13.15 0566 INHIBITORS OF UROKINASE-INDUCED FIBRINOLYSIS IN PREGNANCY.

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Pregnancy plasma possesses inhibitory activity against urokinase measured on unheated fibrin plates. Anti-urokinase activity in late pregnancy plasma subjected to gel filtration on Sephadex G-200 eluted with the high molecular weight proteins including α_2-macroglobulin and, in greater quantity, with albumin. In all non-pregnancy plasmas the high molecular weight inhibitor activity was present in equivalent quantities; the lower molecular weight inhibitor was found in small amounts in only a proportion of plasmas. The anti-urokinase activity of pregnancy plasma could be separated from α_1-antitrypsin and α_2-antiplasmin by chromatography on DEAE-Sephadex. Within 1 hour of parturition plasma fibrinolytic activity increased and there was substantial reduction in the anti-urokinase activity of the lower molecular weight fractions; no change was seen in the high molecular weight inhibitory activity. It is concluded that anti-urokinase activity in pregnancy plasma resides in a protein distinct from established protease inhibitors; a placental source is postulated.

13.30 0567 FACTOR VIII RELATED ANTIGEN-ACTIVITY DIFFERENCES IN INTRA-UTERINE GROWTH RETARDATION.

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Haemostatic values, hormone and uric acid levels were determined in women during pregnancies suspected of growth retardation, and compared with normal pregnancies. Nine of the 21 suspect pregnancies resulted in a small baby, below the 10th weight percentile. Platelet count, fibrinogen, soluble fibrin complexes and fibrinogen degradation product values were not significantly different between the normal and growth retarded group. In normal pregnancies, F VIII related antigen (VIII RAg) and clotting activity (VIII C) increased with gestation up to 36 weeks, with antigen about 20% higher than activity. In mothers who delivered growth retarded babies the VIII RAg minus VIII C difference (or VIII RAg/VIII C ratio) was significantly greater. Seven of the nine mothers who delivered small babies had a VIII RAg-VIII C differen greater than 125% (VIII RAg/VIII C ratio greater than 1.75), while only one of the 12 mothers who delivered normal weight babies had this difference. Serum prolactin, oestriol or uric acid levels provided no further means of distinguishing between the tw groups. The VIII RAg/VIII C ratio appears to be the single best test for distinguishin growth retarded babies from normals in a clinically suspect group.

13.45 0568 PLATELET LIFESPAN IN PREGNANCY COMPLICATED BY PRE-ECLAMPSIA

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Increased platelet consumption has been suggested to occur in women who develop pre-eclampsia and to play a pathogenetic role in this disorder. The approach to this problem was difficult until a non radioisotopic technique was developed to measure platelet lifespan (Stuart et al., NEJM 1975, 292, 1310). Malondialdehyde (MDA) is measured in platelet rich plasma (challenged with thrombin) before and at intervals after ingestion of 500 mg aspirin. The time taken for MDA values to return to baseline levels after aspirin is equal to platelet lifespan. A study is in progress to compare platelet lifespan in healthy non pregnant women, in women in the third trimester of uncomplicated pregnancy and in patients with pre-eclamps The results obtained so far suggest that platelet lifespan in pregnancy, either normal or complicated with mild pre-eclampsia, is within the normal range. Indeed platelet lifespan was 7.6, 9.6, 10.5, and 9.5 days in 4 women with uncomplicated pregnancy and, 10.0, 11.7, and 9.0 days in 3 patients with mild pre-eclampsia. Platelet lifespan in non pregnant women ranged between 9.4 and 12.2 days.