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EPIDURAL ROPIVACAINE VS BUPIVACAINE FOR LABOR: A META-ANALYSIS *Halpern, S, Walsh, V., Joseph, G. Anaesthesia, Sunnybrook and Women's HCS, University of Toronto, Toronto* Epidural bupivacaine (B) has been used for over 30 yrs for labor analgesia. Ropivacaine (R) may be superior to B by reducing adverse obstetrical outcomes and reducing maternal motor block. The purpose of this meta-analysis is to test these hypotheses. RCTs comparing epidural B to R for labor analgesia were sought using a computerized search of MEDLINE, EMBASE, the Cochrane library and Science citation index from 1966 to Jan 1, 2001. Search terms included: obstetrical analgesia, epidural analgesia, labor analgesia, extradural analgesia, ropivacaine and bupivacaine. We conducted a hand search of the relevant journals and supplements for the previous 5 yrs. The bibliographies of retrieved articles were inspected. Researchers in this area were contacted for additional data. We included RCTs in healthy parturients that compared ropivacaine to bupivacaine, with or without identical additives in each group. We excluded studies that used different additives. Eligible studies were rated for quality on a previously validated 5 point scale that considered the randomization and blinding process as well as the attrition rate. We considered 3 or more "high quality". The search for articles, data extraction and quality scores were done independently by 2 of the authors with disagreements resolved by consensus and comparison with the original articles. The primary outcome was the incidence of c/s. Other outcomes included operative vag delivery, spontaneous delivery, motor block, and analgesic quality. Chi square was used to detect heterogeneity. The data were combined using a random effects model. ORs that did not include 1.0 in the 95% confidence interval were considered statistically significant. There were 18 studies with 1557 patients. There was no significant heterogeneity in the primary outcome. All published studies were of high quality. There was no difference in mode of delivery or excellent analgesia (Table). There were more patients in the R group that had no demonstrable motor block. The use of R for labor analgesia does not change the incidence of adverse obstetrical outcomes. Although R is as effective as B as an analgesic, R appears to reduce the incidence of detectable motor block and therefore may be preferable in some circumstances.
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EPIDURAL ANALGESIA LENGTHENS THE FRIEDMAN ACTIVE PHASE OF LABOR *Alexander, J.M.¹ Sharma, S.K.² McIntire, D.D.¹ Leveno, K.J.¹* 1. Obstetrics and Gynecology, University of Texas Southwestern Medical Center, Dallas, TX; 2. Anesthesiology, University of Texas Southwestern Medical Center, Dallas, TX To estimate the effect of epidural analgesia on Friedman's labor curve. This study is a secondary analysis of a previously reported randomized trial of the effects of patient-controlled epidural analgesia during labor compared with patient-controlled meperidine on cesarean delivery rate. All randomized women had a singleton, cephalic, non-anomalous fetus at or beyond 37 weeks of gestation. This secondary analysis was limited to those women demonstrating cervical dilation commencing with a cervix of at least 3 cm (i.e., active phase of labor). A total of 459 women were randomized. Women were excluded for a cervix < 3cm leaving 220 women allocated to patient-controlled epidural analgesia and 214 to patient-controlled IV meperidine available for analysis. There were no significant demographic differences in the two groups including age, race, gestational age, and cervix on admission. The active phase of labor was 1 hour longer in the epidural treated group (6.0 ± 3.2 hrs vs. 5.0 ± 3.2 hrs, $p < 0.001$). The rate of cervical dilation was significantly decreased with epidural analgesia (1.4 cm/hr vs 1.6 cm/hr, $p < 0.002$). The duration of the second stage tended to be longer in the epidural group (1.1 ± 1.5 hrs vs 0.9 ± 1.0 hrs, $p = 0.07$). Epidural analgesia prolongs the active phase of labor by one hour when compared to Friedman's original criteria.

Outcome	R (n/N)	B (n/N)	OR(95%)p
C/S	113/785	124/772	.87(.65,1.2)
Op Vag	195/737	211/726	.88(.82,1.1)
Spont	442/769	407/754	1.2(.95,1.4)
Excellent analgesia	226/294	211/280	1.1(.74,1.7)
No motor block	424/620	342/559	2.0(1.1,3.5) p=0.02