POSTER SESSION II

A737

TITLE: 0.0625% BUPIVACAINE/0.0002% FENTANYL VIA PATIENT-CONTROLLED EPIDURAL ANALGESIA FOR PAIN OF LABOR & DELIVERY

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Previous studies using patient-controlled epidural analgesia (PCEA) for pain of labor and delivery have utilized 0.125% bupivacaine admixed with various concentrations of fentanyl.[1-2] No previous study has assessed the utility of 0.0625% bupivacaine with fentanyl for PCEA.

This study was approved by our institution's Internal Review Board, and all patients gave informed consent. Forty ASA I or II primiparous or multiparous women in established labor with: (1) a singleton fetus with vertex presentation at term, and (2) no previous cesarean delivery were randomized to receive PCEA or continuous epidural infusion (CEI) in a double-blind fashion. Epidural catheters were inserted at L2L3 or L3L4 using standard techniques. Patients received from 5-15 ml of 0.5% bupivacaine to achieve sensory anesthesia to T10. Abbot LifeCare 4100 Plus PCA infusers were immediately connected to epidural catheters. Patients received either: (1) 0.0625% bupivacaine with 2ug/ml fentanyl via PCEA (demand dose=3ml, lockout interval=10 min, background infusion=6ml/hr, no 1 or 4 hr limits), or (2) 0.125% bupivacaine with 2ug/ml fentanyl via CEI at 12 ml/hr. Both groups were instructed to push the PCA demand button whenever they felt the need for analgesia. (The demand button for the CEI patients was deactivated.) Visual analog pain scores, motor strength and pin prick sensory level were assessed by an anesthesiologist blinded to the randomization. Upon patient request, inadequate analgesia was treated with supplemental 0.25% bupivacaine (3 ml every 5 min, p.r.n., X3). Two tailed t-test for unpaired data, Fisher's Exact test, and Friedman's test were used for statistical analysis where appropriate.

The two study groups were homogeneous with respect to demographics and mode of delivery. Analgesia, degree of motor block and cephalad extent of sensory anesthesia were comparable in both groups. Using PCEA there was a significant reduction in hourly bupivacaine use (40% overall)(Table 1). There was no difference in the amount of bupivacaine given to either group to achieve an initial sensory level or in supplemental boluses given by physician upon patient request.

Table I. Bupivacaine use (mg) (mean ± SEM)

	PCEA	CEI	
Total usage	47.8±5.9	75.1±8.5	p<0.02
Total hourly usage			
First stage	8.9±0.8	15.8±0.6	p<0.0002
Second stage	10.3±1.4	17.2±1.0	p<0.0004
Combined	9.7±0.9	16.3±0.8	p<0.0002

0.0625% bupivacaine/0.0002% fentanyl appears to be an effective analgesic combination with dose-sparing properties for use via PCEA.

REFERENCES
1. Can J Anesth 35:249-254, 1988
2. Anesthesiology 72:44-49, 1990

A738

TITLE: INFRAPATELLAR NERVE BLOCK FOR CHRONIC PAIN FOLLOWING DIAGNOSTIC KNEE ARTHROSCOPY

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INTRODUCTION: The evaluation and treatment of a chronic pain syndrome that has not been previously described is reported.
METHODS: 9 patients who developed chronic nonmechanical pain following diagnostic knee arthroscopy were evaluated for severity, character, duration, and distribution of pain. After informed consent and institutional approval, treatment consisted of a series of blocks of the infrapatellar branch of the saphenous nerve as it exits the fascia lata. The nerve was located via a paresthesia technique. The series consisted of a diagnostic block (DB) with 5 ml of 1% lidocaine, followed by therapeutic blocks (TB) with 5 ml 0.25% bupivacaine 1/200,000 epinephrine plus 40 mg (1st block) or 80 mg (subsequent blocks) methylprednisolone (Depo-Medrol).
RESULTS: The distribution of the pain was inferomedial to the patella encompassing the trocar introduction site in all patients and followed the distribution of the infrapatellar nerve. The pain was intermittent, burning or sharp in nature, unresponsive to narcotics or anti-inflammatory agents, intensified with exercise, and resulted in significant limitation of activity in all patients. The average duration of pain prior to presentation was 6.5 (1-14) months. No vasomotor disturbances or trophic changes were noted. The DB resulted in 50 - 100% temporary relief in all patients. In 7/9 patients 75 - 100% sustained relief was accomplished after 2 - 4 TB. No permanent relief was achieved in 2/9 patients following up to 4 TB (TABLE). No complications were noted.
DISCUSSION: A common trocar insertion site for diagnostic arthroscopy is the inferomedial portal in the area innervated by the infrapatellar nerve. Persistent pain following arthroscopy has been described and frequently is considered a form of reflex sympathetic dystrophy (RSD).1 However, the characteristics of the pain, lack of associated changes as well as the excellent success of this treatment, a simple nerve block, is more consistent with a peripheral neuropathy of the infrapatellar nerve than RSD. Given the ease of performance of the block, high success rate, and low incidence of complications, this new technique should be considered as an early option for treatment of patients with persistent nonmechanical pain syndrome of the knee involving the infrapatellar nerve distribution.

TABLE

PATIENT	1	2	3	4	5	6	7	8	9
%Relief with DB	100	100	100	75	100	100	60	50	100
# TB	3	4	4	2	4	3	4	2	2
%Relief with TB	100	100	100	0	75	100	0	100	80

REFERENCES: 1. Arthroscopy 4(1):31-35, 1988.