445 The significance of inflammatory markers for early detection of Chorioamnionitis on management of threatened preterm labor. K.Kihara, K.Takahashi, T.Hasegawa, T.Oda, Dept. Obst. and Gynec., Yamagata Prefectural Kahoku Hosp., Yamagata.

The threatened preterm labor with Chorioamnionitis is refractory to tocolysis. In order to detect the early stage of chorioamnionitis, WBC counts, BSR, CRP, Sialic acid (SA) and maternal intracervical culture were determined. After delivery, placenta and fetal membranes were preformed to confirm the stages of Chorioamnionitis that was classified by Blanc method. The results were obtained as follows:
1. Twenty five patients in 155 patients with threatened preterm labor resulted in preterm labor, and 16 cases were confirmed Chorioamnionitis pathologically. 2. False negative rates of inflammatory markers immediately before labor, WBC counts were 40.0%, BSR was 73.3%, CRP was 21.4% and SA was 7.1%, respectively. 3. Ten cases in 15 patients with Chorioamnionitis were confirmed PROM, and average delayed weeks for labor was 4.7 ± 1.0 (M±SEM) weeks.

In conclusion, it is suggested that SA and CRP are useful markers for making an early diagnosis of Chorioamnionitis.

446 Luminol-dependent chemiluminescence (CL) of peripheral neutrophils in preterm labor. S. Kobayashi, K. Masaki, K. Yuda, M. Tanaka, S. Hirakawa, I. Morita*, S. Murota*, 1st Dept. Obst. and Gynec., Toho Univ. Sch. Med., Tokyo, *Section of Physiological Chemistry, Tokyo Medical and Dental Univ., Tokyo, Japan.

Maternal and intra-amniotic infections are frequently associated with the preterm labor. CL method measures the luminol sensitized light emitted by oxidation with reactive oxygen species produced by polymorphonuclear leukocyte (PMN). We have measured CL which can be used for monitoring preterm labor. The CL assay was performed using a Biolumat (LB9500, Berthold) after stimulating PMN (1.5×10^6/ml) by PMA (10^{-7}mg/dl). The peak CL value was measured in four groups of women: non-pregnant group 1 (n=4), normal pregnancies group 2 (n=12), threatened preterm labor group 3 (n=9), and preterm labor group 4 (n=11). There were no significant differences in maternal CRP and WBC counts between group 3 and 4. In group 4 (1623470 ± 362439) the CL value was significantly higher than in group 1 (126993 ± 3431), group 2 (677881 ± 119595) or group 3 (841413 ± 251869) ($p<0.001$). In addition, the CL value of group 2 was not significantly different from group 3. These results were significantly useful for the diagnosis of preterm labor than maternal CRP and WBC count.

447 Active Control of PROM under Gestational Week 27 by Warm Physiological Saline Filling Perfusion Therapy. N.Horibe, K.Ishikawa, T.Furui, T.Ito, S.Miwa, M.Ochi, Y.Fujimura, T.Miyazaki, T.Kimura, T.Ishizuka, S.Kazato, and S.Sunouchi, Dept. Obst. and Gynec., Nagoya 1st Red Cross Hosp., Nagoya.

Purpose: Warm physiological saline filling perfusion therapy was conducted for Preterm PROM under gestational week 27 and prevention of fetal pulmonary-hypoplasia and control of infection were achieved. Methods: This therapy was performed on eight cases (October 1990 to February 1991) with their consent. Result: Mean weeks of Preterm PROM onset, filling-perfusion periods were 20 weeks 3 days (16 weeks 4 days - 26 weeks 5 days), 1-5 days (1 case), 5-10 days (4 cases) and 10-20 days (3 cases), respectively. Delivery was transvaginal (3 cases) and by caesarean section (5 cases). Fetal prognosis was indicated by survival (6 cases), were intrauterine death (1 case) and newborn death (1 case). There was no case of plumonary hypoplasia. In the survival cases, there was no bacterial identifications. Conclusion: It is evident from the present results that warm physiological saline filling-perfasion therapy for the Preterm PROM under gestational week 27 makes it possible to maintain pregancy with neither fetal pulmonary-hypoplasia nor promotion of infection.