

BIRD-HEADED DWARFS

Studies in Developmental Anthropology
Including Human Proportions

by

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With 64 Figures



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Introduction

“When we find Nature herself practising experimental pathology it is well worth our while to investigate as fully as we can the conditions under which she works and the results of her experiments.”

J. Thomson

The present monograph is concerned with the study of a rare type of dwarf which is set apart from other main types of dwarf, in particular that known as primordial or idiopathic dwarf, by an extreme smallness of the head. Because of this feature, *Virchow* has characterized this type of dwarf as “bird-headed” or “nаноcephalic”. By the former term he referred to the associated largeness of the eyes, beak-like protrusion of the nose, narrowness of the face and recession of the lower jaw and chin. *Gilford* called this type of dwarf “class I ateleiosis, occurring in foetal life”.

The following diagnostic criteria were used in identifying nanocephalic dwarfs: (1) extreme statural dwarfism, that is, an adult standing height of about 120 cm. and, in children, a deviation from mean normal standing height, or length, of group coevals by about minus 30 per cent or minus 6 to 8 standard deviations (cf. *Günther*, 3; *McCune*); (2) a head circumference of 39 to 42 cm. in the adult and down to about 27 cm. in the newborn; (3) proportionate smallness of skull and face; (4) a degree of mental retardation which, in spite of the spectacular smallness of the brain, never drops to the range of the microcephalic idiot; (5) the frequent presence of congenital malformations, in addition to the abnormal configuration of the bird-like face.

Regarding method, one purpose of the monograph is description. That is to say, complete documentation, numerical if possible, is attempted of a maximum number of objective features of nanocephalic dwarfism. This, besides in itself being a scientific aim, is also deemed useful in view to future observers who may find completeness of data valuable for such studies as they may wish to undertake beyond the interest and the ken of the present writer. The second purpose of the monograph is analysis of the assembled data. Techniques and methods are outlined in detail; they are those of clinical pediatrics, endocrinology, metabolism, cytology, teratology, genetics, pathology, roentgenology, anatomy and anthropology, orthodontics, neurology and child psychology (Chapter III to VI). In the third place, the analyzed data are discussed and commented upon under three different headings, differential diagnosis, etiology and pathogenesis (Chapter VII, VIII).

Special attention should be called to the fact that, as a background for the analyses of the dwarfs' somato-cephalic proportions, a developmental canon of human proportions will be found in Chapters III and IV which is based on mean-normal dimensions of North-American children from full-term birth to 17 years.

The clinical material on which this study was based consisted of two children with bird-head dwarfism who were observed in the Department of Pediatrics, The University of Chicago (Chapter I) and of thirteen well-documented nanocephalic dwarfs, children and adults, whose reports have been published in the literature of the last 200 years. These latter have been re-edited in English. An additional group of 11 less well-documented cases was appended to the main body of the literature reports (Chapter II).

The first of the two Chicago patients was by far the best studied dwarf in the whole group*. This girl was first seen in 1946 at the age of 2 years and is still under observation at the age of 15 years. Not all of this 13-year record could possibly be published at the present time. It was rather decided, several years ago, to limit this study to age 9 and complete all analyses necessary for publication up to that date. Meanwhile, collection of descriptive data has been, and is still being, continued. A follow-up report, so the writer hopes, will be published later when the patient is fully grown-up.

Chicago, October 1959

Helmut P. G. Seckel

*Brief reports of this patient as well as of Case 2 have been published in 1953 and 1955 (Seckel, 3, 4).

For references, see bibliography, Chapter III.

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