

UNIOVULAR QUADRUPLETS OF WROCLAW

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Four boys, born in 1954 as uniovular quadruplets, live in Wroclaw, Poland. This is a unique case in the world. Their uniovularity was proved as a result of serological analyses.

Despite the fact that one of the boys was seriously injured during the labor (he suffered from one-sided paresis and deafness) and lived in special conditions, all the boys are identical and they develop identically.

Genetic factors seem to be more important, in the shaping of the phenotype, than the influence of environment.

When in September 1954 a quadruplet pregnancy was diagnosed by means of a radiogram, it was not assumed that the quadruplets born of this pregnancy on 25 October 1954 would be a unique event on a world-wide scale, then and up to the present time.

Although it is not easy to maintain infants from higher multiple pregnancies alive, there are in the world at least 9 quintuplet siblings (of them, one set of quintuplets in Poland) and 7 sets of quadruplets. Whereas 46% of quadruplets should be unisexual, only the Wroclaw quadruplets are unisexual; what more, they are MZ. The author has found no mentions of other MZ quadruplets in the world literature. Their uniovularity, which had not been noted at birth, was proved by Lukaszewicz and Nowakowski (1958) by means of serological analyses, i.e., ABO, MN, Rh, and Kell-Cellano blood groups, taste sensitivity, and the secretion of group antigens in the saliva. This idea was worked out in further studies by the same authors (Lukaszewicz and Nowakowski 1960, Nowakowski and Lukaszewicz 1962).

In 1965 the serological analyses were extended and the C^w, P, and Gm traits were determined: they were identical in all four subjects and this has yet increased the certainty of the uniovular character of the quadruplets.

The dactyloscopic examinations showed an unparalleled similarity of papillary lines, although the criminological laboratory contended that the occurrence of very slight differences would permit to distinguish among the quadruplets as four individuals.

One of the quadruplets, Kazimierz, was injured during labor, he suffered from one-sided paresis and a very considerable degree of hearing impairment. He was taught to speak and paresis recorded to a great extent.

The author followed the development of the quadruplets up to the age of three years according to the Wroclaw method (Bartkowiak et al. 1958). For the sake of comparison a graph is presented of the development of four boys selected at random from among inmates of the State Home for Babies; they were born at dates closely like that of the quadruplets, and they were living in the same environment (Fig. 1). The development of all of them was arrested. The same graph for the quadruplets (Fig. 2) shows a striking

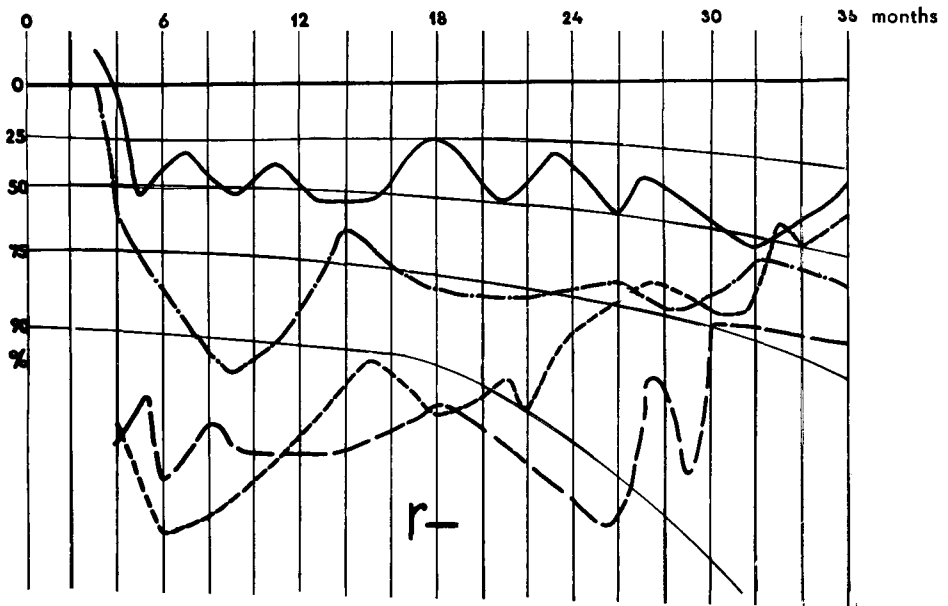


Fig. 1

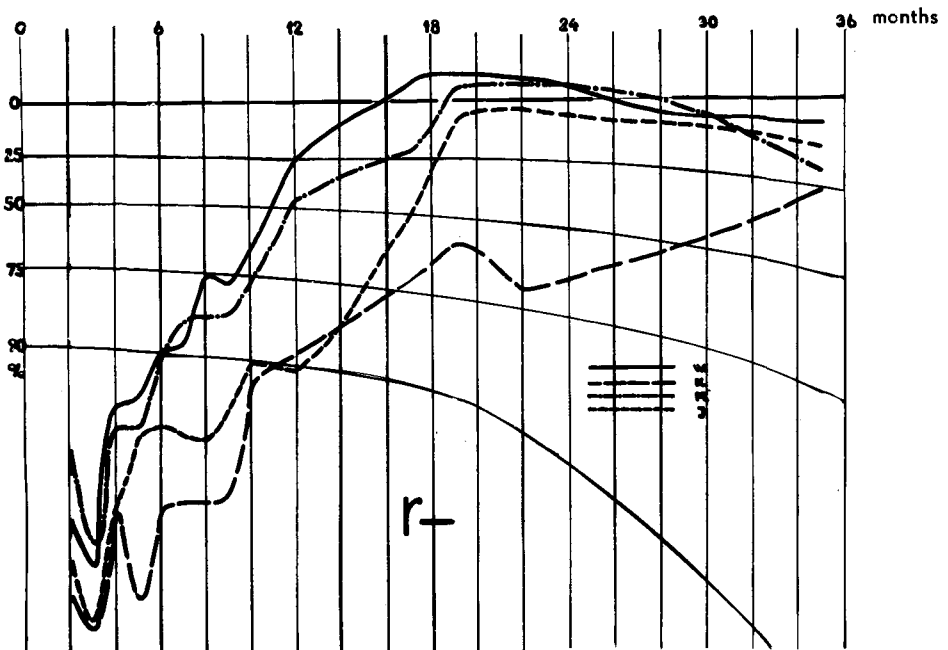


Fig. 2

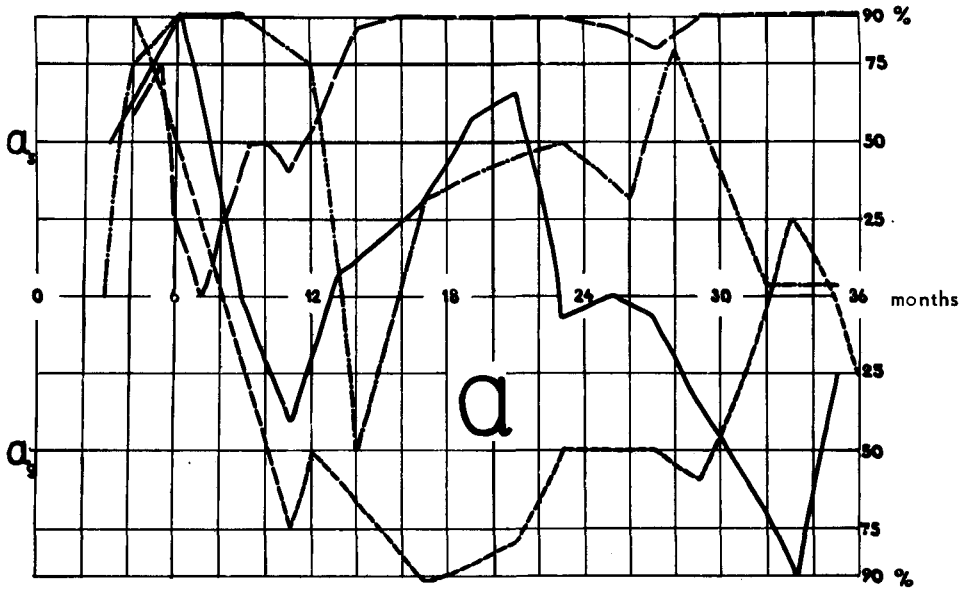


Fig. 3

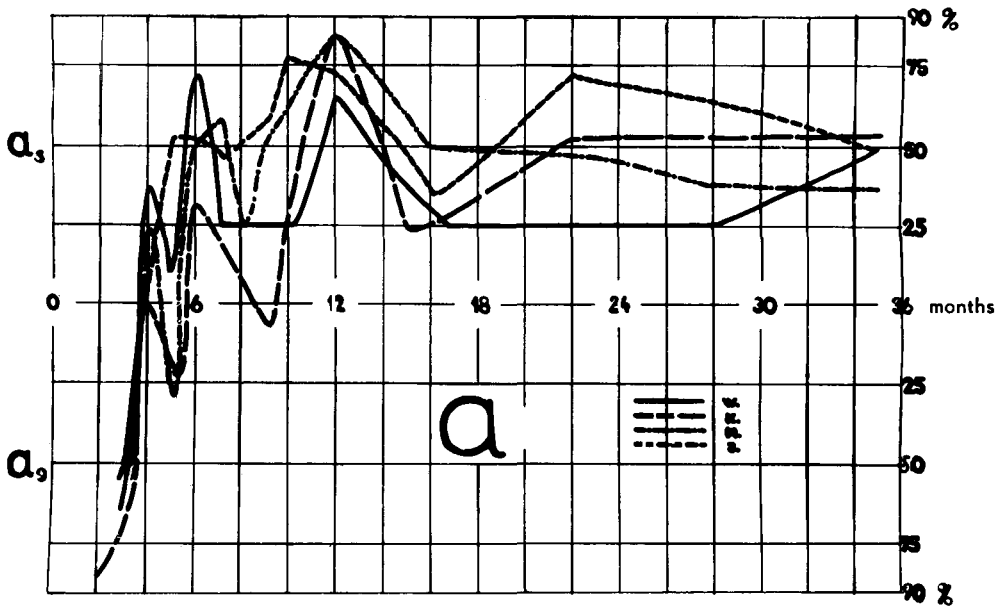


Fig. 4



Fig. 5

similarity. Even the injured boy (K) shows the same bends, the same shape of the development line, although the more arrested level “stubbornly” strives at compensation for the arrest. The same comparison for the “anomalies”, i.e., a too slim or too stout figure for the same boys from the aforesaid Home, shows radically differing curves (Fig. 3). There is an ideal agreement between the curves of the quadruplets (Fig. 4).

After the quadruplets became three-years old, the longitudinal studies on their development were taken over by another scientific institution.

The author tried to reproduce the development of the quadruplets at school age by using examinations made at school. The diagram on Nowakowski and Perkal's normograms (Nowakowski 1968*b*) for three noninjured quadruplets could be drawn, from the technical point of view, by means of single line only, as the plots for the three of them were so closely placed that they were nearly identical. The line of their development runs on the left side, beyond the 90% line, which means that their figures are very slim and very lean, but in an identical way. The arrows pointing backwards show that they were somewhat arrested in development, but this arrest nearly disappeared when they were approaching the age of 18 years. Even a serious, transitory illness of one of them did not effect a deviation from the identical development.

The author has, unfortunately, only 10 measurements of the fourth boy, the one injured at birth and was unable to draw his development in the same manner as for his brothers. The boy was, however, not much smaller and weighed not much less than his brothers: differences of height never amounted to more than 3 cm, those of weight never to more than 1½ kg. The fourth brother was once 10 cm smaller, and another time he weighed 2,2 kg less. Apart from that, the differences were smaller. Now he has attained an identical weight, and is only 4 cm smaller.

The body height of the quadruplets amounts to 173, 173, 172, and (that of the injured quadruplet) 169 cm. They all weigh 51 kg each. The father is 167 cm tall and weighs 72 kg; the mother is 164 cm tall and weighs 60 kg.

Three of the quadruplets have always lived together, whereas the injured one lived for a long time out of home and now attends another school. They all like the same sport

disciplines, even the injured brother, and have the same average capabilities. It is very difficult to tell them apart (Fig. 5).

The impression is acquired that not only body height, but also body weight and other physical and mental traits, are to a much greater extent under genetic control than it is generally assumed, and that genetic factors prevail in the shaping of the phenotype.