

PSYCHOMOTOR DEVELOPMENT OF THE DANZIG QUINTUPLETS IN THEIR FIRST YEAR OF LIFE

A Psychological Evaluation

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A psychological follow-up, based on the Brunet-Lézine Scale, showed a constant progress in the development of the quintuplets, the pace being quite proper from the 5th month on.

The children differed from each other: the best pace of psychomotor development was observed in Adam and Ewa, the worst in Piotr.

In all children, control of body posture showed the highest rate of development, exceeding the presumed norms. Some delay was observed in speech. The results of the examinations made by the Psyche-Cattell Intelligence Scale agree with those obtained by the Brunet-Lézine Scale.

Besides the differences in physical appearance, the children showed differences in personality features.

A normal psychomotor development is an indication of the good physical condition of an infant, of a normal development of the central nervous system, as well as of proper care and educational conditions.

The psychological examination of the quintuplets was carried out once a month and was begun in their 3rd month of life, i.e., after their discharge from the clinic. The documentation concerning each infant was collected separately. Brunet-Lezine Scale of Psychomotor Development in Early Infancy was applied.

RESULTS

At the age of 3 months a retardation of psychomotor development was found in all children, although it was not too far advanced, except in Piotr. This retardation varied within the limits of 2-3 weeks, and that of Piotr amounted to more than 1 month.

At the age of 4 months two children, Adam and Ewa, had results within the limits of normality. Adam had better results; this is probably in connection with his better physical condition. Two infants, Roman and Agnieszka, showed a slight retardation by some 2 weeks in comparison with chronological age, and the values of development quotients (DQ) approached the limits of normality. Piotr continued to be backward in his psychomotor development by 1 month approximately.

At the age of 5 months all infants obtained results within the limits of normality. Adam and Ewa were in the upper limit, and Piotr in the lower one.

At the age of 7 months Adam and Ewa's psychomotor DQ values corresponded to the upper limit of mean values. The rapid progress of Piotr's physical development in that month found its parallel in a considerable acceleration of the rate of psychomotor development. For the first time Piotr's DQ exceeded 100 (good norm).

When the infants concluded their 12th month, i.e., at the age of 1 year, the developmental age of all children exceeded the chronological age. This means that DQs achieved values over 100. The differences in the rate of psychomotor development between the children increased. Adam and Ewa considerably outpaced their siblings achieving DQs at a level above the average (113).

After the infant's 1st year of life, Psyche-Cattell Intelligence Scale for Little Children, was also carried out. The results of these examinations proved to closely approximate the results obtained with Brunet-Lézine Scale. The results are summarized in the Table.

Table. *Results of the Psychological Follow-up of the Quintuplets in Their First Year of Life*

| Age (months) | Adam | Piotr | Roman | Agnieszka | Ewa |
|---|------|-------|-------|-----------|-----|
| <i>Brunet-Lézine Scale of Psychomotor Development (DQ values)</i> | | | | | |
| 4 | 97 | 72 | 87 | 85 | 90 |
| 5 | 110 | 94 | 100 | 100 | 106 |
| 6 | 110 | 96 | 101 | 100 | 105 |
| 7 | 110 | 100 | 101 | 101 | 108 |
| 8 | 110 | 100 | 102 | 107 | 110 |
| 9 | 110 | 100 | 102 | 107 | 110 |
| 10 | 109 | 100 | 100 | 103 | 110 |
| 11 | 110 | 100 | 100 | 103 | 110 |
| 12 | 113 | 103 | 100 | 103 | 113 |
| <i>Psyche-Cattell Intelligence Scale (IQ values)</i> | | | | | |
| 12 | 113 | 103 | 97 | 101 | 113 |

DISCUSSION AND CONCLUSIONS

The data presented point to a systematic improvement of psychologic performances. The retardation in the psychomotor development rate found in the first months of life should be set in connection with the fact that the children were born 4 weeks before term. As their birth weight was low, the quintuplets remained for nearly a month in incubators. Nevertheless, from as early as their second three-month term on, the psychomotor development of the quintuplets has been taking a normal pace: in 2 of the infants (Adam and Ewa) from the end of the 4th month, and in the others from the 5th month of life.

The compensation for the backlog caused by prematurity went on in various ways. A clear-cut differentiation in the dynamics of psychomotor development was found in

the infants. Adam's development was the most rapid one; he achieved results within the limits of normality, the best ones of all infants, the earliest and in all tests. An equally rapid pace of development, particularly from the 3rd three-month life period onwards, was shown by Ewa. Similar are the results in the Psyche-Cattell intelligence test. At the end of the 1st year of life, Adam and Ewa's mental development was above the average. Piotr showed the greatest and most disquieting retardation in psychomotor development. During one month, however, he made up for this backlog, achieving as early as in the 5th month of life, results already within the limits of normality. It should be recalled that he had the lowest birth weight (1380 g), showed symptoms of intrauterine dystrophy, and was the one to stay the longest in the incubator, i.e., 36 days. A considerable acceleration of Piotr's development pace took place in the 7th month of life in parallel to a headlong weight increase. From that time on, his psychomotor and mental development corresponded to a good norm.

The development progress of Agnieszka and Roman went on more or less concomitantly, but the results achieved by Roman are at present the lowest ones among all quintuplets. Not only the rate of psychomotor development proved to occur in a different way for each one of the infants, but the rhythm of development also differed. Among the spheres studied, the development of the body posture and locomotion went in all infants at the most rapid pace, and it even outdid the norms anticipated. The best results in this respect were, however, achieved by Ewa who reached the level foreseen for the age of 15 months at the age of 12 months. Adam was the one to develop the most advantageously with respect to motor development of the hands and of sight-and-movement coordination. The social maturation of all children evolved normally; this may have been conditioned by the widespread social contacts of the infants with the human environment interested in them. The retardation was mainly marked out with respect to speech.

Generally speaking the rhythm of psychomotor development was initially inharmonious. From the 5th month of life on, it occurred more harmoniously; towards the end of the first year of life, the tendency towards intensifying the differences between the pace of development of the various spheres appeared again.

Summing up the results obtained through a one-year psychological follow-up, it can be stated that, in spite of individual differences, the psychomotor development of the quintuplets has so far gone on at a normal rate and rhythm after making up for the initial deficiencies resulting from prematurity, low birth-weight, and the specific conditions of multiple pregnancy and of the perinatal period.

The results of examinations carried out in the second year of life confirm the above conclusions. In the examination carried out on 12 August, i.e., at the age of 1 year and 3 months, the total DQs of all children attained values above 100, and, in the case of Adam, Ewa, and, for the first time, of Piotr too, were included within the limits of values exceeding the average.

The tendency towards further improvement of the performances becomes clearly evident. This means an ever more intensive pace of development and, as the environmental conditions are advantageous, an optimistic forecast can be formulated for the future.