min to a maximum of 30 mIU/min in 0.9% saline. The second group consisted of healthy babies of 30 women who received 25 µg misoprostol every 4 h placed in the posterior fornix of the vagina. Following vaginal birth, the umbilical cord was clamped, and a 2 cc blood sample was drawn from the umbilical artery within 30 seconds. Blood gas samples were analyzed for pH, pCO2, pO2, HCO3 and base excess (BE), while obeying the rules of cold chain. One and five minute APGAR scores of each newborn were recorded.

This study protocol was approved by the Local Ethics Committee of our Hospital, and all subjects provided informed consent.

Statistical analysis was performed using SPSS software. A one-way ANOVA F test was used for the comparison. $P < 0.05$ indicated statistical significance.

Results:

The mean age of all women enrolled in this study was 26.5±5.05 the mean gestation age was years, and 39.85±0.68 weeks. The demographic and obstetrical data of the two groups were comparable (p>0.05 each; Table 1). All infants had 1 and 5 minute Apgar scores

ilical arterial blood gas pH, pCO2, pO2, HCO3 and BE showed no differences between the oxytocin and misoprostol groups (p>0.05 each; Table 2).

Table 1. Baseline characteristics

Characteristics	Oxytocine (n=30)	Misoprostol (n=30	Significance
Age* (years)	27.5±5.8 (18-38)	25.5±4.3 (19-40)	0.577
Gravidity	2.0(2) (1-8)	1.0(1) (1-5)	0.035
Parity	1.0 (0-3)	0(1) (0.2)	0.196
Gestational age* (weeks)	39.7±1.3(37-41.8)	40.0±0.7 (38.1-41.6)	0.470
Birthweight* (g)	3319.58± 49.44	3152.45 ±55.2	0.383

There is no significant difference between demographic data (Table 1).

Table 2. Demographic, blood gas characteristics in the oxytocin and misoprostol groups

Characteristics	Oxytocine (n=30)	Misoprostol (n=30	Significance
pH*	7,30±0,08 (7.09-7.41)	7.32±0.05 (7.10-7.22)	0.781
pCO_2(mmHg)*	43.15±8.66 (19.9-61.2)	44.16±7.73 (21-58.9)	0.580
pO_2 (mmHg)*	18.64±8.31 (4.8-38.2)	18.60±7.38 (7.7-39.1)	0.981
BE (mmol/l)*	-3.73±2.49 (-12-0)	-3.2±2.89 (-12-2)	0.480

oxytocin group and 2 of the neonates in the dinoprostone group were admitted to the neonatal intensive care unit and no significant difference was found between the groups (Table 2). All newborns admitted to intensive care unit were discharged together with their mothers in good health.

Discussion:

The initiation of labor has become a routine procedure in gynecology and obstetrics clinics. We compared the effects of two different methods of labor induction on fetal blood gas parameters. To exclude the effects of fetal distress, we excluded women with chronic maternal disease, complications of pregnancy or fetal distress, and included only uncomplicated pregnancies ending with vaginal birth. Evaluations included Apgar scores and umbilical artery blood gas parameters of the newborn to determine whether acidemia had occurred.

morbidity and mortality were found to be increased at

observed in term babies with umbilical artery pH >7.09. Uterine perfusion decreases during contractions, and increased uterine activity has negative effects on uteroplacental and fetoplacental circulation11. Intravenous oxcytocin was shown to result in hyperstimulation in 8.3-11.1% of women and fetal distress in 15.9-18%, suggesting that oxytocin application during labor may trigger fetal oxidative stress5, 12. However, oxytocin did not have any negative effects on pH and did not increase perinatal risk11, 13. When we investigated the effects of oxytocin-induced labor on fetal acid-base status, we observed an acid-base balance in the umbilical cord, a finding supported by intrapartum cardiotocographic findings and Apgar scores. Thus, the use of oxytocin to assist labor does not have negative effects on the fetus11, 13. Intracervical or intravaginal application of misoprotone (PGE1) is also frequently used to induce labor5, 6, 10. Long term treatment with low-dose controlled misoprostol was well tolerated by both the mother and the fetus (14), with uterine hyperstimulation rates of 7.4 Long

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