

LONGITUDINAL DENTAL EXAMINATION IN TWINS

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In 1970 Hungary has joined in the WHO twin research program, and the medical file of twins has thus become compulsory.

A total of 269 twin pairs could thus be examined at the age of 6 months, 157 at the age of 12 months, and 44 at the age of 24 months. They all came from the same population and included 54 pairs diagnosed as MZ and 109 diagnosed as DZ. Extensive dental examination is planned to take place yearly till the age of 14 years.

The medical file of twins in Hungary has become compulsory since 1 January 1970, Hungary having also joined in the WHO twin research program. Genetic and somatopsychic examination of twins has thus started to be carried out by a working team directed by Professor Sarkany.

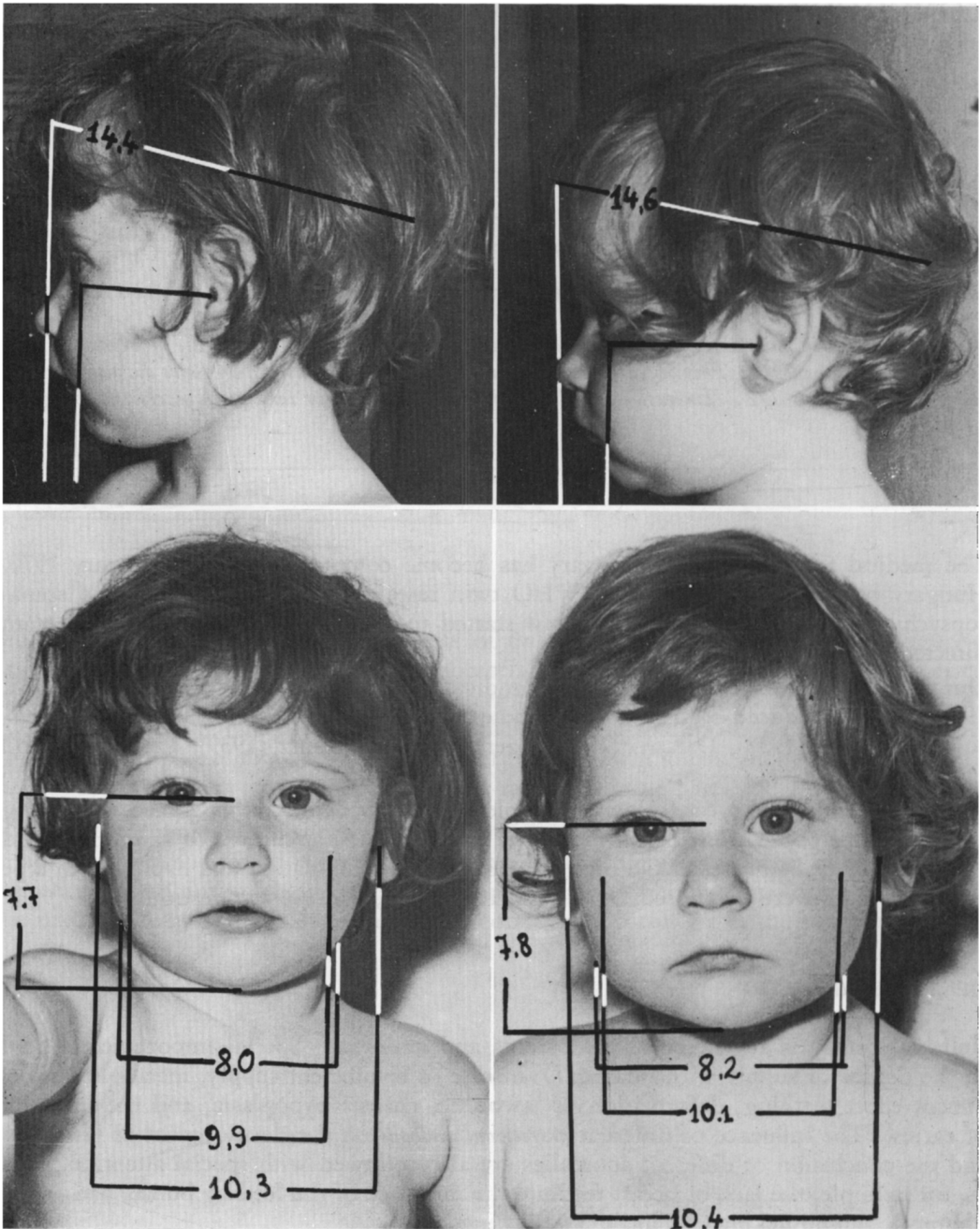
Our work has been largely based on the indications provided by von Verschuer (1927, 1933), who introduced stomatological studies in twins, and by Hungarian researchers, such as Szondi (1938), Daranyi (1939), Szenthe and Madarasz (1939), and Acsadi and Czeizel (1970).

As of 1 September 1972, the following sample of twin pairs could be examined, all coming from the same population: 269 at the age of 6 months, 157 at the age of 12 months, and 44 at the age of 24 months. On the basis of placenta examination and haptoglobin type these 269 pairs were diagnosed, 54 as MZ, 109 as DZ, and 106 as questionable.

DENTAL EXAMINATIONS

Reliable history is registered about parents and children. Special importance is paid to the degree of supply with vitamin D: in case of insufficient supply, metabolic disturbances effect teething, deformation of jawbones, enamel hypoplasia, and the intensity of caries. The influence of different *nutritional methods* on the development of jawbones and the conclusion of different anomalies are also followed with special attention, such as, for example, the lack of breast feeding, the influence of the feeding bottle, bad habits (dummy, thumbsucking, infantile swallowing, etc.).

The diagnosis of the causes of morphological and functional deviations is important from the orthodontic point of view, and the determination of the amount of genetic conditioning may be achieved through the twin method.



The causes of distal occlusion, as examined at the age of 2 years, may be summarized as follows:

Use of the long nipple	37%
Use of the comforter	37%
Thumb sucking	38%
Other bad habits	84%
No bad habits	11%

Photograph side-face analysis is also carried out, and the profile field is examined as shown in the Figure.

Face and skull dimensions are also considered in the course of the stomatological examination, and an index is calculated. As examined at the age of 2 years, face and skull dimensions appear to be identical in 62% of MZ twins, as compared to 28% of DZ twins.

The chronological order of eruption is also examined (graphic system by Kovacs 1958) and found to be identical in 47% of MZ twins, as compared to 16% of DZ twins.

Extensions of our study are planned, both with respect to the number of twins to be followed and to possibilities of early prevention.