

THE EFFICIENCY OF SOME PLACENTAL TESTS IN THE COURSE OF MULTIPLE PREGNANCIES

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Total estrogens (E/day), pregnanediol (P/day) in diurnal urine, and thermostable alkaline phosphatase (APt) in blood serum were investigated. Simultaneously, amnioscope examinations were carried out during pregnancy and the beginning of labour. A retrospective assessment of placental test values with respect to the state of newborns was also made. The usefulness of these tests in the diagnosis of a fetus at risk in multiple pregnancies appears to be limited.

The E/day and P/day, as well as the activity of APt in the blood serum, were examined in 21 confirmed cases of multiple pregnancy. Amnioscope examinations were also carried out during the pregnancy and at the beginning of labour. The material was divided into three groups.

Group I includes 10 full-term multiple pregnancies where the fetus was not directly at risk. The conditions of the newborns after delivery were good, the amniotic fluid was light in colour, E/day value was high (38-65 mg/24 hrs), usually higher than P/day and APt values.

Group II covers 6 full-time multiple pregnancies in which the fetus was directly at risk during either the pregnancy or labor. The conditions of the newborns were 4 to 8 Apgar scores. In one case the baby died the day after delivery, due to intrauterine anoxia. In group II the amniotic fluid, in at least one of the amnia, was green. In 3 cases in amnion I, light amniotic fluid was confirmed by amnioscope examination; in the same patients, in amnion II and once II and III, the amniotic fluid was green. Green liquid was confirmed in amnion I twice, in amnion II it was light; once, the liquid was green in both amnions. The E/day values in group II are lower than in group I (less than 30 mg/day). The P/day and APt values vary, but are mostly lower than in group I.

Group III includes 5 pregnancies in which the births were premature and immature. Seven premature infants (from 3 pregnancies) died as the result of too low birth weight. In one pregnancy intrauterine death of the fetus occurred (reason unknown) in the 25th week of pregnancy; E/day value = 8.7 mg, amniotic liquid was brown. One pregnancy (birth in the 35th week) was concluded successfully, and the premature babies lived.

In pregnancies where there is a direct risk to the fetus, the E/day values are decidedly lower (less than 30 mg/day), the P/day and APt varying. In pregnancies where the fetus is at risk and where there is no risk, no relation in values of P/day and APt were observed.

The following conclusions may be drawn (see also Naor et al. 1964, Aoba et al. 1967, Müller and Nielsen 1967, Curzen and Morris 1968, Pirani et al. 1972):

1. The determination of the E/day in multiple pregnancies is of considerable value in diagnosing endangered fetus.
2. In multiple pregnancies, amnioscope examination is useful in diagnosing one fetus at risk (with two or more amnia).
3. Where there is a threat to the fetus in multiple pregnancies, the P/day and APt values vary.