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Serum levels following epidural administration of morphine was found to be dose-dependent.

There was no significant difference in the onset and duration time of postoperative analgesia between the group recieving 2 mg and 4 mg morphine.

The ratio of umbilical vein to maternal vein concentration (Placental transfer) in pregnant women recieving 2 mg morphine was 0.80 at 10 min after administration, 0.78 at 30 min and 1.28 at 45 min. The concentration of umbilical vein became higher than the maternal level at 45 min after administration.

371. Epidural Analgesia Using Twocatheter Technique in Labor III

I. HONDA, M. UCHIMURA, M. SHINOHARA, Y. SUGIHARA, K. IWASAKI, M. INOUE, T. SHINOZUKA, T. KENJO, Y. KUROSHIMA and A. FUJII

Dept. Obst. & Gynec., Tokai Univ. Sch. Med., Kanagawa

T. TAKAYA and Y. KINEFUCHI

Dept. Anesthesiol, Tokai Univ. Sch. Med., Kanagawa

The effects of epidural analgesia using two-catheter technique on fetal heart rate variability and uterine activity were investigated 22 parturients by means of a computerized technique.

Fetal heart rate variability was assessed by spectral analysis and no significant change was noted after low-dose segmental epidural analgesia.

Uterine activity was not changed on U.C. duration, U.C. interval, U.C. tonus, U.C. area, U.C. peak, U.C. dp/dt and characteristics of U.C. curve (kurtosis and skewness) after analgesia.

Fetal•maternal ratio of bupivacaine in blood level at birth was 0.26.

In epidural group, maternal lactate•pyruvate ratio was low compared with non anesthetized group.

This results indicate that two-catheter epidural analgesia has distinct advantages over the previous methods and safer for mother and child.

372. Comparison of the Postoperative Analgesic Methods among Epidural Morphine and Pentazocine, and Intramuscular Pentazocine

T. MORI, M. KITAZAWA, T. NIIBE, N. HOSOYA, H. WATANABE, K. MASAOKA,

T. OHKURA, K. KATOH and T. KUMASAKA

Dept. Obst. & Gynec., Dokkyo Univ. Sch. Med., Tochigi

To investigate postoperative analgesic effect of epidural morphine and pentazocine, and intramuscular pentazocine, one handred and twenty-five women who have undergone gynecological abdominal surgeries were studied.

1) As for onset of analgesia, there was statistically no significant difference between epidural morphine and pentazocine.

2) The duration of analgesic effect of epidural morphine significantly lasted loger than epidural pentazocine.

3) The duration of analgesic effect of epidural pentazocine showed a tendency to be longer than that of intramuscular pentazocine.

4) As for side effects, circulatory and respiratory depression were not at all observed in the cases of epidural 2 mg of morphine and 15 mg of pentazocine.

5) As for analgesic effect, pentazocine which is κ -receptor agonist and μ -receptor antagonist didn't show antagonistic action against morphine which is μ -receptor agonist.

373. Clinical Studies on Flow Properties of Blood in the Gynecological Surgery

I. TANIGUCHI, M. KAIBARA, Y. MARUMOTO and T. KOBAYASHI

> Dept. Obst. & Gynec., Tokyo Univ. Branch Hosp., Tokyo

The flow properties of blood, the blood viscosity and red cell deformability were mesured under such condition: before and after operation in patients with simple hysterectomy, cesarean section, and radical hysterectomy. The viscosity was mesured at shear rate of 0.989 sec⁻¹ and at 37°C. Red cell deformability was assessed by a filtration technique (by Reid).

Blood viscosity after operation was significantly higher than that of preoperative state (P<0.05). This was due to increased hematocrit. Corrected viscosity (Ht=45%) was significantly higher than that of preoperative state (P<0.05).

This was due to increased fiblinogen levels (P<0.001~0.05).

Red cell deformability following surgery fell in all patients and minimum was reached on first post