BLOOD URIC ACID LEVELS IN MOTHERS AND INFANTS AT BIRTH

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This study has been undertaken to determine a pattern of blood uric acid levels in normal mothers and their full-term infants at the time of birth. Blood samples were taken from the umbilical vein to determine the infant levels and from the maternal venous blood at the time of delivery to estimate the mothers' blood uric acid levels. The uric acid estimations were done by the method of Folin and Trimble (1924). Table 1 summarizes the findings of this study.

Steenstrup (1956) has discussed hypo-uricaemia occurring during pregnancy and, in an extensive study of plasma uric acid levels in 280 cases, he found a moderate hypo-uricaemia to be present during the greater part of normal pregnancy. He used the method of Praetorius and Poulsen (1953) for estimating his uric acid levels. Crawford (1939) found a rise in plasma uric acid levels during labour and a fall in the early puerperium so that normal values were reached by the third day after

delivery. The height of the rise during labour appeared to depend on the length of labour. Benedict's (1922) colorimetric method was used for these estimations.

In the present study the maternal ages of the 21 cases ranged from 18 to 41 years and their parity included seven primigravidae, nine with one previous pregnancy and the remainder having had from two to 10 previous infants. The 21 infants included eight males and 13 females. The blood uric acid levels in the mothers ranged from 6.9 mg./100 ml. to 2.6 mg./100 ml. and in the infants from 7.3 mg./100 ml. to 2.4 mg./100 ml. In 12 cases the mother's level was higher than that of her infant.

This study shows the rather wide range of blood uric acid levels existing in the cord blood of normal male and female newborn infants and in their healthy mothers' blood taken at the time of delivery; there does not appear to be any correlation between these uric acid levels. In three cases the mother's

TABLE 1
BLOOD URIC ACID LEVELS IN NORMAL MOTHERS AND THEIR FULL-TERM INFANTS AT BIRTH

No.	Maternal Age (yr.)	Parity	Birth Wt. (lb. oz.)	Sex	Blood Uric Acid Level	
					Mother (mg./100 ml.)	Infant (mg./100 ml.)
1	20	Primipara	8.3	M	6.5	5.0
2	20	Primipara	7.9	F	3.6	5.5
3	22	Para 1	7.10	M	4.1	3.9
4	23	Para 1	7.8½	M	4.6	3.4
5	25	Primipara	5.4½	M	2.6	2.4
6	32	Para 1	7.12	M	4.6	4.0
7	33	Para 1	6.15½	M	4.2	5.8
8	18	Primipara	8.8½	M	3.8	3.1
9	23	Primipara	6.4	M	4.9	2.8
10	32	Para 3	7.8½	F	3.9	3.5
11	21	Para 1	7.0½	F	4.7	4.2
12	34	Para 4	7.11½	F	6.7	4.3
13	22	Primipara	7.8	F	3.0	3.8
14	41	Para 10	6.10½	F	6.9	6.5
15	29	Para 1	6.12½	F	3.6	3.8
16	27	Para 1	8.2	F	4.4	4.5
17	22	Para 2	6.10½	F	5.1	7.3
18	37	Para 7	6.6	F	2.6	5.3
19	21	Para 1	5.8½	F	3.9	3.7
20	21	Primipara	7.15½	F	4.0	4.5
21	29	Para 1	8.2½	F	4.0	5.0

level was over 6 mg./100 ml. and in two infants cord blood levels were also above this figure; only in one case was the level above 6 mg./100 ml. in both the mother and her female infant.

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