

Some Account of Cretinism. By Henry Reeve, M.D. of Norwich.
Communicated by William Hyde Wollaston, M.D. Sec.R.S. Read
February 11, 1808. [*Phil. Trans.* 1808, p. 111.]

The peculiar idiots, Cretins, which prevail in the Valais and in Switzerland, appear to have been first described by Felix Plater in 1656; but the author of the present communication refers to M. de Saussure for the most accurate account of the appearance of the disorder; to Malacarni of Turin, and to Professor Ackerman, for a particular description of several cretins that they dissected; and for a more full account of the malady, to the *Essai sur le Goitre et Cretinisme*, by Mons. Fodéré.

By these and other accounts, Dr. Reeve's curiosity was excited to examine what connexion could subsist between mental imbecility and that enlargement of the thyroid gland which so frequently accompanies it, and which, in general, first attracts the notice, and has much occupied the attention, of those who have described cretinism. But this is not a constant attendant; while the more essential symptoms are, deformed head, diminutive stature, a sickly complexion, a vacant countenance, coarse and prominent eyelids, wrinkled and pendulous skin, with muscles proportionally flabby. The qualities of the mind correspond to the outward appearance, and vary in all degrees, from common stupidity to complete fatuity.

Notwithstanding the assertions and ingenious reasoning of Fodéré and other authors upon the supposed connexion between goitre and cretinism, the author is inclined to think, from the instances which he had an opportunity of observing in the neighbourhood of Martigny, that the two disorders are perfectly distinct; and that though they frequently occur in the same person in countries where both disorders are endemial, yet no necessary connexion subsists between them: for even there, many persons have goitre without cretinism, and many cretins have no goitre; and in Britain, we know that no weakness of the intellectual powers accompanies bronchocele.

Dr. Reeve is inclined to ascribe this singular malady to peculiarities in the physical constitution of certain districts. The valleys where cretinism is most frequent, as Saussure justly observes, are surrounded by very high mountains; they are sheltered from currents of air, and are exposed to both the direct and reflected rays of the sun. The atmosphere is humid, close, and oppressive: the houses of the cretins are also generally in the most confined situations, are very filthy, very hot, and miserable habitations; while in the more airy and elevated parts of the mountains, no cretins are to be seen.

The hypothesis, that snow-water is the cause of goitre and of cretinism, our author observes, is contradicted by the most obvious facts; since there are many places contiguous to glaciers where the inhabitants can drink nothing but snow-water, and yet are not subject to these disorders; which, on the contrary, do occur in some places where snow-water is unknown.

The theory also which ascribes them to waters impregnated with

calcareous matter is equally unfounded; and even the general opinion, that goitre is endemial in mountainous countries, is of no value, since it is rare in Scotland, though mountainous, and very common in the county of Norfolk.

From those dissections which have been made of cretins by Ackerman, by Malacarni of Turin, and by Foderé, some very singular appearances in the cranium have been observed. There was no cavity for the reception of the pons varolii and medulla oblongata; and that which contained the cerebellum scarcely exceeded one third of its natural capacity.

The present paper is accompanied with two drawings taken in the anatomical museum at Vienna, from the skull of a cretin who died at thirty years of age; yet the fontanelle is not closed, the second set of teeth are not out of their sockets, and none of the bones are distinctly and completely formed. Every part bears marks of irregularity in the growth and formation of bone. The zygomatic and maxillary processes of the ossa malæ are wanting; the ossa nasi very small; in the temporal bone the zygomatic process terminates at the coronoid process of the lower jaw; the mastoid and styloid processes are wanting; the os occipitis is unusually large, and numerous additional ossa triquetra are seen along the whole course of the lambdoidal suture.

Cretinism, says the author, is a most distinct instance of the effect of physical causes on the intellectual as well as on the bodily powers; and it is now sufficiently ascertained, that it may be prevented by removal of children from the confined and dirty situations to the more open and airy parts of the mountains: and, accordingly, the number of cretins has, within the last ten years, sensibly diminished. The analogy between this disorder and rickets is considerable. It is remarkable, that they were both first described nearly at the same time; and it is to be hoped that they will disappear together, and at some happier period be known only by description.

On a new Property of the Tangents of the three Angles of a Plane Triangle. By Mr. William Garrard, Quarter Master of Instruction at the Royal Naval Asylum at Greenwich. Communicated by the Astronomer Royal. Read February 11, 1808. [*Phil. Trans.* 1808, p. 120.]

On a new Property of the Tangents of three Arches trisecting the Circumference of a Circle. By Nevil Maskelyne, D.D. F.R.S. and Astronomer Royal. Read February 18, 1808. [*Phil. Trans.* 1808, p. 122.]

The same property which at the last meeting was stated by Mr. Garrard to belong to the tangents of any three parts of a semicircle, was in this paper extended to all cases of trisection of the whole circle; but the demonstration of course could not be read to the Society.