structural lesion whatever exists in this and in many other nervous diseases, for there is much more than matter to be attended to, and every observable phenomenon is doubtless of the utmost importance. We have scarcely achieved more in the examination of purely vital actions than to ascertain the existence of a vital force, energy, or principle, which has hitherto eluded our grasp, and is yet most powerful in determining the action of various forms of matter. Matteucci and others have opened up a vast field of research in the observation of several of the most wonderful phenomena of organization, and have abundantly proved to us that there are yet many volumes of the book of nature, the perusal of which we have not commenced. It is, indeed, already shown that a peculiar force is manifested in animals in the physiological actions of the nervous and muscular systems, and that, though this force resembles electricity, yet it is perfectly distinct from it. How possible, then, does it appear, that an increased or perverted action of such a force upon the tissues of an animal body may give rise to the whole phenomena of alarming and destructive diseases, and yet leave their structure without a single evidence of material change?

ARTICLE II.—*Case of Strangulated Hernia.* By JOHN TRAILL, Esq., Surgeon to the Arbroath Infirmary.

WEDNESDAY, Jan. 1, 1851.—This morning, at five o'clock, I was requested by my friend, Mr Finlay, to visit David Shuld, a seaman, aged 60, who had been brought ashore from a ship, about four hours previously, with all the symptoms of strangulated hernia. Mr Finlay had seen him shortly after he reached his home, and had made a persevering attempt to reduce the hernia, but without effect. The man's statement—which was rather confused—was, that for many years he had laboured under hernia, for which he had worn a truss; but that the tumour frequently came down, and was returned on several occasions with difficulty, and after having caused symptoms resembling his present attack; that on Monday forenoon (December 30), feeling costive and unwell, he had taken a dose of castor oil, which had acted three times; that the same evening, about nine o'clock, whilst engaged in the ship's rigging, he had felt the tumour come down suddenly; that he immediately became sick, and vomited, and had been in great agony ever since.

He was evidently in great pain, his pulse small and wiry, the whole surface of the body cold and damp (he had not been able to change his wet clothes for two days and nights before coming ashore); but his countenance was not much sunk, nor his muscular strength much lessened. The belly was hard, tense, and tympanitic; but without much tenderness on pressure. He complained of intense sickness, and had frequent retching and vomiting of bilious-looking matter, with dragging pains about the navel, and constant thirst.

The hernial tumour occupied the right side of the scrotum, and was fully the size and about the shape of a *Bon Chretien* pear, of twelve ounces or a pound weight, having the testicle at its lower part, and feeling very tense, but with no great degree of tenderness.

We placed him under the full influence of chloroform, which produced complete relaxation of the muscular system, and the taxis was again tried. At first it seemed as if the tumour would be easily reduced, a considerable part

of its bulk apparently passing up, but immediately returning on the withdrawal of pressure.

He was now directed to be sent to the Infirmary, and placed in the warm bath as soon as possible.

About nine o'clock he was seen by Dr Bruce, who, after keeping him for about half an hour in the bath, again placed him under chloroform, and attempted reduction, without effect.

At ten o'clock, the symptoms continuing unmitigated, it was resolved, in consultation, to operate. On cutting through the integuments, the fascia and cellular substance were found much thickened, matted together, and infiltrated with serum, and at several points with air. The sac was strongly and uniformly adherent to the parts around, was very tough, and much thickened, being at no point less than a line, and at one part at least half an inch, in thickness. On making a small opening into it, a stream of yellow, turbid, and very foetid fluid was thrown into the air with great force, and this continued to flow until at least ten or twelve ounces were discharged. On a careful examination I now became convinced that the sac was empty, at least of any solid body; and, on introducing a director through the opening, it passed without any obstruction through the inguinal canal into the abdominal cavity. From these circumstances, and the large quantity and nature of the fluid passed, some of my colleagues were of opinion that the part opened *might* prove to be intestine.

Although satisfied in my own mind, from the colour, density, toughness, great and unequal thickness, and uniform adhesion to the fascia, that the part opened must be the sac, yet, being also satisfied that it contained neither omentum nor intestine, it was agreed to place a ligature on the small opening, and, after closing the wound with sutures, to wait for some hours the result.

In the evening—no relief having resulted from the operation—the wound was opened up and the sac cut into, which, from its structure and smooth serous surface, was now evidently seen to be thickened peritoneum. The finger could now be passed without difficulty through the neck of the sac into the abdominal cavity, and there encountered what felt like a mass of omentum, and adhered slightly to the peritoneal surface.

The man died the same evening, about ten o'clock, after having vomited a large quantity of stercoraceous matter, and without any abatement of his sufferings.

On opening the body next day, we found the appearances usually presented after death from hernia,—considerable effusion of turbid serum, the intestines agglutinated together by soft fibrinous matter, and the whole abdominal viscera indicating, in greater or less degree, the existence of inflammatory action. Immediately corresponding to, and lying loosely over, the internal orifice of the sac and inguinal canal, was a portion of the ileum, in a completely sphacelated state, about three inches in length, and its margin sharply and regularly defined, so as to indicate accurately the line of constriction. The serous surface of this part had lost its smoothness and elasticity, and the mucous membrane was soft and pulpy, and so much thickened as completely to close up the canal. Above this part, the intestine was, as usually seen, enormously dilated.

Remarks.—The opinion which I formed of this case at the time of the operation, from the phenomena which presented themselves during its progress, was, that the part strangulated must have passed up during some of the attempts at reduction; but that the morbid action was so far advanced as to have prevented any relief being derived from the removal of the strangulation. This view, I think, the post-mortem examination proves to have been correct.

It was also evident, from the appearances presented both during

the operation and on dissection, that the hernial sac had been irreducible for a long period, probably for many years; and, on minutely inquiring into this, we found that, although a strong circular truss had been constantly worn up to the commencement of the attack, the right side of the scrotum had always remained considerably enlarged.

The constant pressure of this strong truss over the unreduced sac will also account for its strong adhesions to the fascia, and for the congested and infiltrated state of the surrounding cellular tissues. The circumstance of our being able, during the attempts at reduction, to lessen considerably the bulk of the tumour, led probably to a longer delay of the operation than would otherwise have been the case.

The more I see of hernia, the more strongly am I convinced that all danger lies in delay; from the operation itself I have never seen the smallest danger result.

Notwithstanding this apparent reduction in bulk during pressure, yet the instant pressure was withdrawn, the tumour resumed its former size, and at the time of operation it was as large, and felt as tense, as it ever had been. This, and the persistence of all the symptoms, rendered it impossible to suspect reduction of the strangulated bowel.

ARBROATH, 5th January 1851.

ARTICLE III.—*On the Favourable Terminations of Pericarditis, and especially on Adhesion of the Pericardium, with cases illustrating its Secondary Effects on the Heart.* By W. T. GAIRDNER, M.D., Pathologist to the Royal Infirmary of Edinburgh.

THE permanent results of the effusion of fluid and lymph into the pericardium, in cases not fatal in the first instance, are now generally admitted to be the following:—

1st. The formation of limited thickenings, or opaque white patches, on the surface of the membrane, more or less smooth on the surface, and more or less firmly adherent to the serous tissue, from which they are sometimes indeed entirely inseparable.

2d. The formation of *partial* fibrous adhesions, commonly about the root of the great vessels and base of the heart, but occasionally nearer the apex, between the fibrous and vascular layer, or between the portions of the latter covering the aorta and pulmonary artery.

3d. *Universal* fibrous adhesion, such as to obliterate the serous cavity; the two surfaces being generally very closely applied to one another, but occasionally connected so as to allow of a limited amount of motion between them.

4th. Adhesion (which in this case is almost invariably universal), with marked thickening, induration, and sometimes calcareous transformation of the uniting medium. Under this head are comprised