

11th.—Quieter again to-day. Bowels open freely after enema. Lying on left side, all parts flexed; bedsores healing.

14th.—Temperature 100.2°. Bowels open.

15th.—Decubitus right side; all parts flexed. Chloral 20 gr., iodide of potassium 5 gr., three times a day.

20th.—Talking for the first time, but in an indistinct manner.

21st (thirtieth day).—Asked her mother for rice this morning; talks rather irrationally, although she knows people. Bowels not open for two days. Decubitus left side; all parts flexed. Both pupils dilated. Pulse 84, irregular in volume and time. Stop brandy; to take iodide of potassium, 5 gr., three times a day.

22nd.—Quite sensible; asking for food. Bowels acted after enema. Speech very indistinct.

24th.—Crying out that she is in pain. Bowels open. Tongue furred. Temperature 98.4°; pulse 104. Ptosis of right eyelid. Drawing of mouth to left side not nearly so marked. The rolling from side to side continues; all parts flexed. Speaks as if she had something in her mouth. Ice to head discontinued.

25th.—Temperature, right axilla, 98.8°; left 98°. Sleeps well. Bowels open. More rational. Pulse 88, small, irregular. Tongue drawn to right side; mouth to left. Ptosis of right eyelid.

26th.—Pulse 76, intermittent. Bowels open twice.

27th.—Temperature, right axilla, 99.4°; left 98.6°; pulse 92, full, intermittent. Bowels not opened. Wound almost healed up. Right side of body warm, left cold. More sensible. Passes water in bed, but tells her mother when she wants to pass a motion. Cold to head. To have a pint of rice.

28th.—Temperature, right axilla, 100.3°; left, 99.6°. Two small pieces of dead bone came away this morning. Pulse 92, full, intermittent. Right arm still rigid. Bowels open.

29th.—Body hot; a marked difference between the two sides. Tongue clean, protruded in a jerky style, and always to the right side. Cannot straighten arms further than a right angle. Bowels open scantily once. Stop rice. To have a compound senna draught.

On the 30th I gave over charge of the hospital to Surgeon-Major A. Porter, M.D., to whom I am indebted for the following notes:—

31st.—Pulse 96; respiration 14. Tongue white, protruded to right side. Ptosis of right eyelid; left eye open and staring. Urine passed in bed. Milk, two pints; broth, three pints; rice, one pint. Continue iodide of potassium.

February 11th.—Stop medicine. Can protrude her tongue straight. Pulse 96; respiration 20. Continually asking for more food, which directly it is given causes her temperature to rise.

15th.—Going on well. Arm still stiff. Ordered sulphate of quinine, two grains; dilute sulphuric acid, two minims; water to one ounce, three times a day.

March 2nd.—Going on well. Can move her arm. Leg stiff. Full diet. Repeat mixture.

20th.—Happening to be again in Madras, I paid her a visit, and found a very great change for the better. She was quite plump, although still asking for more food. She recognised me directly. Temperature same in both axillæ, but there was a marked difference between the legs, the right leg being much colder than the left. She could use both hands, and I could not distinguish any difference between them when she tightly grasped my hands.

24th.—I saw her again to-day. Temperature in both axillæ 99.8°. Both legs seem of the same temperature to the hand; can sit up in bed, but has to support herself with her hands; can lift her legs; sensation slightly impaired; can feel the point of a pin, when it is gently placed against the skin, as low down as the lower third of the right leg; sensation normal in the left leg.

26th.—Complains of burning in eyes and pain in head; tongue white; skin hot. Temperature 101.2°; pulse 112. Spoon diet; one pint of boiled rice. Ten grains of acetate of potash, ten minims of spirit of nitrous ether, and twenty minims of solution of acetate of ammonia, in an ounce of water, three times a day.

On the 28th she had an eruption of measles; and on April 5th she went home for a week. Is to report herself at hospital every now and again. Cannot walk yet, but her legs are improving very rapidly.

*Remarks.*—The chief features in this case are the length

of time the patient was insensible (thirty days), the warmth of the body on the paralysed side, the extent of the internal injury, and the rapid recovery from it. The resistance offered by the right arm when attempts were made to extend it points, I think, to an irritative form of brain lesion, and the peculiar attitude—lying on one side with all parts of the body flexed, so characteristic of brain irritation—seems to bear out this idea. The patient, when sensible, was always asking for more food, and directly it was given the temperature rose. Unfortunately I could not test the irritability of the paralysed muscle, as I had no battery. The intercurrent attack of measles no doubt retarded her recovery somewhat.

## PRACTICAL NOTES ON THE TREATMENT OF PHTHISIS.

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IN our large manufacturing towns, phthisis, in its various forms, constantly presents itself, and we are called upon to treat those who are unable to seek a more genial climate. The modern treatment—that which regards the morbid state upon which the disease depends and not the symptoms—has been followed by marked success.

Phthisis is a disease of debility, the result of defective nutrition, depending not altogether upon an insufficient supply of nutritive food. The food may contain all the elements necessary for preserving a normal state of the blood, but if that blood is not properly aerated by the lungs, and purified by the secretory and excretory organs, nutrition becomes defective. The lungs are respiratory and decarbonising organs, the skin and liver assisting in these processes to the great relief of the lungs. The skin, on account of its extensive surface, large nervous and vascular supply, and as the greatest absorbent and exhalant surface of the body, has most important and intimate relation to the lungs. This is proved by Bischoff's experiments upon frogs. He removed the lungs of a frog, and found that a quarter of a cubic inch of carbonic acid gas continued to be excreted in six hours from the skin, half a cubic inch only being excreted by lungs and skin when acting together during the same time. It is also well known that animals whose skins are covered by an impermeable varnish soon die asphyxiated. The skin and lungs are the organs by which oxygen—that most important of all substances to life—is introduced; the exact amount by the skin is uncertain, but, from experiments upon animals, we infer its respiratory action in man is considerable.

In the treatment of phthisis, our great aim must be to *improve nutrition by improving the general health*. The diet must be as nourishing as the patient's weak digestive power will allow. The food is to be thoroughly masticated and insalivated (not washed down by tea and hurtful diluents). The air of bedrooms and sitting-rooms must be kept pure, and as little gas used as possible. The function of the skin stimulated by an occasional Turkish bath, and also by the daily use of sponging with salt and water. Sea-salt may be given to hospital patients to encourage cleanliness. If the skin can relieve the imperfectly-acting lungs, how necessary to increase its function. These are some of the measures which benefit the dyspepsia of phthisis, one of the earliest premonitory symptoms, and one of the most obstinate. Medicine plays an important but secondary part in this disease. Our object being to improve digestion and nutrition, nauseating drugs—opium, squill, ipecacuanha—must be seldom used. The early dyspepsia is best treated by salines with strychnia, followed by acids, such as phosphoric acid, and quinine. As a rule acids agree best, for although there is excess of acidity in the stomach, it has been shown that it can be checked by the use of acids given *before meals*, an explanation of their undoubted benefit in phthisis. Cod-liver oil, cream, cod-liver oil jelly, pancreatic emulsion, suet dissolved in milk, are all beneficial; but small doses should be given at first, directly after meals. The hypophosphites of lime and soda give good results in some advanced forms of unilateral phthisis. Much has been done to improve the hygiene of all classes, but much remains to be done, and

these *preventive measures* alone can help us to stamp out a disease so hereditary in its nature. Animals confined in menageries and zoological gardens die phthisical from lack of air and light, and we are painfully struck with the unhealthy state of the workshops of our large towns. Some are cellars, damp, dark, and cheerless, killing by inches the occupants; cottages, and even better houses, with unopening windows. This is a subject of great scope and importance for medical officers of health to take up who have already done so much towards stamping out zymotic disease and checking the spread of typhoid fever, &c., throughout the country. Such treatment as briefly sketched is the only one suitable to early phthisis, and even in advanced cases we must not despair. By perseverance in the right way, even when the lungs are very seriously injured, the tubercle may become absorbed or "cornified," and rendered inert; and our post-mortem rooms often exhibit lungs with a cicatrix at their apices, clearly indicating that a curative process has taken place, even in the last stage of the disease.

Bradford.

## A Mirror OF

### HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

#### MIDDLESEX HOSPITAL.

##### CASES OF FRACTURE OF THE BASE OF THE SKULL.

(Under the care of Mr. HULKE.)

THE following report completes the series of cases of fracture of the skull begun at page 689.

CASE 4. *Extensive fracture of the base of the skull by a fall upon the street pavement, probably in an epileptic fit; bleeding and serous oozing from the ear; diffuse meningitis; death on the fifth day.*—The extent of the injury to the skull in this case is remarkable, occasioned as it presumably was by a simple fall upon the pavement—not from a height; for it can hardly be reasonably entertained that the man had been struck a violent blow on the head in the open street at mid-day without its having been witnessed by others; the motive of theft, too, was wanting, and his character was inoffensive and good. It was ascertained that he had been epileptic for eight years, and that the injury to his elbow had been sustained in a fall about two months before the present accident. It is noteworthy, in relation to the epilepsy, that no morbid appearances were visible in the brain or its membranes which could be assigned to a date earlier than the injury for which he was admitted into the hospital. The diffuse meningitis to which his death is referable started apparently from the fractured pars petrosa of the right temporal bone. No explanation was found for the sudden strong spurt of blood from the ear on the fourth day; no wound of the carotis interna was found, and the cessation of the bleeding forbids the supposition of such source. The blood-pressure in the cerebral sinuses is known to be sufficient to expel their contents in a strong stream to the distance of more than one foot.

Soon after midday on Jan. 2nd, a working jeweller, aged twenty-five, was found insensible upon the street pavement, a few yards distant from the door of his lodgings. The police brought him to the hospital; on reaching it he was still unconscious. Above the right ear was a small scalp-wound, not reaching the bone, in which no irregularity suggestive of fracture could be felt with the finger. Blood trickled from the auditory meatus. Over the outer border of the right orbit was a slight graze, and under the conjunctiva of the eye blood was extravasated. The right elbow was stiff, and it was discoloured by an old bruise. Whilst being taken into the ward he vomited a coffee-ground-like fluid with some red blood-clots, and became conscious. In the afternoon his temperature in the armpit was 99° Fahr., and at 9 P.M. it had risen to 100°. The

hair was cut, ice kept on the head, and thirty grains of compound jalap powder were given him.

On the 3rd the bloody appearance of the fluid oozing from the right auditory meatus had changed to serous. This ear was quite deaf. He had had a restless night, and complained of intense headache, which was somewhat relieved by lying on the left side. The bowels not having acted, a compound colocynth pill was given, followed by a draught of compound infusion of senna, which purged him freely.

Next day the headache was still intense, and the temperature was high. Six leeches were placed on the right temple, and mercurial ointment was rubbed into both arms. The leeches were repeated later in the day.

On the 6th, early in the morning, the nurse was alarmed by the spouting of bright-red blood from the right auditory meatus. She stated that it was thrown out to some distance, and was not a welling-up or oozing; the amount was guessed at two ounces. The bleeding ceased spontaneously, and did not recur. Till then the serous discharge noticed on the second day had persisted. Throughout this day (the fourth after the injury) his mind wandered, but in the evening when impressively spoken to he gave apposite answers. In the night he became very delirious. At 9 P.M. the temperature was 99°. At 4.30 A.M. on the 7th he was convulsed, his face was blue, and he died.

*Necropsy ten hours later.*—Weather cold; ground covered with snow. Above the right ear was the scalp wound mentioned above, one inch long. About it, and also under and in the temporal muscle, was extravasated blood. A crack, two inches long, descended vertically through the parietal into the pars squamosa. From this a fissure crossed the pars petrosa, cutting the meatus auditorius internus, and ending in the foramen lacerum posticum basis cranii. From the meatus a second crack ran forward into the foramen lacerum medias. Other cracks joining these circumscribed a lozenge-shaped piece of the upper surface of the pars petrosa, which was quite detached. On lifting this as a lid the tympanum and labyrinth were seen plugged with blood-clot. A large blood-clot, which had its source in a large posterior branch of the middle meningeal artery, was found upon the outer surface of the dura mater in the temporal region, beneath which the cerebral convolutions were flattened. In the left side of the skull, opposite to the direct injury, under the dura mater lining the pars squamosa, was a small clot, of the size of a flattened filbert. The convolutions of this temporo-sphenoidal lobe were superficially ecchymosed. The basal pia mater was congested, and its web was infiltrated with a sero-purulent, opaque, yellowish fluid. On the arachnoid, over the pons and medulla, was a thin film of exudation, and the lateral ventricles contained about four ounces of sero-purulent fluid.

CASE 5. *Fall off two steps; copious bleeding from the ear and other symptoms strongly suggestive of fracture of the base of the skull; recovery.*—In this case the recovery of the patient gave no opportunity of verifying the diagnosis, but the occasion of the injury—a fall on the back of the head off two steps; the profuseness of the bleeding from the ear, to the extent of saturating his clothes, its continuance during several hours, and its replacement by a serous oozing; the deafness, much greater than could be fairly attributed to the rent in the membrana tympani and to the damping of the vibrations of the auditory ossicula by entangled blood-clot, and its continuance, together with the long stupor—concur in justifying the belief that here a fracture of the base of the skull crossing the left petrosal bone had occurred.

On the 20th March, 1875, a large, heavy man, aged thirty-three, fell backwards off two steps of a doorway on to the street pavement. He was taken up insensible and brought to the hospital. On reaching it he had already so far regained consciousness that he answered when spoken to, but it was necessary to raise the voice, indeed to shout; and his reply was not always suitable to the question. When his attention was not thus roused he lay as in a deep stupor. Blood was issuing freely from his left ear, and by the amount upon his clothes it was plain that he had lost a large quantity. The most careful examination of the vertex and sides of the head failed to detect any mark of fracture or even a bruise. At nine o'clock the same evening he was still in the same stuporose state, but he occasionally tossed restlessly about and groaned. The blood still oozing from the ear was thinner and more serous. The left pupil was now widely dilated; at the time he was admitted both