ON
ENCEPHALOCELE;
BEING THE
HISTORY OF A CASE,
WITH
A TABULAR ANALYSIS OF SEVENTY-FIVE CASES.
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CONGENITAL hernia of the brain is a rare malformation; for the subjects of it to live any length of time is a matter of still greater rarity. In the following instance of the disease life was considerably prolonged, and it is chiefly on account of this peculiarity that I have ventured to submit the case to the Society.

Mrs. G— was delivered, on the 15th of November, 1855, of a female child, which bore at its birth a tumour at the back of the head. The labour was natural.

The child was two months and a half old when I first saw it. Concealing, and apparently originating from, the occiput and nucha, was a somewhat conical tumour, nearly as large as the child's head, measuring five inches and a

quarter in length, and three inches and a half from side to side. The tumour was bounded by a thin, glossy membrane—stretched skin of the head and neck—upon which coursed numerous varicose veins, and which had hairs on its upper surface similar to those of the head. (See the figure.) So freely did the tumour fluctuate under the fingers, that it felt like a thin bladder filled with water; and when one half was shaded by the hand, the other half transmitted even the

daylight in a marked degree. There was no pulsation perceptible. The child had a very receding forehead, and a vacant idiotic stare; was to all appearance blind, but was startled by any sudden noise. The limbs were not paralysed, on the contrary, the flexor muscles of the right hand were in a state of tonic contraction; the fingers of this hand were constantly kept clenched and turned inwards, and any attempt to unclench the hand made the child cry. The body generally was very thin and puny. It had been wasting ever since birth (although the child took a good deal of food), whilst the tumour had increased rapidly in size. Shortly before death, contraction of the fingers of the left

hand occurred. The mother, who was a healthy looking young woman, thirty-one years of age, had previously given birth to five hearty children. She found the child dead by her side on awaking, the morning of the 8th of April, 1856; so that it had lived altogether about five months.

Autopsy ten hours after death.—The tumour having been cut into, about half a pint of clear colourless fluid escaped; this fluid was alkaline and albuminous. When the tumour was laid open, it was seen to contain a portion of the brain, and the entire cerebellum; these were continuous with the intracranial portion of the encephalon. The cavity of the tumour was lined by the dura mater and the arachnoid, between which and the portion of contained cerebrum passed several bands of old adhesions. The intracranial portion of the brain offered no anomaly of conformation; but the longitudinal fissure was prolonged back through the extracranial portion, which was thus divided into two halves; further dissection proved these to be two large cavities (three inches and a half long, by two inches and a half transversely), each containing the choroid plexus, and each continuous with the corresponding lateral ventricle. The cerebellum was greatly atrophied, especially its left half, the margin of which did not exceed one eighth of an inch in thickness. The cerebral substance and the cranial nerves appeared normal.

After the brain was removed, a hole was perceived in the occipital bone; this hole was oval in form, continuous with the foramen magnum, and measured (including this latter) two inches and a quarter from before backwards, and one inch and a quarter across. The margins of the aperture corresponded with the lateral sinuses. The basilar and condyloid portions of the occipital bone were of their usual proportions, and the articulation of the condyles was perfect; but immediately above the commencement of the spinal canal was an expanded osseous cavity, on each side of which was the foramen lacerum jugulare, with its vein and nerves.

I am indebted to Mr. Jakins, of Osnaburgh Street, for the opportunity of observing this case.

A TABULAR ARRANGEMENT OF SEVENTY-

I. *Of those occurring in*

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
1	M.	47 days (operated on).	Of two walnuts.	—	Softened.	Gangrened.	—
2	M.	95 days.	Of a walnut.	Cerebellum.	Effusion into ventricles.	—	Spina bifida.
3	M.	2 days (operated on).	6 in. × 5 in.	Posterior lobes of cerebrum and cerebellum.	Effusion into ventricles.	—	—
4	—	Still-born.	6 in. wide.	Posterior lobes of cerebrum.	—	—	—
5	M.	26 days.	4½ in. across.	—	Atrophied; effusion into ventricles.	—	—
6	—	Fœtal.	Of the child's head.	—	—	—	—
7	—	— (Operated on.)	Of the child's head.	—	Sound.	—	—
8	M.	Some days (operated on).	3½ in. long.	—	—	—	—
9	—	34 days.	—	Cerebellum.	Sound.	Too large.	Spina bifida
10	—	6 weeks.	—	—	—	Soft.	—
11	—	Still-born.	Of the child's head.	Posterior lobes of cerebrum and cerebellum.	Atrophied.	—	Spina bifida.
12	—	Fœtal.	—	—	—	—	—
13	—	Still-born.	—	Whole of cerebrum.	Defective.	—	Spina bifida.

FIVE CASES OF ENCEPHALOCLE.

the Occipital Region.

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
—	—	Salomon Reiselius; Ephemerid. Med. Physic. Acad. Nat. Cur., 1683, p. 272.
Hole, size of finger in occipital.	—	Lechel; <i>ibid.</i> for 1684.
Hole in proral part of occipital.	—	Corvinus; Haller's Disputat. Chirurg., t. ii, 1749.
—	—	Fried; Lieutaud's Hist. Anatom. medic., 1767.
Hole in occipital, near lambdoid angle.	—	Siebold; Collect. Observat. Medico-chirurg., 1769.
—	—	J. Gardner; Medical Commentaries, vol. v, p. 306, 1777.
—	—	Senac. Traité du Cœur, 2me éd., 1783.
Middle and right lateral parts of occipital perforated.	—	Thiebault, Desault's Journal de Chir., t. iii, p. 327, 1791-2.
Occipital, parietal, and part of temporal bones absent.	—	Penada, Ernia del Cerebro, 1793.
—	—	Ibid.
Hole in occipital continuous with foramen magnum.	Fusion of all the cervical vertebrae.	Van der Laar, Observat. chirurg., obstetric., anatomic., medic., 1794.
—	Umbilical hernia.	Sandifort, Museum Anatomic., pl. 126, 1793-1827.
Superior portion of occipital wanting.	Spinal canal open from neck to sacrum; union of three ribs; club-foot.	Hull, Memoirs of the Lit. and Phil. Society of Manchester, vol. v, p. 494, 1802.

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
14	—	Still-born.	Very large.	—	Effusion into lateral ventricles.	—	—
15	—	30 days.	Of a fist.	Cerebellum.	—	—	—
16	F.	Still-born.	1½ in. wide.	Posterior lobes of cerebrum.	Atrophied.	Normal.	Spina bifida.
17	M.	Still-born.	—	—	Atrophied.	—	Spina bifida.
18	—	Fœtal.	Of the child's head.	Cerebellum.	—	Greatly extended.	—
19	—	Still-born.	—	—	—	Degenerated.	Spina bifida.
20	—	13 days.	—	—	Atrophied.	Small.	—
21	F.	17 days (operated on).	Larger than the child's head.	Posterior lobes of cerebrum.	Effusion into ventricles.	Normal.	—
22	F.	— (Operated on.)	—	—	Effusion into ventricles.	Atrophied.	—
23	M.	Still-born.	Size of head.	Posterior two thirds of cerebrum and cerebellum.	—	—	—
24	M.	Still-born.	—	Cerebellum.	Healthy.	—	—
25	F.	Still-born.	—	Posterior lobe of right hemisphere.	Atrophied.	—	—
26	—	Fœtal.	—	—	—	—	Spina bifida.
27	M.	—	Voluminous.	Greater part of brain.	Effusion into ventricles.	—	—
28	M.	—	Of a goose-egg.	Left posterior lobe of cerebrum, and left lobe of cerebellum.	Effusion into left ventricle.	—	—
29	—	9 days (operated on).	Of an orange.	Posterior lobes, and cerebellum.	Softened.	—	—
30	—	7 weeks.	Of a large orange.	—	—	—	—
31	—	Still-born.	—	—	—	—	—
32	—	44 days (operated on).	8½ in. round.	Posterior lobes of cerebrum.	Effusion into ventricles.	—	—

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
Occipital perforated above foramen magnum.	—	Chaussier, Dict. des Sciences Médicales, t. xxxiv, p. 229, 1819.
—	—	Isenflamm, Anatomische Untersuchungen, 1822.
Hole, above occipital protuberance.	Cleft palate; club-foot; supernumerary fingers and toes.	Meckel, Deutsches Archiv, t. vii, 1822.
Hole, above occipital protuberance.	Cleft palate; club-foot; supernumerary fingers and toes.	Ibid.
—	Umbilical hernia of all abdominal viscera; left forearm absent; club-foot, &c.	Rathke, <i>ibid.</i>
—	—	Dugès, Ephem. médic. de Montpellier, t. ii, p. 289, 1826.
—	—	Cruveilhier; Anatom. Patholog., 1829.
Hernia came through posterior fontanelle.	—	Horner, American Journal of Medical Science, for 1829, vol. iv, p. 530.
—	—	Breschet, Archives génér. de Médecine, t. xxv, 1831.
—	Malposition of right hand; thumb of this hand wanting.	Ibid.
Occipital absent.	Absence of neck; diaphragmatic hernia.	Breschet, loc. cit.
Occipital perforated at lambdoid angle.	—	Ibid., t. xxvi, 1831.
Occipital perforated above foramen magnum.	—	Ibid.
Vast fissure of occipital, continuous with foramen magnum.	—	Roux, <i>ibid.</i>
Hole in occipital, continuous with foramen magnum.	—	Buettner, Dissert. inaug. Berol., 1832.
Hole in occipital continuous with foramen magnum.	Cranium very small; absence of fontanelles.	Robert Adams; Dublin Journal of Medical and Chemical Science, 1833, vol. ii, p. 338.
—	—	Ibid., p. 393.
—	—	Cloquet, Dict. de Médecine, vol. xii, 1835.
Hole in proral part of occipital.	—	Thierry, L'Expérience, for 1837.

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
33	M.	Fœtal.	Large.	Posterior lobes of cerebrum and cerebellum.	Softened ; right hemisphere small.	Very small.	—
34	F.	Still-born.	Large.	Posterior lobes of cerebrum and cerebellum.	Softened ; effusion into ventricles.	Normal.	Spina bifida reaching to the sacrum.
35	F.	2 months.	Of a fist.	Posterior lobes of cerebrum.	Atrophied ; effusion into ventricles.	Less than usual.	—
36	M.	Still-born.	Large.	Posterior lobes of cerebrum.	Softened ; effusion into ventricles.	Very small.	Traversed by a large canal.
37	M.	Fœtal.	Large.	Posterior lobes of cerebrum.	Effusion into ventricles.	Very small.	Spina bifida reaching to pelvis.
38	M.	Fœtal.	Very large.	Posterior lobes of cerebrum.	Sound.	—	Spina bifida ; cord reached to pelvis.
39	F.	Still-born.	Of an orange.	Posterior lobe of left hemisphere.	Effusion into ventricles.	Less than usual.	—
40	—	Still-born.	—	—	—	—	Spina bifida.
41	—	Still-born.	Large.	—	Effusion into ventricles.	—	—
42	F.	118 days.	Of a fœtal head.	—	—	—	Spina bifida.
43	M.	1 month.	Nearly that of the head.	Posterior lobes of cerebrum.	Sound.	—	—
44	—	51 days (operated on).	30 centimeters round.	Nearly the whole brain.	Softened and disorganised.	—	—
45	—	Fœtal.	—	—	—	—	—
46	—	Still-born.	—	—	—	—	Spina bifida.
47	M.	8 days.	43 centimeters long, 31 centimeters wide.	Posterior lobes of cerebrum.	—	—	—

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
Large hole in occipital, continuous with foramen magnum.	Tumour and foetal membranes adherent together; body cleft in front from neck to navel; abdominal viscera and thoracic (except lungs), exposed; pericardium wanting; ventricles of heart communicating; ductus arteriosus absent; left supra-renal capsule wanting; right very small; cleft palate; club-feet; imperforate anus.	Otto, <i>Monstrorum sexcentorum Descriptio Anatomica</i> , 1841.
Occipital reduced to its foramen magnum.	Whole vertebral column greatly bent forwards; five right false ribs wanting; supra-renal capsules distended into two communicating cysts; fundus of uterus double; club-feet; cleft palate.	Ibid.
Hole above foramen magnum.	—	Ibid.
Hole above foramen magnum.	Atrophy of right supra-renal capsule.	Ibid.
Large hole in occipital, continuous with foramen magnum.	Fissure of soft palate; supra-renal capsules atrophied.	Ibid.
Hole in occipital, continuous with foramen magnum.	Supra-renal capsules atrophied; a cervical vertebra absent.	Ibid.
Hernia at the posterior fontanelle.	Umbilical hernia; velum palati cleft; fingers and toes grown together.	Ibid.
Hole in occipital at lambdoid angle.	Cervical vertebræ reduced to four; these anchylosed to one another.	Ibid.
Hole in right side of occipital.	Cleft palate.	Ibid.
Hole in occipital below lambdoid angle.	Eversion of the bladder.	D. J. Taylor, London and Edinburgh Monthly Journal of Medical Science, for 1842.
—	—	W. Lyon, <i>Med. Gazette</i> , for 1844.
Separation of the halves of the proral part of the occipital.	—	Forgemol, <i>Bull. de l'Acad. de Méd.</i> , 1844-5, p. 493.
—	Umbilical hernia of the liver, stomach, spleen, and intestines.	Vrölik, <i>Tabulæ ad illustrand. Embryogenesin Hominis et Mammalium</i> , 1844-9.
Hole in occipital, continuous with foramen magnum.	Neck apparently absent.	Ibid.
Hernia at the greatly enlarged posterior fontanelle.	Club-foot; suprarenal glands very large.	Ibid.; In Spring's paper in the <i>Mém. de l'Académie Royale de Médecine de Belgique</i> , 1854.

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
48	F.	Still-born.	Size of head.	Posterior lobes of cerebrum and cerebellum.	Effusion into ventricles.	Atrophied.	Spina bifida.
49	M.	58 days (operated on).	Of a fowl's-egg.	Left posterior lobe of cerebrum.	—	—	—
50	—	30 days.	9½ in. round.	The whole, except cerebellum.	—	—	—
51	F.	14 days.	2 in. across.	—	—	—	—
52	F.	2 days (operated on).	Enormous.	Left posterior lobe of cerebrum.	Effusion into ventricles	Atrophied.	—
53	M.	8 days.	—	Posterior lobes of cerebrum.	—	—	—

II. Of those occurring in

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
54	—	4 days.	Very large.	Whole of cerebrum.	—	—	—
55	—	—	Two thirds that of head.	—	—	—	—
56	—	2 days.	Of a fowl's egg.	Great part of brain.	—	—	—
57	—	—	—	—	Right ventricle distended.	—	—
58	M.	14 days.	—	Anterior lobe of right hemisphere.	Atrophied; effusion into right ventricle.	Normal.	—
59	—	Some days.	Of the child's head.	Anterior lobes of cerebrum.	Effusion into ventricles.	—	—
60	—	11 weeks.	21 in. round.	—	—	—	—

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
—	Cervical vertebræ reduced to two and split.	L. D. Le Roy, <i>Verhandelingen van het Genootschap ter bevordering van genees-en-heelkunde tot Antwerpen</i> ; anno viii, p. 253.
Hole above occipital protuberance.	—	A. Willems, <i>Ann. de la Société de Médecine de Gand</i> , for 1846.
Protrusion at the posterior fontanelle.	—	Ortwin Nagelè, <i>Pr. Ver. Ztg.</i> , for 1849, p. 9.
—	—	Lussana, <i>Gaz. Med. Ital. fed. Lomb.</i> , 1851.
Hole above occipital protuberance.	—	De Lavacherie, <i>Bull. de l'Acad. de Brux.</i> , t. vi.
—	Suprarenal capsules very large.	Spring, <i>Journal de Méd. de Brux.</i> , 1853.

the Frontal Region.

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
—	—	Oliv. Jacobæus, <i>Act. Med. et Philosophicæ, Hafniensia</i> , 1677.
Frontal and part of parietals absent.	Ureters and urethra absent; cleft palate; lips, chin, and external ear absent; arms and legs each only with one bone.	Gottl. Friderici, <i>Monstrum Humanum Rarissimum</i> , Lipsiæ, 1737.
Hole in frontal.	—	Saxtorph, <i>Collectanea Societ. Havniens.</i> , vol. ii, p. 280, 1775.
Opening between frontal and nasal bones. Separation of coronal portions of frontal.	—	Kelch, <i>Beiträge zur Patholog. Anatomie</i> , 1813.
Hole at glabella.	—	Osiander, <i>Goet. Gel. Anzeig.</i> , 1812, No. 139, p. 1377.
Separation of halves of frontal.	—	Bèclard, <i>Bull. de la Faculté de Méd.</i> , t. iii, p. 292, 1814.
—	—	Meiners und Benecke, <i>Langenbeck's Nosologie u. Therapie</i> , t. v, 3, p. 1395, 1822-25.

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
61	—	Fortnight.	Of an apple.	Anterior lobes of cerebrum.	Softened.	—	—
62	—	Some days.	Of a nut.	Anterior lobes of cerebrum.	—	—	—
63	F.	Still-born.	8 in. round.	Anterior lobes of cerebrum.	Softened.	—	—
64	—	Still-born.	Of a chestnut.	—	—	—	—
65	F.	Still-born.	Of an orange.	Anterior cornu of left ventricle.	Effusion into ventricles.	—	—
66	M.	Fœtal.	Two, each the size of half a walnut, and one the size of a fist.	Anterior lobes of cerebrum.	Effusion into ventricles.	Small.	—
67	—	21 days.	Two, each the size of a pea.	Anterior lobes of cerebrum (?)	Meningitis.	—	—
68	F.	10 days.	Of a pigeon's egg.	—	—	—	—
69	M.	6 weeks.	—	Anterior lobes of cerebrum.	Meningitis and cerebritis of protruded part.	—	—
70	F.	6 months.	Of an olive, increased to that of a fowl's egg; before death.	—	Effusion into ventricles.	—	—

State of Bones (at Hernia).	Other Malformations.	Reference to Author.
Separation of coronal parts of frontal.	—	Breschet, Arch. Gén. de Médecine for 1831.
Hole between the right os unguis and frontal.	—	Ibid.
Separation of ethmoid and frontal. Frontal pushed upwards.	Uvula cleft.	Niemeyer, De Hernia Cerebri, Congenita, Halæ, 1833.
Separation of coronal halves of frontal.	—	Moreau, Dict. de Médecine. vol. xii, 1835.
Hole above nasal bones.	—	Otto; op. cit.
Large hole in frontal.	Left half of the body cleft from the axilla to the umbilicus; gall-bladder wanting; two supernumerary nostrils; cleft palate; a cutaneous appendix from the vertex of the head; left upper extremity atrophied, and four-fingered.	Ibid.
Deficiency of orbital plates of frontal and of roof of ethmoidal cells.	—	W. Lyon, Monthly Journal of Medical Science for 1842.
Crista galli absent. Ungual bones absent. Nasal and superior maxillary bones defective.	—	Schmitt, Med. Correspond. Bl. Bayerischer Aerzte, 1842.
—	—	Raynaud, Comptes Rendus de l'Acad. des Sciences, t. xxiii, p. 50, 1846.
Ethmoid shortened and depressed. Orbital parts of frontal depressed.	—	Dr. Clar, Zeitschr. der Gesell. der Wiener Aerzte, vol. vii, for 1851.

III. *Of those occurring in the*

No.	Sex.	Age at Death.	Size.	Part of Brain protruded.	State of Cerebrum.	State of Cerebellum.	State of Spinal Cord.
71	F.	30 days.	$\frac{1}{2}$ inch in diameter.	Left middle lobe of hemisphere.	Atrophy of left hemisphere; meningitis; cerebritis. Softened.	—	—
72	—	—	Voluminous.	—	—	—	—
73	F.	Still-born.	Large.	—	—	—	Left brachial swelling absent.
74	—	17 days.	—	—	—	—	Spina bifida.
75	F.	Still-born.	—	Nearly the whole cerebrum and cerebellum.	—	—	—

Parietal and Temporal Regions.

State of Bones (at Hernia).	Other Malformations.	Reference to Authors.
Squamous portion of temporal bone absent.	—	Billard, Tr. des Malad. des Enfants, 1828.
Separation of fronto-parietal suture.	Vast umbilical hernia, containing all the abdominal viscera and the heart; umbilical cord adherent to the head; club-foot.	Béclard, Bull. de la Faculté de Médecine, t. iii.
Bones of vault of cranium absent.	Placenta and the encephalocele connected by a ligament; right suprarenal capsule absent, left very small and cystic; left arm absent.	Otto; op. cit.
—	—	Dr. Camstock, Boston Journal, vol. xi, p. 241.
Left half of cranial vault absent; right half defective.	Adherence of brain to placenta and foetal membranes; thoracic and abdominal walls cleft, causing hernia of the heart, left lung, and all the abdominal viscera; left eye incomplete; hare-lip; cleft palate; left forearm and arm adherent; fingers of left hand reduced to one; club-foot.	Houel, Gazette des Hôpitaux, for 1850.

The preceding table contains 75 cases of this remarkable malformation, collated in every available instance with the works in which they were originally recorded.

The following is an analysis of some of the leading facts observed in these cases :

Congenital hernia of the brain occurs with pretty equal frequency in either sex. Of 39 cases 21 were males, 18 females.

The portion of brain protruded varies extremely in size, from that of a pea to dimensions surpassing those of the child's head. If the hernia occur at the occiput, the posterior lobes of the cerebrum and sometimes the cerebellum are protruded ; if at the frontal region, the anterior cerebral lobes. In some few cases (e. g., Cases 13 and 54) the entire brain had quitted its natural dwelling.

Meckel long since pointed out that the occiput was the chosen seat of encephalocele.¹ Of the 75 cases, 53 were in that position. The disease bears a marked analogy to spina bifida : indeed, in 16 of the 75 cases the two malformations were present together.

The cerebrum is rarely sound in these cases. Among 44 cases in which the state of this organ is specified, in only 5 cases was it healthy. In the remaining 39 cases it was either atrophied, softened, or, what is very commonly the case, effusion had taken place into its lateral ventricles.

In 19 cases the state of the cerebellum has been mentioned by observers, and it is not unworthy of remark that in 10 of these cases this organ was atrophied. It was so too in the case I have narrated.

As regards the duration of life, the cases admit of being divided into two categories, one in which the subjects of the malformation have lived for years, a second in which they have either been born dead or have survived but a brief

¹ 'Handbuch der Patholog. Anatomie,' Leipzig, 1812.

period after birth. Of the former class, there are six authentic instances on record.

(1) In 1774, M. Guyenot brought before the Academy of Surgery of Paris a man, 33 years old, who was born with a tumour on the left side of his forehead. This tumour measured $2\frac{1}{2}$ inches across, and pulsated. Around it could be felt a defect in the ossification of the frontal bone. The man's intellects were unimpaired; but there was a deficiency of power of the right arm.¹ (2) In 1813, M. Lallemand was about to operate on a girl, 23 years of age, for what appeared to be an ordinary wen on the back of her head. He had circumscribed the base of the tumour by a circular incision, when he detected the dura mater. The operation was at once left off; but the girl died within eight days from meningitis. The tumour proved to be an encephalocele. (3) Wedemeyer observed a case, in an idiot, 18 years old.² (4) Mr. Robert Adams relates an instance of hernia of the brain in a man, aged 20, in whom the tumour occupied "nearly the whole of the right half of his forehead."³ The same surgeon had (5) a little girl under his care, who was born with an encephalocele about the size of a hen's egg below the tuberosity of the occipital bone. The tumour was repeatedly punctured, and fluid drawn off from it. The child was seen well when six years old, without, however, the tumour having diminished in size.⁴ (6) Breschet met with a subject in the dissection room: an adult with a large tumour of the occiput containing the cerebellum.⁵

The following case has been often quoted as a case of

¹ *Mémoires de l'Académie de Chirurgie*, t. v, in 4to, p. 863.

² *Journal für Chirurgie und Augenheilkunde*, von C. F. v. Gräfe und Ph. v. Walther, vol. ix.

³ In the *'Dublin Journal for Medical and Chemical Science'* for 1833, vol. ii.

⁴ *Loc. cit.*

⁵ In the *'Archives Générales de Médecine'* for 1831.

congenital encephalocele; but appears to have been rather the consequence of the operation undertaken for its cure, than of congenital origin. J. N. Held had a young lady, aged 19, under his care for a congenital tumour of the forehead, the size of an apple. He opened it with a lancet. Some serum escaped and a pulsation was perceived. "Directly a small portion of brain rose up through the aperture in the os frontis and became prominent." The membranes of the brain were not injured in the operation, the aperture in the cranium closed, and the patient recovered in eleven weeks.¹ Equally equivocal is a case mentioned by Doepp, that, he states, lived several years, for the "out-growth" (Auswuchs) only sprang from the brain, to which it was but connected by the arachnoid, the tumours and brain being separable without tearing either.²

With the above isolated exceptions, all the cases of encephalocele belong to the second category, that is to say, are exceedingly short-lived. On this head the testimony of most observers agrees. M. Isidore Geoffroy Saint-Hilaire says "they are generally born alive, but die within a few days;"³ Dr. Montgomery that "most children so affected are either still born, or live but a very short time."⁴ Out of 68 cases which I have collected 32 were born dead. Mr. Taylor has recorded the case (No. 42 in the table) of a child who lived 118 days with a tumour the size of a foetal head. Dr. Clar one (No. 70) who lived upwards of six months. But in this latter instance the tumour was at first only the size of an olive, and never grew larger than a fowl's egg. The case I have narrated seems to stand alone in this, that while the tumour equaled in size the

¹ 'Dissertatio de Hernia Cerebri,' Giessæ 1777.

² 'Abhandlungen der Petersburger Aerzte' for 1842.

³ 'Traité de Tératologie,' par M. Isidore Geoffroy Saint-Hilaire, Paris, 1832.

⁴ 'The Cyclopædia of Anatomy and Physiology,' edited by Robert B. Todd, M.D. F.R.S., vol. ii, p. 320; article "Fœtus."

child's head, life was yet prolonged for the long period of 144 days.

For the alleviation of this disease surgery has hitherto been able to do but little. I have only met with two well-authenticated cases in which a surgical operation has been attended with a good result; the one of Mr. Adams, above alluded to, and one of M. Richoux. The latter surgeon operated on a child ten days old, the tumour being the size of a fowl's egg and situate above the outer canthus of the right eye. He opened the sac, and sliced off a portion of the protruded brain. The patient recovered.¹ In all the other cases in which any operation has been undertaken, it has led to the death of the patient. It is probable that for any operation to succeed the tumour must be of small size, as in the two instances I have just quoted.

¹ 'Revue Médico-Chirurg,' p. 358.