45 min. The sensory level following EB was at T10 level before surgery started. When the level was found below T10, top ups with epidural 0.25% bupivacaine 8ml 8 hourly were carried out. The addition started in this case after 120 mins.

Patient was sedated with inj. Midazolam 0.1 mg/kg and fentanyl 50mcg IV and was arousable on verbal command in between.

In post operative HDU patient was shifted for further monitoring and along with antibiotics he was started LMW heparin s.c, 0.5mg unit BD. In post operative period patient was topped up with 0.125% bupivacaine (8ml) 8 hourly. During his entire stay in the hospital patient was saying the magical words "I DON'T FEEL PAIN AT ALL". I can play football with my operated leg (because patients left leg was moving but he did not feel any pain) I was in pain before my operation. Now I am absolutely fine (Review on NRS scale revealed pain score 0-1/10).

The epidural catheter was topped up for 72 hrs and for removal we decided to stop LMHW for at least 6hr prior and readminister LMHW 6-12hr after removal of catheter. Any other analgesia (opoids/NSAIDS) was not required. Patient was discharged after 7 days.

DISCUSSION

Fear of pain during replacement surgery is one of the worst perception for the patient and to achieve the victory against pain in perioperative period is a challenging task for an anaesthesiologist continous epidural anaesthesia (CEA) is one of the wonderful technique to do so.

Beside this, the sole regional anaesthesia has added advantages, like it avoids the possible complications of GA and this makes patient monitoring efficient as certain symptoms may be detected earlier when patient remain awake intraoperatively[2,3]. DVT and pulmonary thromboembolism is one of the recognized postoperative complications of TKR[2,6].

In the review done by Pavone V, Johnson T, Sanlog Ps et al4, 1002 TKR were done under regional anaesthesia. The different complications encountered during perioperative period were arrythmias (5%), congestive heart failure (0.2%), lower extremity deep vein thrombosis (13%), fat embolism (3%), pulmonary embolism (0.4%),acute renal failure (0.4%). So selection of patients, surgical procedure, comorbidities and anaesthetic plan needs to be discussed preoperatively for individual patients[5].

Use of opioids also controls the postoperative pain but it delays early ambulation due to sedation and may cause respiratory problems. NSAIDs are also usually prescribed but in extensive surgery like TKR, higher doses and frequent aliquots of the drugs limit its uses in elderly population due to its effect of renal impairment.

Use of epidurals in TKR has become a popular practice worldwide.

The mortality from DVT in TKR is reduced following epidural in recent years. The advantages of continuous epidural in TKR are:

1. Effective postoperative pain control.
2. Walking epidural allows early physiotherapy and ambulation.
3. Epidural changes rheology of blood and decreases the platelets aggregations thereby reduces DVT[6].

CONCLUSIONS

Well managed epidural has gained popularity amongst orthopaedic surgeons who have done specialization in the field of total knee arthroplasty. Continous Epidural (CEA) manages perioperative pain by epidural block effectively, helps to decrease mortality from thromboembolism episodes postoperatively and allows early mobilization of the patients

REFERENCES:

1. Sharrock NE, Haas SB, Hargett MJ et al: Effects of epidural Anaesthesia on the incidence of deep vein thrombosis after total knee replacement, J Bone Joint Surg 73-A 502, 1991.
2. Sharrock NE, Hargett MJ, Urquhart B et al: Factors affecting DVT rate following Total Knee Replacement under epidural Anaesthesia J Arthroplasty: 8:133, 1993.
3. Dorr LD, Boiardo RA: Technical Consideration in Total Knee Replacement, Clin Ortho 205: 153, 1986.
4. Pavone V, Johnson T et al :Clin Orthop.2004 April;(421):155 61,Perioperative morbidity in bilateral one-stage TKR.
5. Cazeneuve JF, Berlemont D and Pouilly A.: Rev chir Orthp Reparatrice Appar Mot. 1996 ,82(8) 705-8.
6. Montilla CB, Harlocker TT et al, Frequency for Pulmonary embolism,Deep vein thrombosis following hip or total knee arthroplasty Anesthesiology,2002 May, 96 (50):1140-6.