

THE FOLLOW-UP HISTORY OF CHILDREN FROM MULTIPLE PREGNANCIES

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Infants born from multiple pregnancies were observed for three years, 1969-71. Twin births were 1.88% (full-term 1.23%, premature 0.66%) and perinatal twin mortality was 7.94%. The Apgar scale assessment, acid-base balance, physical and psychomotor development equilibration rate, and morbidity, were determined. Great differences were found between first and second twins, sometimes differing 1000 g in weight. In postnatal disorders the equilibration period was shorter than in single-born children. Examinations after three years did not show much deviation from the norm, although twin pregnancies and deliveries are dangerous and the children are included in the "high-risk" group.

Twin births are a high risk for both the mother and the children (Döderlein 1964, Sternadel 1968, Michalkiewicz 1970). Twin pregnancies rate third among causes of prematurity and ninth among causes of perinatal mortality (Opitz and Schmid 1971). According to the data of Sternadel and Slomko, perinatal mortality in twins considerably exceeds 10% (Slomko and Kuczynski 1965_{a,b}, Sternadel 1968, Michalkiewicz 1970). Twin pregnancy and twin delivery have long been a subject of special attention for obstetricians on account of the high rate of complications. Pediatricians have taken up this problem only in recent years, so that in the pediatric literature there is a lack of reports on the follow-up history of twins who have survived the period of perinatal danger. The aim of our study was the observation of children of multiple births from the point of view of:

- a. the general condition at birth and during early infancy, and the speed of equilibration when there are deviations from the norm;
- b. the further physical and psychomotor development of twins;
- c. the morbidity rate for particular diseases among twins.

During a three-year period of observation (1969, 1970, 1971) there were 12,346 deliveries in the Narutowicz Hospital in Cracow. These included 131 twin births (1.06%). Out of 12,272 live births there were 257 twin children (1.88%), including 178 full-term (1.23%) and 79 premature babies (0.66%). In our material the total perinatal mortality was 3.31% while the perinatal mortality in twins amounted to 7.94%, of which 93.33% was constituted by premature twins. Our percentage of perinatal mortality is lower than reported in the literature (Slomko and Kuczynski 1965_{a,b}, Sternadel 1968, Talhamer 1967, Huntingford et al. 1969, Michalkiewicz 1970, Opitz and Schmid 1971).

The mean assessment of the general condition at birth for the whole group of twins

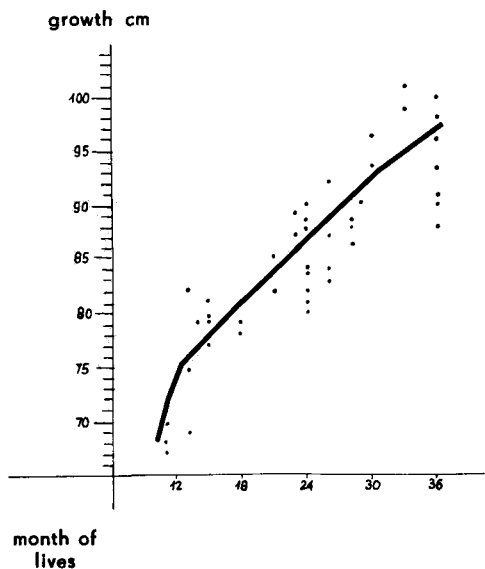


Fig. 1. Length of children from multiple births in relation to the average length for a given age in the Polish population (solid line).

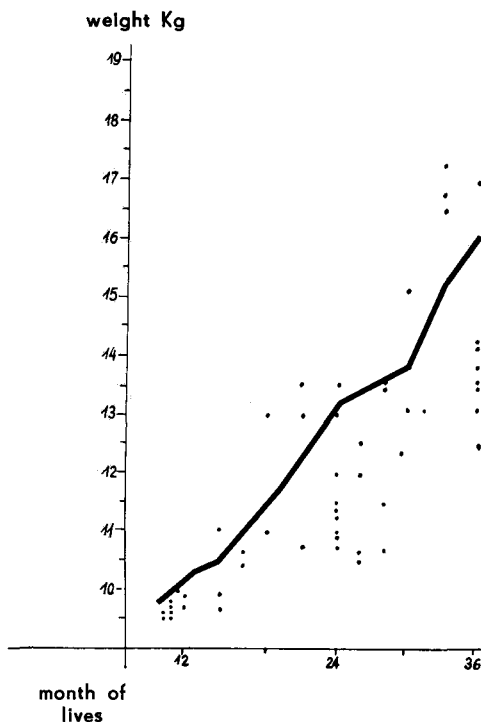


Fig. 2. Body-weight increase in children from multiple births in relation to average body-weight increase in children for a given age in the Polish population (solid line).

examined amounts to 6.3 Apgar's points. In the group with the lowest assessment (1 to 4 points), no marked differences were found between the conditions of first and second twins. In the medial group (4-6 points) and in the group with 7-10 points, marked differences were found between first and second twins, to the detriment of the latter, irrespective of sex. Among full-term children there were two cases of death of the second twin. The course of the perinatal period and of the first days and weeks of life was compared in premature babies, whose condition at birth was determined as serious, and in children from multiple births in relation to children born singly. Premature babies from multiple births, in spite of the low birth weight and the low Apgar's score, equilibrate more quickly and gain weight more rapidly than single-born prematures, which agrees with the observations of Bryniak and Kallista-Milewicz (1971).

The percentage of full-term twins (over 37 weeks of fetal life) with low birth weight (under 2300 g) was 33.1%. In some cases the weight difference between the first and second twin was as much as 1000 g.

Among full-term twins, 52.6% were boys and 47.4% girls, while in the group of premature infants 62.2% were girls and 37.8% boys.

On the basis of the three-year period of observation of our group of children from multiple births, it was found that the length of these children differed very little from the average length for the same age (Bogdanowicz 1968), as illustrated in Fig. 1.

The increase in body weight of children from multiple births, on the other hand, showed a marked divergence from the average for the Polish population (Bogdanowicz 1968). The greatest deviation from the average weight was found at about two years of age. By the third year of life, only half of the children had reached the average weight for their age, as shown in Fig. 2.

Psychomotor development in twins was normal: they began to sit up between the 6th and 7th month of life and to walk between the 12th and 14th month. Recognition of people surrounding them, deliberate movements, e.g., reaching out for toys, prattling, and then speech development, occurred in accordance with the age norm (Bogdanowicz 1968).

No predisposition to rachitis was found in the group of twins. Dentition began between the 6th and 8th month. The case histories of illnesses, however, show that in the group of twins observed there was a marked predisposition to upper respiratory tract involvement.

Environmental conditions, which are equally important for the normal development of every child, had a great, though not decisive influence on the development and general conditions of the children observed.

It may be concluded that, in spite of the great strain of multiple birth, no significant differences in mortality were found, either in the group of full-term children or in the premature group, as compared with children from single births.

When considering the follow-up history of twins, no great deviations from the normal development were found, although twin pregnancy and delivery is a great risk, especially for second twins, which is sufficient reason for including them in the "high-risk-baby" group.