

We have collected twelve cases of diphtheritic paralysis, two of which we saw, and which represented about six per cent. of the whole number of cases. Five were in children, the remainder adults. Of the adult cases, five were persons of sedentary habits, whose occupation was mental. Three were teachers, one a manufacturer, and one a professional man. In the latter there was some tendency towards paralysis, his father having had incomplete paralysis after typhoid, at the age of fifty-one, which was permanent. In this case, with general paralysis of the limbs, etc., the duration was three months. In one case of a child of three years, permanent paralysis of the internal rectus of one eye resulted, and in one adult paresis of accommodation to some extent. In one case there was no affection of the fauces after the paralysis appeared in the extremities. In the adult male cases, it was noticed that the sexual organs were the last to be affected, and the first to recover their functions. The digestive organs in these cases performed their functions in a generally satisfactory manner, and a good amount of nourishment was taken and digested, which in the main constituted the treatment.

Recovery in these cases took place in from three weeks in one child, to nine months in a woman of forty. The fatal case has been referred to. Death took place in twelve weeks from the invasion of the paralysis. It is unfortunate that no effort was made to administer nourishment through a stomach tube, which has been successfully done in several instances. In two cases, after recovery severe lancinating pains in the joints and feet persisted for two or three months, and have been troublesome at intervals since. We were impressed with the probability that those whose nervous powers were most heavily taxed were more liable to this sequel than the laboring class. Our cases seem to show this as far as they go, and it is also likely that in some a predisposition to paralytic disease renders the patients more susceptible. Recovery was apparently aided by the administration of strychnine, and the faradic current applied after no new sets of muscles were invaded.

THE FORAMINA OF MONRO: SOME QUESTIONS OF ANATOMICAL HISTORY.

BY BURT G. WILDER, M. D.

THE foramina of Monro may be provisionally defined as a pair of lateral orifices which form the sole channels of communication between the *lativentriculi* and the *cephalic division of the mediventriculus*.

This definition is provisional in respect to terms rather than facts. It may be easily demonstrated, upon an uninjured brain, that the only exit from either lativentricle — other than into the corresponding olfactory ventricle — is by an opening through its mesial wall into the cephalic (anterior) part of the mediventricle (third ventricle); but there is room for a difference of opinion as to, first, the desirability of distinguishing, by the name *aula*¹ or otherwise, this prethalamie space from the interthalamie part, or third ventricle proper; and, second, as to whether the name foramen of Monro shall be applied to the whole extent of the passage between the two lativentricles, including the vertical pas-

¹ The Latin word signifying a hall or passage; suggested in reference to the relations of this space to the lateral ventricles.

sage sometimes called "*vulva cerebri*," or be restricted to the lateral orifices of this space.

The former question must be decided mainly by reference to the facts of embryology and comparative anatomy. In considering the latter it would be well for us to know, first, what was described by Monro; second, what was intended by the anatomist who first used the term; third, what is sanctioned by modern usage.

Taking the points in the reverse order, it must be admitted that upon the third the evidence is conflicting. In some cases the author's meaning is not made clear, but, so far as I have been able to learn, two foramina are specified by Darling and Ranney² (444), Dunglison (431, 1095), Foster and Langley (224), Gray (468), Hirschfeld (50), Huguenin (4, 67, 73), Hyrtl (444), Mihalkovics (118), Milne-Edwards (xi. 304), Morrell (174), Reichert (15, 26, 52), Robin et Littré (1633), and Vicq D'Azyr (9, 17). It is distinctly mentioned as a single passage with two lateral orifices, and sometimes a median ventral orifice, by Charles Bell (ii., 428), Cuvier (111, 369), Chauveau (730), Mivart (120), Todd (676), Quain and Wilson (iii., plate 7), and Quain, Sharpey, Thomson, and Schäfer (ii., 544).

As to the second point, I have been unable to ascertain by whom the phrase "*foramen of Monro*" was first employed, and hope to learn through some one more familiar with the works of the older anatomists.

The original descriptions which gave rise to the name are undoubtedly contained in a work by Alexander Monro, published in 1783, and entitled *Observations on the Structure and Functions of the Nervous System*.³ The evidence for this view is both internal and external.

In the chapter Of the Communication of the Ventricles of the Encephalon with each other, as described by other Authors, numerous citations and quotations are given to show the imperfection of previous descriptions. The author claims (page 16, note) to have "read to the Philosophical Society of Edinburgh, in 1764, December 13th, a paper On the Communication of the Ventricles of the Brain with each other," etc. He also claims to have been in the habit of demonstrating the communication since 1753, and quotes part of a letter from one of his students, a Dr. Morgan, "now physician and professor of physic in Philadelphia," written to Sir John Pringle in London in 1762, and describing the demonstration as seen by him in the lecture-room. Longet seems to have been displeased at the use of the name in connection with the foramina, but Vicq D'Azyr compliments Monro for his description in an *Éloge*, and in his own great *Traité*, published in 1786, apparently before the phrase "*foramen of Monro*" was introduced, uses the following language: "*M. Monro, savant professeur d'anatomie à Edinbourg, a donné, etc. . . et l'on voit dans ses planches III. et IV. de son Nervous System les ouvertures qui établissent une communication entre le troisième ventricule et les deux ventricules latéraux.*" Meckel (ii. 462) also refers to Monro on the Brain, although, probably by a misprint, the date of its publication is given as 1793. Finally, in no other work is it claimed that the description is original.

² The numbers refer to the list of works at the end of this paper. The authors are placed alphabetically, and the Arabic figures denote the pages, the Roman the volumes.

³ Two copies of this work are in the library of Harvard University.

The work above mentioned contains the following passages: "After laying open one of the lateral ventricles . . . an oval hole. From this hole a probe can be readily passed into the other lateral ventricle, showing in the first place that the two lateral ventricles communicate with each other. . . . The middle part of this passage is over a passage downwards, named the *iter ad infundibulum*, or *vulva*, which should rather be called *iter ad tertium ventriculum*." (Page 114.) "A natural passage by which the lateral ventricles communicate with each other and with the third ventricle. This passage is bounded on the fore part by the anterior crura of the fornix; above, by the fore part of the body of the fornix, where it is about to form its anterior crura; behind, by the meeting of the choroid plexuses of the two ventricles; below, by the thalami. . . . The communication between the lateral ventricles laid open by cutting the fore part of the body of the fornix. By such a section the hole or passage appears by which the lateral ventricles communicate with the third ventricle." (Explanation of Plate 3.)

These passages certainly entitle the author of the work to the credit of demonstrating the existence of interventricular communications, which, as he states (pages 9 and 10), had been ignored or denied by most prior anatomists; but they also indicate a serious misconception of the true relations of the ventricles. *Monro* seems to have regarded the mediodorsal commissure as an important morphological landmark, and as separating the passages above described from the mediventricle. We know now that this commissure exists only in mammals, and is formed late with them, while in birds, reptiles, and batrachians the mediventricle is undivided.

If this statement of *Monro's* views is correct, it seems to me that full justice will be done to his memory if we retain his name in connection with a part of the passage which he described, and that considerations of development, comparative anatomy, abundant precedent, and real convenience should decide us to restrict the application of the term foramen of *Monro* to each of the *two lateral orifices* of the prethalamie part of the mediventricle. The question of naming this *aula* need not be discussed upon the present occasion.

Naturally connected with the historical part of the subject are the identification of the author of the Observations and the spelling of his name.

In *Huxley's* Vertebrates and in *Huxley and Martin's* Elementary Biology the name is always spelled *Munro*; while in *Darling and Ranney* it is as constantly *Monroe*. The name is undoubtedly to be spelled *Monro*.

The last of our historical inquiries is, Which of the *Monros* was the author of the Observations? The title page bears simply Alexander *Monro*. But there were *three* Alexander *Monros*, father, son, and grandson; all were professors of anatomy in the medical school of Edinburgh, and all wrote anatomical works. *Dunglison* and the Edinburgh Encyclopædia state that the foramen was described by *Monro secundus*, while *Todd and Littré* et *Robin* ascribe the description to *Monro primus*.

After a careful examination of the Observations, and a comparison of dates from nine different sources, I am prepared to state positively that the work was written by Alexander *Monro secundus*, and that the foramen was named in his honor.

Concisely stated, the evidence is as follows: *Monro primus* died in 1767, while the work claiming to contain the first full description was not published until 1783, sixteen years later. A letter from a student published therein speaks of the author as *filio*; and the author refers to "the radial nerve of Winslow" as "the nerve called spiral muscular by my father." and as the "muscular spiral nerve of *Monro*." (Pages 134 and 136.)

The author of the Observations, then, must have been either the son or the grandson of the first *Monro*. But *Monro tertius* was born in either 1773 or 1774, and at the time of the publication of the work was only nine or ten years old. Moreover, in his own work, The Elements of Anatomy, I am informed that *Monro tertius* describes the discovery of the foramen by his father.

Recapitulation of conclusions and inquiries:—

(1.) It will be better to consider that there are *two foramina of Monro*, one for each lativentricle.

(2.) The cephalic end of the mediventricle, forming what was originally regarded as the middle part of the passage called foramen of *Monro*, should probably be recognized as a distinct ventricular integer, and might be named *aula*.

(3.) The work claiming to contain the first sufficient description of the interventricular communication was written by Alexander *Monro secundus*, and the name was given in his honor.

(4.) Who first employed the name I have not been able to learn, and what was first implied by it can only be inferred until the first use of the term is known.

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RECENT PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.¹

BY F. I. KNIGHT, M. D.

SOME OF THE COMMONER AFFECTIONS OF THE TONSILS FROM A DIAGNOSTIC AND THERAPEUTIC STAND-POINT.

UNDER this caption Dr. G. M. Lefferts² read a very interesting and valuable paper before the New York Academy of Medicine. He deprecates the old method of examining the throat with a teaspoon instead of a proper tongue depressor, and urges the use of reflected light. He calls attention to the loose nomenclature of acute affections of the tonsils, all of them being called "quinsy and ulcerated sore throat." As a matter of fact, the inflammatory conditions to be named, both in their causation, seat, symptomatology, and treatment, are as widely different as in like conditions elsewhere. Inflammation may attack either the parenchymatous tissue, or the secreting tissue of the tonsil, or the tissues about it. In the former case, if acute, it will proceed to the formation of true tonsillar abscess, or so-called quinsy, a comparatively rare condition. What is commonly reported as abscess of the tonsil is oftener an inflammation and suppuration of the tissues at the base or in front of the gland. Verneuil has shown us that the tonsil does not adhere very firmly to the groove, if it may be so termed, which lies behind it; and that when tumefied by inflammation it bulges out between the anterior and posterior pillars of the soft palate, and moves backward and forward with every movement of deglutition. This mobility, he asserts, is one of the principal causes of the formation of abscess. The gland being continually displaced, a serous bag forms in the connective tissue, which stretches between both pillars of the fauces and occupies the bottom of the groove in which the tonsil lies. In this serous bag the purulent gathering is formed. Such an abscess is always deep seated (and this is the one commonly met with in practice), and cannot, therefore, be easily reached with the knife. To incise such an abscess it is necessary to cut through the anterior pillar of the fauces; for this pillar—enlarged, oedematous, and protruding—forms the anterior wall of the abscess. The reason of failure at times to find pus on incision of a fluctuating spot in this region is explained in this manner. The swelling of the tissues puts upon the stretch the thyro-palatine and the pharyngo-palatine muscles; between the two is thus left a small triangular soft spot, palpation of which conveys to the finger a decided sense of fluctuation.

Dr. Lefferts dwells upon the frequency of follicular tonsillitis being classed as ulceration of the tonsil, the disease being in reality an inflammation of the mem-

brane lining the crypts of the tonsil, which are blocked up by a cheesy secretion. To prevent recurrence of the attacks of true tonsillitis Dr. Lefferts recommends excision of the glands and constitutional treatment, which he thinks always indicated. For acute tonsillitis and peritonsillitis he recommends steam inhalations and warm applications outside. Scarification of an inflamed tonsil often gives great relief, even if no abscess is reached. The nitrate of silver locally and guaiac internally he thinks of doubtful value.

Dr. Lefferts dwells upon the great importance of excision of enlarged tonsils in children, that is, when the tonsil is much enlarged and indurated. He dwells upon the serious affections of the general health dependent upon such condition, which necessitates the breathing of a diminished supply of air which has also become vitiated by the foul secretions of the tonsils.

LUXATION OF THE LEFT CORNU OF THE HYOID BONE.

Dr. W. H. Daly³ reports the case of a physician who applied to him for relief from this condition, which had occurred half an hour before while laughing. Dr. Daly, on laryngoscopic examination, found no lesion to account for the patient's symptom of marked dysphagia. His head was bent a little forward and to the left, and straightening it up caused a dull pricking pain over the left cornu of the hyoid bone. Speech was clear, but exercised cautiously. The patient stated that he had suffered repeatedly from this luxation. Dr. Daly grasped the throat firmly below the os hyoides with the thumb and index finger of his right hand, steadying his head with his left, and directed the patient to swallow vigorously, at the same moment compressing and retracting the parts between his fingers, and then quickly releasing them. After the third effort the patient suddenly declared that he was all right again.

THE IMPORTANCE OF ANÆSTHESIA OF THE LARYNGO-PHARYNX AS A SYMPTOM OF HYSTERIA.

During the course of an epidemic of hysteria which occurred at a young ladies' boarding-school at Bordeaux, M. Armaingaud⁴ observed that in some cases irritation of the pharynx, epiglottitis, the opening of the larynx and the ary-epiglottic folds by means of the finger-tip or a stiff feather was followed neither by the slightest sensation nor by reflex action. He concludes, therefore, that this anæsthesia is not simulated, agreeing with the views of M. Chairon. He does not, however, believe with the latter that this symptom is pathognomonic of hysteria, because it is also found in a certain proportion of cases of epileptic, saturnine, and simple neuropathic convulsions. Nevertheless, with other symptoms of hysteria, anæsthesia of the pharynx and larynx may assist us to decide whether the attack be simulated or real.

ON POLYPUS AND OTHER MORBID GROWTHS IN THE NOSE; THEIR RADICAL TREATMENT BY THE ELECTRO-CAUSTIC METHOD AND THEIR CONNECTION WITH ASTHMA.

Dr. J. L. W. Thudichum⁵ says that he abandoned the use of the forceps in removing nasal polypi sixteen

³ Archives of Laryngology, vol. i. No. 2.

⁴ Gazette des Hôpitaux, No. 39, 1880, Archives of Laryngology, vol. i. No. 2.

⁵ London Lancet, April 17, 1880.

¹ Concluded from page 133.

² New York Medical Record, December 27, 1879.