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TITLE: POSTOPERATIVE EPIDURAL ANALGESIA FOR CHRONIC CANCER PATIENTS TAKING ORAL NARCOTICS

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Morphine (MS) is routinely used in treating intractable cancer pain (1). Likewise epidural bupivacaine-morphine (BUP-MS) is commonly used for postoperative analgesia (2,3). Chronic pain patients taking opiates may experience inadequate analgesia or withdrawal after surgery due to insufficient narcotic dosing. We studied the effectiveness of postoperative epidural BUP-MS infusion for cancer patients on chronic opiate therapy in preventing pain and withdrawal.

METHODS After IRB approval and patient consent, 118 cancer surgical patients were evaluated for their postoperative epidural BUP (0.1%)-MS (0.01%) usage over five days after epidural-light general anesthesia. Group 1 (n=19) included patients taking opiates daily for three months or more, while group 2 (n=99) were narcotic naive. Postoperative epidural infusions were started at 10 ml.hr^{-1} for group 1 and 5 ml.hr^{-1} for group 2. All patients were evaluated every 6 hrs for pain, withdrawal and overdosing. Pain scores were kept at <4/10 by titrating infusions and/or giving IV MS 4 mg q 2 hr PRN. Mann-Whitney tests using two-tailed p values were used to evaluate data and p values <0.05 were deemed significant.

RESULTS All patients experienced adequate analgesia. Eighty-four percent were taking narcotics for 3-6 mos and the remainder >6 mos. Mean oral MS-equivalent usage for group 1 was 150±99 mg (11-360 mg range). Group 1 was younger (45 vs 59 yr), required more epidural (137 vs 44 mg) and IV (48 vs 10 mg) MS and had a longer duration of therapy (9 vs 3 days) (table 1). Daily epidural and IV MS usage was always larger for group 1 by 2-3 fold (table 2). No patient experienced either respiratory depression or opiate withdrawal during hospitalization.

DISCUSSION We conclude that epidural BUP-MS provides adequate postoperative analgesia while preventing withdrawal if three times normal dose and duration of therapy are employed.

REFERENCES 1) Clin Pharmacokinet 11:87, 1986 2) Anesth-Analg 63757, 1984 3) Anesthesiol 67:787, 1987

Table 1 - Total Usage

Group	Age*	Epid MS (mg)#	IV MS (mg)#	Therapy (days)#
1	45±14	137±28	48±4.0	9.0±1.8
2	59±15	44±15	10±6.0	3.2±0.6

* p< 0.0009 1 vs 2 # p< 0.0001 1 vs 2

Table 2 - Daily Usage

Postop Day:	0	1	2	3	4
EPID MS (mg) *					
Group 1	23±6	24±5	22±4	20±4	18±6
Group 2	13±2	12±4	10±4	8±4	6±2
IV MS (mg) *					
Group 1	12±6	11±5	10±6	7±6	7±9
Group 2	5±6	3±4	1±3	1±3	.2±1

* p< 0.0001 1 vs 2 for all comparisons

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TITLE: EFFECTS OF ANESTHETIC TECHNIQUE ON POSTOPERATIVE MORPHINE CONSUMPTION

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Introduction: It has been postulated that preempting preoperative analgesia (by regional block) has prolonged effects which outlast the presence of drugs.[1] This study was designed to test this hypothesis, using morphine consumption (MC) as a measure of post operative pain.

Methods: After institutional approval of the protocol, 44 consenting patients undergoing elective cesarean section were divided into two groups, based on: Regional (RA, n=28) or General (GA, n=16) anesthesia used. GA was maintained with 0.5-1% isoflurane in N_2O:O_2 (50:50) mixture, RA was maintained with 2% lidocaine. Both groups received 50-100 μg fentanyl IV immediately after delivery. All patients received morphine sulfate using PCA device, were seen at hourly intervals for the first 4 hours and then every 4 hour for 24 hrs. Satisfaction with pain relief and MC was noted. Numerical data were subjected to a 2 factor analysis of variance for repeated measurements.

Results: Two groups were matched for age, height, weight and skin incision. All patients reported satisfactory analgesia. Delivery-PCA interval was longer in the RA group (97.5 vs 56.9 min; P<0.001). Duration of RR stay was longer in RA (97.5 VS 70.4 min, P=0.03). Total MC was higher in RA (46.5±15.8 vs 37.2±18.3 mg) but the difference was not statistically significant (P=0.08). A detailed study of the time course of MC too (Fig. 1), revealed no significant effect of anesthetic technique (P=0.08). There was a significant effect of time (P< 0.0001). MC in the first 8 hours was significantly higher than that at other time points in both groups.

Discussion: The finding of higher MS consumption after RA for postoperative pain control is contrary to popular belief. Possible explanation for this finding is based on endogenous mechanisms of pain control.[2] We suggest that patients under light GA have a significant endorphine release which simulates stimulus-produced analgesia - well documented in experimental animals. RA blocks the afferent limb of this pathway.

References:

1. Wall PD: The prevention of post operative pain. Pain 33: 289, 1988
2. Fields HL, Basbarum AI: Endogenous pain control mechanism. Textbook of Pain. Wall PD and Melzack RJ, ed., New York. Churchill Livingston 1989, pp 206 - 216.

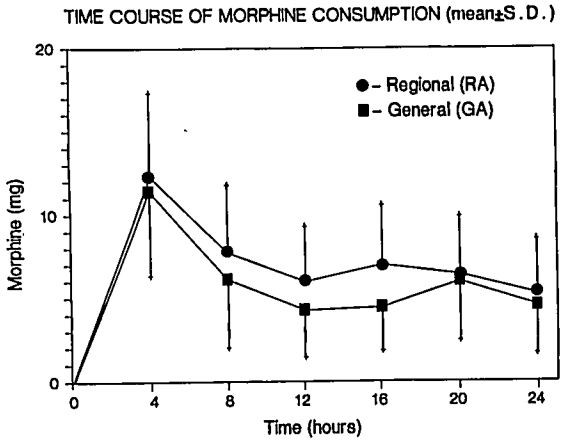

Fig. 1: No significant effect of anesthetic. Significant effect of time.