144 Effect of the vascular endothelial cells on refractoriness to Angiotensin II(A-II) of pregnant and non-pregnant rabbits. -Significance of Nitric Oxide as EDRF- O.Nakamoto, A.Hidaka, S.Tomoda, T.Kitanaka, T.Sugawa, Dept.Obst. and Gynec., Osaka City Univ. Med.Sch., Osaka

Decrease in the vascular sensitivity to A-II during pregnancy is generally accepted, but this mechanism is still unclear. We studied the vascular sensitivity to A-II in the isolated rings of rabbit iliac arteries both in the pregnant and the non-pregnant. We also compared these rings with both intact and denuded endothelium. Each vascular response to A-II cumulatively dosed was estimated by the EC_{50} value(-log[A-II]). We have already reported that the vascular response to A-II has endothelium dependent refractoriness during pregnancy compared with the non-pregnant. So we studied how prostacyclin and EDRF(NO;nitric oxide) are related to this, by showing the change of vascular response to A-II after the successive administration of these inhibitors(the former;tranylcypromine, the latter;methylene blue and N-methyl-L-Arginine). Prostacyclin was shown to decrease the vascular response to A-II and have no difference between the pregnant and the non-pregnant. NO had more potent effect on the vascular refractoriness to A-II in pregnancy than in non-pregnancy. This indicates that NO as EDRF has more important role on the endothelium dependent vasodilation during pregnancy than prostacyclin.

145 Treatment and fetal outcome of lupus anticoagulant-positive pregnancies. M.Awaji, T.Saikawa, Y.Nakamura, H.Takeuchi, R.Miyazaki, K.Yoshida, T.Hashimoto, M.Takada, Dept.Obst.and Gynec., Juntendo Univ.Sch.Med., Tokyo.

Lupus anticoagulant (LAC) is one kind of the antiphospholipid antibodies and found in 5-10% of patients with SLE. LAC is known to be linked to a number of adverse pregnancy outcomes. Nine cases of LAC positive pregnancies, all cases were SLE patients whose previous 18 pregnancies terminated in early abortions or stillbirths, were treated and their fetal outcomes and effect of the treatment were evaluated. The therapeutic protocol we used was based on low-dose aspirin (80-100 mg/day) and prednison (10-30 mg/day). Five cases out of nine cases terminated in intrauterine fetal death. In addition to the protocol, another four cases were treated with plasma adsorption therapy. The mechanism of this therapy is removal of LAC through dextran sulfate column by its negative charge. In the four cases, three children were produced successfully, but one case terminated in intrauterine fetal death at 18 weeks' gestation. Plasma adsorption therapy can play a useful part in the treatment of LAC positive SLE pregnancies, but still further studies should be required to validate its use as adjunct to other therapies.

146 Effects of Magnesium sulfate($MgSO_4$) on the isolated uterine artery and platelets from pregnant women. K.Kanamaru, T.Matsumoto*, Y.Sawaki*, M.Ito*, H.Yanase**, Y.Sugiyama**, Dept.Obst.and Gynec., Suzuka Kaisei Hosp., Mie, *Dept.Obst.and Gynec., Tsu National Hosp., Mie, **Dept.Obst.and Gynec., Mie Univ.Sch.Med., Mie.

We examined the effects of $MgSO_4$ on the maternal circulation by an *in vitro* experiment using isolated blood vessels and platelets. Spiral specimens of the uterine artery were prepared and the isometric tension in Krebs-Ringer solution was recorded. The platelet-rich plasma from pregnant women were used for the experiment on the platelet aggregation. When the extracellular Mg^{2+} levels were rapidly reduced for the uterine artery at 0.5g resting tension, the tension became markedly higher than that in the control group. Conversely, when the levels were increased, the tension decreased in a pattern similar to that in the control group. By preincubation of PRP with $MgSO_4$, ADP and adrenaline induced significantly ($P<0.01$) lower maximum aggregation rates. Inhibition of contraction of the vascular smooth muscle and inhibition of platelet aggregation should be considered in relation to Ca^{2+}, and the present results suggest that $MgSO_4$ is useful for improving circulation in pregnancy-induced hypertension.