

tempting to give the predecessors of Harvey their deserved honour. On the other hand, he debates the question rather as a captious pleader than as an impartial judge; his hypercriticisms, and insinuations of dissingenuousness, nay, of dishonesty, ignorance, and stupidity, against Harvey, are too feeble, or too mean, to permit reply. If Galen, in the words of his great successor, was "vir divinus, pater medicorum," the term *immortal* may still be attached with propriety to the name of Harvey.

We have entered at some length into this historical question, not yet viewed, we believe, in its true light in this country, as the time seemed favourable for its fair and deliberate examination. Besides, the fame of great men is the patrimony of the world, and they well deserve from posterity that just adjudication of their rights, and that due share of glory, which they so rarely obtain from the envy or the passions of contemporaries.

HOPITAL DES ENFANS MALADES, PARIS.

RESEARCHES INTO THE DISEASES OF CHILDREN.

LESIONS OF THE NERVOUS CENTRES.

CASE 1.—*Partial Ramollissement of the Spinal Marrow.*

JULES JANIN, 14 years of age, born at Paris, of a mother affected with pulmonary consumption; is addicted to masturbation; had a confluent small-pox at the age of four years, and still bears the traces; the appearance of the child is strongly marked by the scrofulous character; for several years he has been affected with a muco-purulent discharge from both ears, with diminution of the sense of hearing. The patient had complained of severe pain in the head for several days, when he was admitted into the hospital on the 12th of November, 1835. During the first five days after his admission he did not present any symptom worthy of notice, except pain occupying the occipital region, accompanied by a very remarkable slowness of the pulse; the child was ordered to take two purgative draughts, at three days interval between each, and was allowed the ordinary food.

17. The pulse, which hitherto presented only from 56 to 60 pulsations, rose suddenly to 130; at the same time the respiration became accelerated, and mounted to no less

than 80. When asked about the seat of pain, the patient assures us he does not suffer anywhere; the headache has disappeared, and we cannot discover any trace of lesion in the lungs or heart, by means of auscultation and percussion, which could account for the sudden acceleration of the pulse, dyspnœa, and other symptoms; the skin is not more warm than ordinary; the child insists on having something to eat, and asks permission to get up. During the next few days the dyspnœa persists, and the patient experiences from time to time accesses of suffocation.

20. To-day for the first time we remarked that the sensibility of the skin covering the superior extremities was very obtuse; the patient now complains of pain along the trajet of the cervical vertebræ; the frequency of the pulse and difficulty of respiration continue as before. Two cauteries are applied *colo dolenti*.

22. Inspirations 66; pulsations 132; the act of drinking excites violent coughing; the sensibility of the superior members continues obtuse; the lower extremities conserve their normal sensibility; the patient can get up and walk about without any assistance; he assures us he does not experience any pain. Continue the purgatives.

23. The voice is to-day broken; the respiration has now mounted to 90 in the minute; on auscultating and percussing the thorax with attention, we are unable to discover any organic lesion in this cavity; the sight is distinct; the limbs are free from any convulsive movement; during the day the patient got up several times to the close-stool; at 10 o'clock in the evening he was seized with violent agitation, which continued until 1 o'clock in the morning, when he died in a fit of suffocation, without any convulsive movements.

Autopsy.

On examining the body we find the brain perfectly healthy, as also its membranes; the cerebellum is a little more injected and less firm than in the normal state; the pons varolii is free from any alteration; however, on laying open the spinal canal, opposite the fourth and fifth cervical vertebræ, we find a softening of the spinal marrow, extending about the length of an inch downwards; the softening does not affect the whole of the thickness of the chord, but is limited to the posterior moiety; the softened pulp presents a slightly yellow tint; we do not observe any tubercular deposits in or near the softened pulp; the membranes of the spinal marrow and the osseous canal are both quite normal. The lungs present some ancient adhesions to the costal parietes; they are generally permeable to air, but contain a good number of small tubercles in a crude state. On opening the pericardium we observe an adherence between

that membrane and the heart, to about the extent of a shilling piece, near the apex; the uniting membrane seems to be of old formation; the tissue of the heart free from alteration. Nothing worthy of notice in the intestinal canal.

CASE 2.—*Tubercle occupying the Left Hemisphere of the Cerebellum; Ramollissement of the Cerebral Pulp; Paralysis, with Contraction of the Limbs on the Right Side of the Body.*

Nicolas Baude, twenty-two months old, was brought to the hospital on the 9th of January, 1836, in the following state:—The child's head, which is voluminous, and projecting over the left parietal bone, is constantly inclined towards the left side; the anterior fontanelle is not ossified; the face is coloured; the sight intact; the eyeballs are affected from time to time with convulsive movements. The superior and inferior limbs on the right side of the body are both paralytic and contracted; the affected parts are also œdematous; the child coughs; we hear nothing but a mucous râle on both sides of the chest; the respiration is a little difficult; the tongue is natural; deglutition is performed with ease; the appetite good; stool daily. The father of this child informs us that he was born at the full time; that the projection of the skull at the left side always existed, that he never walked, but could pronounce distinctly the words papa and mamma. At the age of thirteen months he was seized with an acute inflammation of the chest, which detained him in bed for a fortnight, and required the application of a blister to the thorax; since that time the infant has constantly coughed, but he recovered his flesh, and had always a good appetite. At the beginning of December 1835, his parents for the first time observed some convulsive movements of the eyeballs, which recur at short intervals; fifteen days after the appearance of this symptom, a permanent contraction of the limbs on the right side set in. Leeches to the anus, blisters to the limbs and neck, sinapisms to the feet, did not effect any change in the patient's state. On the 6th and 8th of January, general convulsions, with foam at the mouth, which persisted for about five minutes at a time. From the 10th to the 11th of January, the child's state persists without any change. On the 12th, coma, strabismus, dilatation, and immobility of the pupils; abolition of the sight, ending in death.

Autopsy Thirty-six Hours after Death.

External appearance.—Considerable plumpness of the body; the limbs on the right side continue stiff, as during life; the fingers are strongly flexed against the palms of the hands; the limbs on the opposite side of the body are relaxed.

Cavity of the Cranium.—The dura mater is adherent to the osseous parietes round the anterior fontanelle, which is not ossified; there is no accumulation of serum in the great cavity of the arachnoid; the glands of Pacchioni are but slightly developed; the arachnoid membrane lining the superior surface of the brain, conserves its transparency, and is elevated by a good deal of serum shed into the sub-serous cellular tissue. This fluid is clear and of a gelatinous consistency; it penetrates between the convolutions, several of which it separates from one another; there is no adherence between the membranes and cerebral substance; the latter is pale, save in the medullary and cortical portions. The lateral ventricles contain about four or five ounces of transparent serum; in the optic thalamus of the left side, we find a tumour of an inch diameter, which appears to displace the neighbouring parts, and especially the right optic thalamus, that seems a little atrophied. The body just named is formed by a tubercle of the size of a small apple, and having the consistency of firm cheese; it is of a greenish white colour; at the upper part it is quite free and uncovered; at the sides and below it is lined by cerebral pulp, which is softened to the depth of one to three lines; the central white parts, as the septum lucidum, fornix, and corpus callosum, are intact. The membranes lining the base of the brain are in a normal state; no injection or ramollissement of the cerebral substance here, or in the cerebellum and spinal marrow; no tubercular deposit except the one we have noticed.

Thorax.—All the thoracic ganglia are tubercular; false organized membranes unite the lung to the costal pleuræ on the left side. Both lungs are the seat of tubercles, disseminated and confluent. The pericardium contains a spoonful of clear serum; heart healthy.

Abdomen.—Liver of a rosy-gray colour; pale in certain spots, and very friable; spleen normal; mesenteric ganglia not much developed, though almost all are tubercular; the mucous membrane lining the intestinal canal and stomach is healthy.

Spinal Marrow.—The spinal canal seems throughout, and especially inferiorly, more capacious than is natural. Underneath the arachnoid, we observe a considerable quantity of clear, gelatinous serosity; the spinal marrow itself is firm, and seems somewhat atrophied.

CASE 3.—*Ramollissement of the Cerebrum.*

[Child 6 years old; symptoms of pulmonary consumption; acute peritonitis intervening; death. Yellow softening at the upper part of the middle lobe of the right hemisphere; tubercular infiltration of the surrounding pia mater; caverns at the summit of both

lungs; sero-purulent effusion into the cavity of the peritoneum.]

Henry Loillot, six years old, the son of a woman now in the last stage of pulmonary consumption, was transported to the *Hopital des Enfants Malades* on the 3rd of February 1836; on the following morning we observed that the child was pale and thin; the neck was the seat of several glandular engorgements; the abdomen considerably tumefied; externally, near the umbilicus, we felt a number of knotty tumours; the patient coughs, and is affected with diarrhoea. On examining the chest, we find a dull sound, pectoriloquy, and gurgling, underneath the right clavicle; we also remark a paralysis of the lower extremity on the left side; the motility of the limb is completely lost, and the patient is unable to communicate to it the slightest motion; the sensibility of the limb is intact; there is no modification of motility or sensibility in the left upper extremity, or in those on the right side of the body. The intelligence is sound: we do not observe any modification of the sight or hearing. When questioned as to the cause and invasion of the paralysis, the little patient informed us, that about a month back, while dressing himself, he had a fall, and since that time he began to walk with some difficulty. His uncle is unable to give any more precise account; however, he affirms that, although the child dragged after him his left leg, yet he was able to go a good distance on foot, three days before his reception into the hospital; that he coughed for a length of time; was almost constantly in a stupid state for the last three weeks, and complained frequently of his head.

The patient was ordered to take a cough mixture, while the progress of the disease was observed. The state of the patient did not present the least change until the 9th of February; the paralysis continued solely in the left lower extremity; the headache was complained of only once, seated in the frontal region.

On the 9th of February the child was seized with acute pain in the right side of the abdomen; the pulse became accelerated, the figure altered; on the following day the pain extended to the other parts of the abdomen; it is combated by opiate draughts.

12. The child lies exclusively on the right side; the face is shrivelled; the respiration anxious, 54 in the minute; the pulse 140; the abdomen is tumid, tympanitic, and painful on the slightest touch; there is some nausea and no vomiting; the patient answers correctly all the questions we address to him; there is no derangement in the functions of sight or hearing; the muscular power of his hands appears intact; but the left leg is always motionless towards midnight. The little patient sank quietly, conserving till the last moment its intellect.

Autopsy.

Cranium and Rachis.—The dura mater and arachnoid attached to it do not present anything remarkable; in the superior and internal part of the right cerebral hemisphere, and on a line with the middle lobe, the pia mater presents several yellow spots, of a line to a line and a half in thickness; these spots present the consistence of Gruyere cheese, and are adherent to the substance of the brain; the latter is completely softened, and in some places presents a reddish, in others a canary-yellow tint, while in others, again, it contains some sanguineous clots, varying from a pin's head in size to that of a small pea. The alteration just described occupies the whole superior and internal part of the middle lobe; it is circumscribed in an irregular manner, and descends nearly as far as the roof of the lateral ventricle, where it is gradually lost; the ventricles contain hardly any fluid, not more than a teaspoonful; the corpora striata and thalami are in a normal state; the base of the hemisphere also is quite free from any alteration; at the extremity of the left hemisphere we also observe some small yellow patches and a few granulations; the cerebral substance underneath these patches is slightly diminished in consistency, but we cannot say ramollished as in the right hemisphere. There is nothing worthy of being detailed in the rest of the cerebrum, in the cerebellum, or pons varolii, all of which parts were examined with care.

The Spinal Marrow presents every where a normal degree of colour and consistency; we do not find any trace of tubercle; the arachnoid is separated from the pia mater by a small quantity of serous clear fluid.

Neck and Chest.

The Cervical and Bronchial Ganglia are transformed into tubercular matter, and at the summit of the right lung we find a large tubercular excavation; there are two much smaller in the left lung; the portion of pulmonary tissue surrounding is indurated; the other lobes are studded with crude tubercles.

Abdomen.—The ganglia in the neighbourhood of the liver and pancreas are changed into tubercular matter; the mesenteric ganglia form masses as large as the patient's fist; the liver is covered with a purulent layer, and the peritoneal cavity contains a small quantity of muco-purulent fluid. Nothing remarkable in the other abdominal viscera.

In juxta-position with this case, which has been recently observed, we may place another, much more remarkable, that occurred at the hospital several months back.

CASE 4.—Ramollissement of the Cerebrum.

[Child ten years old; cephalalgia affecting the right side of the head; numbness of

the left leg for eight days; then general convulsions, followed by coma, and hemiplegia of the left side of the body; disappearance of the coma at the end of twenty-four hours; persistence of the headache; contracture of the left arm; symptoms of mental alienation; intervening small-pox. Death thirty days after its invasion. Ramollissement of the inferior portion of the middle lobe of the cerebrum on the right side.]

Eliza Adele Chabeaux, ten years of age, whose mother died about a year back in a state of insanity, had been for a long time addicted to the vice of masturbation. She experienced for eight days intense headache, occupying specially the right side of the head, when on the 10th of April, without any known cause, she was seized with general convulsions, accompanied by complete loss of consciousness. A physician was immediately called in, who applied eight leeches behind the ears, and sinapisms to the lower extremities. The convulsions disappeared rapidly, but the patient remained plunged in a state of coma. On the 11th of April she was brought to the hospital, where we observed the following symptoms a few minutes after her arrival:—*External appearance.* Body fat; head large; forehead well developed; face pale; eyelids at one time closed, at another half open; irregular movements of the eyeballs, which are almost constantly directed towards the right side; no deviation of the mouth; no trismus.—*Intelligence.* Complete loss of consciousness; coma, without any low cries; no answer to any question.—*Motility.* Demi-resolution of the limbs on the right side of the body; complete loss of motion in the limbs on the left side. When the skin of the left arm is pinched, we do not observe any motion, but the patient agitates her right arm as if to remove the hand which touches her. No contraction of the limbs or retroflexion of the head.—*Sensibility* is conserved equally on both sides of the body.—*Digestion.* We can only see the tip of the tongue, which appears to be moist; the abdomen is retracted and indolent on pressure; no vomiting or nausea; constipation for several days.—*Circulation.* Pulse small and irregular, 108; temperature of the skin moderate.—*Respiration.* Twenty-four respiratory movements in the minute; the respiration is unequal, and at times sighing. We obtain nothing but negative results from the auscultation and percussion of the chest.

M. JADELLOT ordered the dresser to write on the ticket, "Hemiplegia, subsequent to convulsions," and ordered, 1st, eight leeches to the temple, and behind the ear on the right side; 2nd, cold applications to the head; 3rd, sinapisms to the lower extremities; 4th, an infusion of mallows for drink.

Two hours after the application of the leeches, the child recovered from the state of coma in which she lay plunged, and asked for drink.

12. The girl answers to-day all the questions put to her; she complains of pain in the head, and points out the right temple as the seat of the pain. The sight is intact; pupils rather contracted than dilated; the irregular movements of the eyeballs have ceased; no loss or diminution of hearing; the right arm and leg conserve their power of motion. On the left side we find the arm in a state of contracture, while the leg is extended and rigid; both are perfectly motionless; pulse 120; inspirations 24. A blister to the neck.

10. The headache and contracture of the left arm persist; pulse and respiration as yesterday; no change in the other symptoms. Eight leeches behind the right ear.

14. The contracture of the left arm has now disappeared; the limb is supple, and falls like a dead mass; the child's countenance is stupid; somnolence. The answers still correct; the sight is weakened; urine involuntary; no stool since the patient's admission; pulse 114; respiration 36. Two grains of calomel every hour; head to be shaved, and then rubbed with a pomade composed of equal parts of calomel and suet; friction of the paralyzed limbs with acetic ether; infusion of linden for drink; two teaspoonfuls of sirup of sulphuric ether internally.

15. The headache is still obstinate; the contracture of the left arm has returned, with imperfect paralysis of the left leg; urine involuntary; two stools. Continue the remedies.

From the 16th to the 30th of April, the headache continued, and never left the patient for an instant, being fixed in the right temple; the left arm remains contracted and completely immoveable; the left leg can exercise a few slight motions. On the right side of the body motility is still intact; the sensibility is not modified; the patient answers correctly to a few questions, but she is seized with an inconceivable loquacity that disturbs the repose of the whole ward. She speaks to every body she sees as to old acquaintances; laughs and cries without any motive. From time to time she gives herself up with energy to the vice which she has been so long addicted to, or tears off the plaster from the blisters and carries it to her mouth: in a word, she has fallen into a complete state of mental alienation. She is now carried into another ward, and the right arm is confined in the strait-waistcoat.

May 1. The pulse has become accelerated: the pain has now extended to the whole head, and the child is affected with nausea and vomiting.—On May 2nd, the patient, who had not been vaccinated, is covered with

an eruption of small pox. On the 3rd the strait-waistcoat being removed, the patient destroyed with her nails the cicatrix covering a leech-bite over the right temple; she thus opened a small branch of the temporal artery, the hemorrhage from which could not be commanded before the expiration of a quarter of an hour.—4th. The face is pale; the variolous pustules are sunk and flat, the tongue dry and dirty, pulse small and very quick: the contracture of the left arm is more evident than ever; it is impossible to separate it from the chest, the lower extremity on the same side is completely paralytic, both extremities on the right side of the body are from time to time affected with a trembling motion. The skin continues to preserve a normal degree of sensibility. The patient is now delirious, and the pupils are dilated; she imagines that she hears a concert, and sees the musicians at the extremity of the ward. The excretion of urine and fecal matter is involuntary: the wound produced by the blister on the neck has become gangrenous, as also have some ulcerations from the sinapisms on the legs. From this moment the patient sank gradually, and died without convulsion on the 5th of May.

Autopsy.

The pustules are flat and scarcely apparent, skin universally pale; the left upper extremity remains rigid, the others are in a state of relaxation; cranium voluminous; dura mater healthy; arachnoid transparent; pia mater slightly infiltrated with serum; the right hemisphere of the cerebrum seems smaller than the left; when divided by fine layers, this hemisphere does not present any alteration as far as the lateral ventricle; the optic thalamus and corpus striatum are healthy: however, beneath these parts, on the right side, we find the cerebral matter reduced to a soft yellowish pulp, a part of which is completely fluid; the ramollissement is strictly confined to the inferior portion of the middle lobe. The left hemisphere, the pons varolii, cerebellum, and spinal marrow, are free from morbid alteration. The other cavities do not present any change worthy of notice: we do not find any trace of tubercular deposit.

The two cases last reported present examples of ramollissement of the brain in which the symptoms of this affection were sufficiently well marked.

In the first of the two, the disease to which we ventured giving the name of *tubercular meningitis*, instead of terminating, as it almost always does, in acute hydrocephalus, gave rise to inflammation and ramollissement of the cerebral pulp. The previous history of the case is not so perfect as we could have de-

sired it to be; thus we could not ascertain the precise time at which the headache commenced; we are therefore compelled to regard the paralysis as one of the first symptoms; this was soon joined by headache, but the intervention of acute peritonitis prevented the further march of the disease, by terminating the patient's life.

In the second case, besides headache, corresponding to the injured side of the head, we have paralysis, and the peculiar muscular contraction, which, though not a pathognomic symptom of ramollissement, is still an element of great value in the diagnosis of that disease. We would draw the attention of those who persist in attributing the coma of hydrocephalus to the effects of serous effusion and compression, to the manner in which the acute stage of ramollissement set in here. After some hours of general convulsion the patient falls into profound coma. Are we thence to conclude the existence of considerable effusion? Certainly not. The truth is, that coma is a symptom which attends various diseases of the brain widely different from one another. We have seen the deepest coma terminating fatally, produced by simple cerebral congestion, without the slightest trace of effusion; here certainly compression may be admitted; but what shall we say of those cases where the cerebral pulp is pale and bloodless, where a small portion of the brain is reduced to a fluid consistency, where the general bulk of the brain is rather diminished than increased, yet the patient falls into the same degree of unconsciousness as if the ventricles were distended by half a pound of fluid? We have already satisfied ourselves by close observation of facts, and by a few opportunities afforded of examining the bodies of patients affected with cerebral disease, who were cut off by some other malady, that the slow pulse, irregular respiration, and the dilated pupils, are not necessarily connected with effusion, but may coincide with a much earlier period of cerebral affections. We do not attempt to explain under what condition of the brain this may occur, whether it depends on congestion or exhaustion; it is enough for us to have removed an error; to others must be the credit of advancing a step further.

P. H. GREEN.