distinct outline. The nucleus varied in size, and was divided sometimes to various extents, bifid or trifid, double or triple nuclei being frequently observable. The varieties of corpuscular character, under the action of the same reagents, were found so to graduate and pass into each other, that it was impossible to distinguish different species or kinds of corpuscle.

When boiled in acetic acid, the cell-wall was wholly dissolved, and the nuclei left naked; but they were floating in, or imbedded among, minute granular matter. In this condition, a few of the nuclei were colourless and clear; a few exhibited various degrees of granularity or opacity; some were more or less divided; and a few of the single clear nuclei exhibited the appearance of a nucleolus in the form of a dark central spot. When boiled in aqua potassæ, both cell-wall and nucleus were dissolved, no trace being left under the microscope.

Chemical Character. The fluid was densely albuminous, when mixed with water and heated.

Acetic acid agitated with it, in the cold, formed a somewhat viscid mucilaginous liquid. On the application of heat, this became very fluid; but the mixture continued opaque, and of the same colour as prior to the addition of the acid.

Aqua potassæ agitated with it, in the cold, likewise formed a viscid mucilaginous liquid; but a partial solution only was effected, many curdy opaque flocculi being left floating in the fluid. On the application of heat, however, a complete solution was effected, the fluid showing no trace of flocculi, and having an uniform dark brownish-green colour.

Nitric acid, cold, added to a mixture in water, produced a dense white opacity (albumen); and, at the same time, caused the development of a fugitive pink tint (biliary reaction), which slowly became greenish-yellow. On the subsequent application of heat, the latter colour was rapidly deepened, and there was a copious formation and precipitation of albuminous flocculi.

CASE VIII. [History of case unknown.]

General Character. Discharge a jelly-like mass, of an olive-green colour; devoid of fœtor.

Histological Character. Nothing but hyaline bands of mucus were seen, which were only visible on the addition of acetic acid. There was no trace of corpuscles of any kind.

Chemical character. A mixture in water, on the application of heat, became very coagulable. In aqua potassæ, assisted by heat, it was wholly dissolved. Nitric acid developed a greenish-yellow colour.

In this case it is important to notice the absence of fœtor and the absence of the corpuscular element of the mucus.

III. DIARRHŒA.

CASE IX. Chronic diarrhœa.

General character. The stool was of a pea-soup colour and consistence: sediment flocculent; resembled oatmeal and water; devoid of fœtor.

Histological character. Mucus corpuscles were abundant. Some were very indistinct and delicate; others were larger than usual, and loaded with dark granular matter. The nucleus was usually indistinct or invisible, until after the addition of acetic acid; but, in no case, did this acid completely dissolve the granules, so as to make the cell wall transparent and the nuclei very distinct. On boiling in acetic acid, the granular matter was wholly removed, and the nucleus, thus rendered prominent, was more frequently single than divided or compound, and was usually dark and hazy. A few blood corpuscles were also present.

Chemical character. The stool was densely albuminous. Nitric acid and heat developed a greenish-yellow colour. The flocculent sediment was converted into a thick mucilaginous fluid by aqua potassæ, and on the superaddition of heat a complete solution was formed, which was clear and of a light-brownish red colour. Acetic acid, assisted or not by heat, appeared to effect no change.

The presence of mucus, and more especially of blood, here, tend to assimilate the case to dysentery; to which, however, it presented no other resemblances.

CASE X. Chronic diarrhœa.

General character. The stools were of the consistence of thin porridge or gruel; of a pea-soup colour; contained a considerable amount of floating mucus flocculi; fœtid.

Histological character. The sediment contained mucus fibrillæ and mucus corpuscles, large and well formed; prismatic phosphates, muscular fibre and other food-débris, and granular matter.

Chemical character. The filtered fluid was very albuminous; nitric acid and heat developed a transient but deep blood-red colour, which passed gradually through orange into greenish-yellow. Nitric acid, in the cold, produced a deep green, which slowly became orange.

CASE XI. Chronic diarrhœa of phthisis, which proved fatal shortly after the stool under-mentioned was evacuated.

General character. The stool had a light brownish-yellow colour, and a branny or oatmeal-looking sediment. It closely resembled many reaction and fever stools of cholera, which I have seen.

Histological character. The sediment contained potato-cells and other forms of food-débris; fatty matter, phosphates, compound granular bodies, and granular matter.

Chemical character. The fluid was very albuminous. Nitric acid, in the cold, produced a pinkish tint; preceded by heat, it developed a transient deep brownish-red colour, which rapidly passed into yellowish-green.

Murray's Royal Asylum, Perth, February 1855.

CASE OF STRANGULATED UMBILICAL HERNIA: OPERATION: RECOVERY.

By HENRY LOWNDES, Esq., Surgeon to the Liverpool Dispensary.

FRANCES LONGUEST, aged 64, had had a hernial protrusion about the umbilicus since her first confinement, which occurred when she was 28 years old. Before that time, she stated, no tumour existed. This hernia she could in general return without difficulty; but, for four months before I saw her, she had been unable to return it. Her bowels were usually costive.

On September 15th, 1854, she sent to the South Dispensary, and was visited by one of the house surgeons, who found her suffering from much pain about the umbilicus. Her bowels had been slightly moved that morning. The night following, at midnight, she was seized with vomiting; and this persisted till the next morning, when the house surgeon reported the case to me. I saw her at noon, when she was still vomiting brown flocculent matter, without any fæcal odour. She was low and anxious; her pulse was small. She complained of great pain about the umbilicus. I found the tumour of about the size of a small orange, tense and hard, and rather tender to the touch; and the abdomen about it also rather tender. I tried to reduce it, but without success; the house surgeon had also previously used the taxis. As she seemed very low, I determined to operate at once; and at half-past twelve I commenced, assisted by my colleague, Mr. Fenton, and the house surgeon, Dr. Carslan, who administered chloroform. I made a single incision from above downwards, through the skin, the whole length of the tumour, about two inches and a half in length. Under one part, a little fat was found; but the greater part of the sac was almost subcutaneous, nothing requiring division but a thin subcutaneous fascia, when the sac was exposed. The sac was laid freely open, when a small quantity of clear fluid escaped. Only one knuckle of bowel was down; this looked dark-coloured, but was in good condition; it was very tightly grasped at the ring (which I believe was situated at the umbilical opening of the peritonæum); so that the handle of a scalpel could not be introduced by the side of the bowel. Two slight in-

cisions were made into the stricture, one upwards, and one laterally; the ring then dilated readily, and some of the contents of the bowel passed back, and the bowel itself was returned without difficulty. The ring was felt to be quite free.

The wound was now brought together by sutures closely inserted, and a thick pad of lint pressed down upon the umbilicus, and secured by straps and a broad bandage. The pulse improved greatly after the operation. Thirty minims of Battley's solution was administered at once.

4 P.M. She had vomited once or twice, and had thrown up the draught. The pain seemed gone, and she expressed great relief. Her pulse was good; the bowels had not been moved. Anxious that her bowels should not be disturbed for two or three days, I gave a grain of opium in a pill at once, to be repeated at 9 P.M.

9 P.M. There had been no return of the vomiting. She was quite easy: the pulse was good.

Sept. 17th, 10 A.M. She seemed very comfortable. There was slight pain about the navel. She had a teazing cough, that prevented her from keeping quite so still as could be wished. The pill was repeated.

9 P.M. The patient was going on well. The abdomen, however, was rather hot and tense. The pill was repeated.

Sept. 18th, 11 A.M. She had had some pain in the left iliac region, was cold, and felt low and anxious. The pill was repeated. I now administered wine and ether in small quantities, frequently repeated; and ordered bran poultices to be applied to the pit of the stomach.

2 P.M. I found her better, warmer, and more cheerful. She had less pain; the bowels had not yet been moved. The opium pill was repeated. I dressed the wound, and found the edges firmly united. There was a little suppuration from the sutures: these I cut out, and applied dry lint and compress.

Sept. 19th. This was the third day after the operation. Her bowels had not yet been moved; I therefore ordered an ounce of castor oil to be taken immediately, and the opium to be suspended for the present.

9 P.M. The bowels had not yet been relieved.

Sept. 20th. The bowels had been moved three times in the night. She was very easy, and seemed much better. She was directed to continue the wine, and the opium pills every night.

Sept. 21st. The bowels were not open. The castor oil was repeated.

Sept. 22nd. In the afternoon, she was seized with very sharp purging, with a good deal of pain to the right of the umbilicus. I gave a pill with a grain and a half of calomel and a grain of opium every three hours.

Sept. 23rd. I found her quite easy. The wound was healed, with the exception of a little superficial ulceration.

Sept. 26th. The wound was perfectly healed; the bowels were still rather costive, and required castor oil. She felt quite well, and was regaining strength.

She wears a pad strapped over the umbilicus, which prevents the hernia from reappearing; and I have seen her recently in perfect health.

REMARKS. I have ventured to report this case at some length, that I might attract notice to the after treatment adopted. The older surgeons always inculcated the necessity of clearing out the bowels thoroughly after the operation; and even Mr. Syme recommends that, if the bowels are not moved spontaneously within three or four hours, mild laxatives are to be given, followed by injections, if necessary. The propriety of this treatment has lately been much questioned, and many cases have been published where an opposite mode has been very successful. In the present case, the bowels were kept perfectly at rest until the third day, when a little castor oil was given, which operated freely the following night, without causing much pain. I think that to this perfect repose I must attribute the union of the external wound by the first intention—a matter of great consequence where there is so little space intervening between the skin and peritonæum; and I should think any slight inflammation of the bowel or peritonæum much more likely to subside under this mode of treatment than under one producing irritating movements.

In the operation for vesico-vaginal fistula, perfect rest of the neighbouring parts is an essential part of the after treatment; and opium is usually given in sufficient quantities to prevent any motion of the bowels for eight or ten days, or even longer; and, on a spare diet, no great inconvenience is generally felt, though when, after this long delay, defæcation does take place, it is a painful and troublesome process. No apprehension, therefore, need be felt as to keeping the patient quiet with opium for three or four days after the operation for hernia; after which time the chief danger is generally over.

Liverpool, March 5th, 1855.

BIBLIOGRAPHICAL NOTICES.

PATHOLOGICAL AND SURGICAL OBSERVATIONS. By HENRY LEE, F.R.C.S. pp. 232. London: 1855.

AMONG the leading characteristics of this age, so far as the science of medicine is concerned, there is no one thing which will stand out in bolder relief to the future etiologist than the vast amount of patient, highly cultivated, and accurate habit of observation, which has been brought to bear on obscure subjects of research. Indeed, it is only to-day that we begin heartily to recognise the importance of such subjects, or rightly to estimate the deep obligations under which, as having to practise the *art* of healing, we are placed by those who devote themselves to the elucidation of these "hidden things" of its *science*. When for the first time we behold the marvellous effects of such an agent as chloroform, the thought breaks upon us, that the long trains of symbols and pages of description given by the chemist of analyses or combinations we have been accustomed to regard as of no practical interest, may, at a time the least expected, become of inestimable value. Reflecting further on such occurrences, we are irresistibly led to the conclusion that, in subjects nearer akin to our every day pursuits, we may perhaps have undervalued and neglected those physiological and pathological investigations, which, though unappreciated in the present time, will rank in the future as marking the true progress of medical science. The materials are gathering on every hand; minds of the highest stamp are accumulating for our future use treasures, the value of which we now know not how to estimate, and can never rightly appreciate until a master hand shall, from this disordered profusion of precious materials, arrange a cabinet of gems, which shall render medicine worthy of a place among the exact sciences.

Among the names of our own day that will then command respect, as having by high intelligence, acute reasoning, and candid inquiry, furthered the progress of medical science, our author will be valued; and his merits will rest mainly on the fact that, viewing all physiological science only as a means to an end, he has, in conducting his investigations, however abstrusely scientific, kept constantly before him one great and noble object—the alleviation of human suffering.

Mr. LEE possesses qualities which we could wish to see oftener acting in concert. He unites the acute reasoning of the inductive philosopher with calm foresight, and with just appreciation of the conclusions to which his experiments lead; and, at the same time, he examines candidly and deals fairly with the acts and opinions of those who, pursuing the same path, have been led to different results.

In the introduction to the present volume, four experiments are recorded, showing the influence of pus in coagulating the blood, when introduced into the circulation; and several very interesting cases are detailed, where, upon *post mortem* inspection, coagula and plugs of fibrin were found in the blood-vessels. In these cases, an abscess had formed in the neighbourhood of recently amputated parts; and Mr. Lee endeavours to establish a relation of cause and