CASE OF PERFORATION OF THE STOMACH
AND OESOPHAGUS, WITH BRIEF REMARKS.

By MARSHALL HALL, M.D.

THE little girl had been subject, from a very early period after its birth, to attacks of bronchitis. Early in April it became affected with pertussis. The symptoms of bronchial and pulmonary inflammation called for the abstraction of blood; and three, and then two leeches were applied to the chest on two successive days, with other remedies usual in such cases. This was followed by exhaustion, with reaction, the countenance varying, being sometimes pallid and cold, and sometimes flushed, and the pulse frequent and jerking. Soon after the second application of leeches, there were also frequent fits of convulsion, for which a cold lotion was applied to the head; and the warm bath was used frequently. The *hydragryum cum creta* was administered, with a mild, nutritious diet. There was no sickness, no diarrhoea. After a variable state of things, this little patient sank and expired, having lingered eight days.

Permission could not be obtained to inspect the body until the fifth day after death. The morbid appearances were then carefully noticed by Mr. R. Welbank and myself. The general surface was extremely pallid, but there was little or no emaciation. The bronchiæ were clogged with mucus, and the lowest lobe of each lung was hepatised.

On looking into the right cavity of the thorax, a small portion of venous blood was observed. The source of this was carefully traced. A small part of the pleura immediately adjacent and above this spot, extending upwards over the convex surface of the vertebræ, was found perfectly removed by erosion; the subjacent veins had been opened by the same process, and their blood had escaped; the nerves were left entire, as it were, beautifully dissected. Proceeding with the examination, there was found at a part which corresponded with these appearances, an opening that penetrated into the oesophagus; and through this opening, a portion of the contents of the stomach flowed on raising this organ. At the same moment the rest of the contents of the stomach escaped into the abdomen, through a large orifice at its most dependent part. On further examination of the state of the oesophagus and stomach, the mucous membrane was found uniformly reduced to a gelatinous mass; the textures constituting the former were pierced by an irregular opening, of a size less than that of a pea; the peritoneum covering the latter was destroyed to a considerable extent, but there were no appearances of disease about the edges of either

orifice. The head was not examined. The other viscera presented no unnatural appearances.

The case thus briefly detailed, leads to some remarks of great interest:—

1. It cannot be doubted, that in this case the perforations of the oesophagus and of the stomach resulted from the action of the gastric juices after death. This appears to be proved by the eroded state of the adjacent parts. This fact may, therefore, be regarded as established by the present and similar cases.

2. It is equally certain, that there is one special disease or disorder of infants which leads to similar results, as stated in the interesting and valuable paper of Dr. John Gairdner, in the Transactions of the Edinburgh Medico-Chirurgical Society, vol. i. p. 311.

3. It is a point of the utmost importance to state in the account of post-mortem appearances, at what precise period after death the examination was made; and it might be useful sometimes to make the examination at two distinct periods, taking care not to disturb the parts at the first. It is quite plain, that, had the parents of the little girl whose case has been given earlier consented to an examination of it, some of the appearances which have been described would not have been observed.

4. It would be interesting to make a series of observations on rabbits and other animals, with a view of determining the circumstances which favour or oppose the erosion of the stomach by the gastric juice. The observations made by Dr. W. Philip, in the third edition of his singularly admirable work on the Vital Functions, pp. 131, 132, appear to be too general on this point.

5. We might possibly employ the gastric juice in the minute dissection of the nerves, since this texture appears to resist the action of this agent, whilst that of the other parts is destroyed by it. The fact itself is mentioned by M. Cruveilhier, in his *Médecine Pratique*, cahier i. p. 143.—*Ed. Med. and Surg. Journal*.

CASE OF SPINA BIFIDA.

By WILLIAM LAW, Esq., F.R.S.E.

THE child was a male, rather more than two months old, and the disease, of a hemispherical form, two inches in diameter, was in the usual situation on the lower part of the lumbar region. This was about the 20th of September; and a few days after, when the mother agreed to have it punctured, I proceeded to do so with a lancet. The instrument was pushed into the most prominent part near the middle, and on this occasion seemed to enter a membranous cap-

sule, distinct from the outer skin; the swelling was more than half emptied of a thin watery fluid mixed with blood, which appeared to flow from the divided edges. A little patch of adhesive plaster was put on the opening, and a fold of linen and flannel, with a piece of pasteboard, quilted with tow in a circular form, bound over the part by a roller. The child did not seem much affected by what was done. Three days after, the pasteboard being removed, the swelling was found of its original size, when the water was again drawn off at a new opening, and the pasteboard applied as before. In three or four days it was again done, but I changed the pasteboard for a piece of circular cork, which, having a slight projecting rim on the edge of the surface applied to the tumour, and a strap of adhesive plaster across, remained more steadily on the part. After the first occasion, I twice made the openings more to the side of the tumour, lest I might bring on ulceration where the integument was so thin as to be almost vesicular; but after a few applications of the cork compress, this precaution became quite unnecessary, as great thickening took place at this part.

It was seldom now necessary to puncture, simple tightening of the roller over the compress answering every purpose. The tumour had become flat, projecting scarcely one-fourth of an inch from the surface, not hanging pendulous, and was in its exterior so thick and unyielding, as to afford no space within for a fluid, which, if any now remained, must have been quite beneath the level of the surface. A too frequent evacuation of the fæces (which in themselves seemed all along healthy) had ceased, and even a constant discharge of urine, which at first gave bad hopes of ultimate success, had been quite corrected. The skin in general became mottled, like that of most healthy infants, and, in short, the case in every respect proceeded with prospects beyond what could have been anticipated.

Nothing seemed now remaining to be done, but to preserve for a short while the ground which had been gained. About the third week of October, however, some increase reappeared in the part; the fluid discharged by puncture was thick; and at the next opening on the 24th, had become purulent. Still, however, let it be observed, the little patient seemed unaffected constitutionally, and I was much surprised, on the 26th, to be informed of its death, with no other precursor than that about forty-eight hours before, when its clothes were changing, something was heard to snap or give way, as it were, about its person, compared in sound to that caused by the fracture of a nut. From this time the mother, in her homely idiom, said it was much "distressed

with the nerves;" but I cannot say I could perceive any remarkable change, or such as to induce me to remit the treatment.

On dissection, I found, exterior to the spinal sheath, a distinct cavity where the pus had lodged; but whether communicating with that canal by a small opening I cannot, from a little injury done in clearing out the matter, be quite certain. There was a slight appearance of extravasation beneath the cyst, but I did not, in dissecting, perceive any fracture of the ligaments or bones, if such took place when the snap was heard, and which might have let the purulent matter in upon the spinal chord. Some considerable injury, however, may have taken place at this time. I took a passing view of the abdominal viscera, which seemed healthy.

On further reflection, I am inclined to think, I ought not to have continued the pressure, when I found pus discharged from the puncture. The absence still of all bad symptoms rendered it probable that there did not then, at least, exist any connexion with the important part beneath; but the fear, on the other hand, of allowing the protrusion of the former watery bag, at what might now have been an ulcerated aperture, a trust in the law of the system, that matter, when formed generally, tends to the surface, and a hope that the cavity in which it existed might diminish at each discharge, made me, in choosing between two evils, believe it safer to keep the part reduced as it was, rather than expose it to the irritation of mechanical friction, which it must have undergone from its situation on the exterior of the body.

In similar circumstances, that is, if the treatment unexpectedly produced the suppurative action, the inflammation proceeding beyond the mere desirable adhesive thickening, I would be apt to leave Nature in this stage more to her own course; but the account of my error, if such it was, may prove beneficial to others on a like occasion.
—*Read at Ed. Med. Chirur. Soc.*

THE VITAL PRINCIPLE.

To the Editor of THE LANCET.

SIR,—The early insertion of a former communication has tempted me to trespass again upon your patience, though I must doubt whether you will think the importance of the subject a sufficient apology for its length. I allude to Mr. Dermott's theory of the "organic materiality of the mind." There have appeared sundry objectors to his theory, but none of so much importance as Mr. Thomas, inasmuch as he has superadded