TITLE: PREGNANCY - INDUCED HYPERTENSION AND BLEEDING IN PARTURIENTS UNDER EPIDURAL ANESTHESIA

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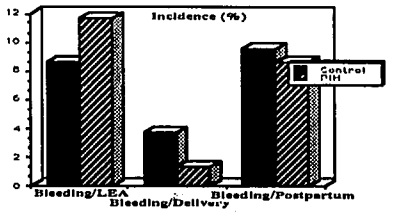
Lumbar epidural analgesia (LEA) in pregnancy-induced-hypertension (PIH) is highly indicated. However, thrombocytopenia (less than 150.000/mm3) is frequent (18%) in patients with PIH (1). Thombopathy may also occur since 18% of patients having PIH and a normal platelet count (PC) have an increased bleeding time (BT). The aim of this study was to prospectively look for possible complications of LEA and delivery in patients with PIH.

After institutional approval, a prospective, longitudinal study concerning all parturients undergoing LEA during labor was conducted in our institution between January and December 1989. Patients were separated in two groups for analysis of data: control group (C): parturients with normal arterial blood pressure, and group PIH, in which patients had a systolic arterial pressure ≥ 140 mm Hg and/or diastolic arterial pressure ≥ 90 mm Hg with multiple measurements at various days. The following items were compared in the two groups: clinical data, PC by automatic Coulter Counter before LEA, fibrinogen plasma concentration, puncture complication (bleeding), and hemorrhage during and after delivery . BT was not routinely performed.

1127 women fullfilled the inclusion criterias: 156 with PIH and 971 in group C. There were no difference between the two groups as regard to age, height, parity, fibrinogen concentration, PC (PIH = 221.000 ± 59.000/mm3 versus C = 223.000 ± 63.000/mm3), incidence of predelivery thrombocytopenia (PIH = 9.5%, C = 7.4%), PC in thrombocytopenic patients (PIH = 136.000/mm3, C = 130.000/mm3). In the PIH group, no PC was less than 100.000/mm3. However, patients in the PIH group had a mean gestational age of 38.4 ± 3.8 weeks (group C = 39.5 ± 2.4 weeks, $p<0.05$). During epidural puncture, incidence of bleeding in the needle or in the catheter was not different between the two groups. The incidence of hemorrhage during or after delivery was similar in both groups (figure). Postdelivery lumbar pain was more frequent in group C(46.3%) than in patients with PIH (34.3%) ($p < 0.05$). No neurologic sequelae occured throughout the study.

Our study shows that in patients with mild PIH, simple biological values related to hemostasis were not significantly different from the normal population. This was confirmed by the absence of increased risk of bleeding during LEA and delivery. The clinical significance of increased BT in PIH patients with normal PC (1) is thus debatable. Further, the lower limit of PC allowing safe LEA remains to be established.

(1) Ramanathan S et al . Anesthesiology 1989, 71: 188-91.



TITLE: RISK FACTORS ASSOCIATED WITH DIFFICULT AIRWAY IN NORMOTENSIVE PARTURIENTS.

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Difficult intubation is still the leading cause of anesthetic-related maternal mortality. General anesthesia with endotracheal intubation for emergency cesarean section is the commonest situation in which such disaster occurs. Use of epidural anesthesia (EA) has been advocated by some authors (1) to decrease the need for emergency general anesthesia, but to date there is no prospective evaluation of what patient could benefit from this use of "prophylactic" EA. We conducted a longitudinal study to select the high risk parturients with regard to predictable difficult intubation.

We prospectively studied 1256 consecutive normotensive parturients examined at a mean gestional age of 36 ± 2 weeks. Age, height (H) and weight (W) before pregnancy were recorded and body mass index ($BMI= W/H^2$) was then calculated. Patients were asked to open their mouth and protrude their tongue maximally and were then classified using the simplified Mallampati score as having a normal airway (group A) if pharyngeal structures (uvula, fauces, soft palate) were totally visible or as having an abnormal airway (group B) if these structures were only partially or not at all visible (2). The two groups were compared with respect to demographic data, mode of delivery , type of anesthesia and neonatal outcome by using either t-test for unpaired data or chi-square analysis when appropriate. $p< 0.05$ was considered significant.

There were no difference between groups concerning age, weight before delivery, parity, duration of labor or presenting part of the fetus. However, height was significantly lower and weight before pregnancy as well as BMI significantly higher in parturients with high risk airway. Furthermore, these high risk patients underwent more emergency operative delivery than patients with normal airway (figure).

Risk of difficult intubation, although present in the normal pregnant population (7%) was more frequently encountered in parturients with high BMI. Since these patients are also at higher risk of cesarean section, early "prophylactic" epidural anesthesia during labor is highly indicated. Finally, the need for predelivery airway assessment for all obstetric patients should be reemphasized.

1/ Anaesthesia 1987, 42:487. 2/ Anesthesiology, 1989, 71:A937