

## Physiological Changes of $\alpha$ -Fetoprotein in the Mother after Delivery and in the New Born Baby

H. TAKEZAWA, N. KUNIYOSHI, S. SHIMODA, K. TAKIZAWA, E. MORI and M. TABATA

*Department of Internal Medicine, Ohta General Hospital, Ohta*

It has been well known that  $\alpha$ -fetoprotein found in the fetus is become to appear in the blood of mother in 10–12 weeks after pregnancy. The maximum appearance of  $\alpha$ -fetoprotein in the mother's blood is known to be around 20 weeks of pregnancy. However, at the end of pregnancy, amounts of this protein could be significantly high. The present study was designed to know when  $\alpha$ -fetoprotein was disappeared from the blood both from mother and new born baby and the protein was measured by radioimmunoassay.  $\alpha$ -fetoprotein of mothers immediately after delivery was 80–400 ng/ml; mean value of it was 210 ng/ml. Although the fetoprotein disappeared gradually from the mother's blood,

the value of it on the 7th day after delivery was over the normal limits, indicating 30–110 ng/ml and it became within normal limits between 14 and 21 days after delivery. On the other hand, the  $\alpha$ -fetoprotein of the new born baby measured by umbilical venous vein blood was 20000–240000 ng/ml, showing approximately 1000 times higher than that found in the mother at delivery. In the baby, the amounts of the fetoprotein were still high even at the end of one month after new born; it was more than 400 ng/ml and it was thought that approximately 50 days were required to obtain the normal value of the fetoprotein in the baby after delivery.