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Morphological and Dermatoglyphic Perculiarities in a Family with Autosomal Dominant Inherited Syndactyly

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ABSTRACT A family with isolated, autosomal dominant syndactyly of the hands is presented. 40 persons from 5 generations are included in the study. Morphological and dermatoglyphic investigations were carried out on 10 probands, only 1 of whom showed solely the characteristic changes of the dermatoglyphics. Syndactyly of the fingers 3-5 occured with reduced penetrance and variable expressivity. 8 persons exhibited bilateral osseous or cutaneous changes. Analysis of the pattern on fingertips revealed an increased number of whorls in probands in comparison to their relatives and the middle-european population (65.6 % :28.6 % :25.4%). A parallel course of ridges without pattern formation was observed on 5 fingers of 4 probands. The c-triradius was absent in 14 hands of 9 persons, fusions bc were found in 3 hands and fusions cd in 8 hands. In 3 cases the C-line was reduced. The number of palmar interdigital patterns was reduced in probands. The ridge structure was aberrant in the regions of syndactyly in 8 of 9 probands. A chromosome rearrangement was excluded as the cause of the syndactyly. An assignment to Syndactyly Ia, II and III was excluded by the molecular investigations. A morphologic correspondence to Type I seems obvious.

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