SUMMARY AND CONCLUSIONS

This study was conducted on 170 newborn-mothers pairs classified into one control group "Full term healthy newborns" and five test groups: Preterm, preterm with RDS, SGA, preeclamptic and diabetic groups.Vitamin A level was estimated in both cord and maternal blood samples.

In the premature group both cord and maternal blood vitamin A were significantly lower than corresponding values of control group reflecting deprivation of transplacental transport of vitamin A from the mother to the fetus which occurs mainly in the third trimester.

Also a significant lower level of maternal and cord vitamin A were found in the group of small for gestational age newborns and was consistent with the positive correlation between the cord vitamin A and birth weight. This is consistent with the carlier findings of other authors which stated that mothers with low vitamin A gave birth to babies with low cord vitamin A and is associated with intrauterine growth retardation.

Preeclamptic mothers and their newborns have, also, significantly lower maternal and cord blood vitamin A than the control group. So, a possible prediction of preeclampsia is by measuring concentration of retinol which is relatively easy to be measured .

In the diabetic group, both cord and maternal vitamin A were significantly lower than the fullterm group values. This may be attributed to

¡mpaired mobilization of retinol from the liver, due to insulin defect, or decreased conversion of carotene to retinol at the intestinal level.

Both cord and maternal blood vitamin A values in nephropathy-complicated diabetic mothers were significantly higher than non-complicated diabetic mothers.

Significant correlations were found between cord serum vitamin A, gestational age and growth status, and maternal vitamin A.

So in conclusion the vitamin A status of the newborn is influenced by factors such as gestational age, growth status and maternal vitamin A status as well as overall nutritional status. The studies also suggest the low vitamin A status of the mother to be one of the feature associated with prematurity as well as intrauterine growth retardation. These findings stress the ¡mportance of safe vitamin A supplies to pregnant and nursing mothers to prevent vitamin A deficiency and growth retardation in the progeny.