the skin by arsenic; that of an irritable phagedænic sore by opium; or that of a syphilitic ulcer by iodide of potassium. Although simplicity of treatment indicates your general faith, yet surgical practice should by no means degenerate into an expectant sameness.

In more recent times, the plan of irrigation, overflowing foetid sores, gave, and continues to give, satisfaction. This overflow is practically inconvenient, because excessive; to obviate this, Dr. Lee's steam-kettle is a good mechanism for gently applying a continuous stream of disinfecting moisture without deluge. As for poultices, I hold them in abhorrence; they are both dirty and vulgar; warmth and moisture may be obtained by hot flannels, the steam-jet, or by warm water dressing; but, in all cases where warm water dressings are used, the element of moisture should assuredly be constantly changed, because water is a prime factor in favouring decomposition; the wet lint and gutta-percha sheet placed over an open sore shortly becomes impure by reason of admixture with blood and discharge, the granulating surface is swamped, and its tone enervated.

At the present time, surgical attention has been prominently focussed on the antiseptic system of dressing wounds by Professor Lister. I well know that by his method more serious operations may be performed with impunity than hitherto; *e.g.*, the free opening of joints, deep abscesses, serous cavities, etc., and that in the Royal Infirmary, Edinburgh, admirable have been the results in his own hands; but, with all due deference to so high an authority, I cannot but think that his hobby has been ridden hard, and that a tedious expenditure of energy occurs in the Edinburgh school. Will the majority of English surgeons admit that the antiseptic system is necessary for tenotomy? or for the operations of minor surgery?

By so pointedly directing attention to the dressing of wounds, the minds of surgeons are in danger of becoming narrow; for the wound itself is but a single element in a surgical case, and in many instances the amount of suppuration is of no vital import; the bugbear pyæmia is to be combated by sanitation, only one condition of which is supplied by the dressings.

If I may liken a surgical case to a domestic establishment, Lister's treatment of wounds is represented by a householder who disinfects his drain; a most wholesome practice, but not so absolutely essential as to justify the stigma that an ordinary well-trapped sewer is impure and untrustworthy. In the same way as many establishments are well regulated and successfully conducted without such artificial remedies, so also many cases in surgery are to be treated satisfactorily without antiseptics. My own experience at this hospital supports this view.

Professor Lister has, by his talent, given surgeons a grand ally in performing operations where death is to be apprehended from exhaustive discharge, or from the results of interference with synovial or serous cavities. In ordinary surgical work, I question the necessity for the antiseptic system; "the game is really not worth the candle"; and, until I learn that the open treatment of wounds is unsuccessful, I shall continue it, for the following reasons.

1. Our results are equally as good as by the antiseptic system; no death having occurred from pyæmia or exhaustive discharge.
2. Trouble and expense are reduced to a minimum.
3. The fullest opportunity is granted to students for clinical observation; on the antiseptic system, the wound is but seldom and briefly exposed.
4. All nervous apprehension from the indiscreet removal of, and the painful repetition of, dressings is done away with.
5. The process of healing by scabbing is solicited.
6. Nature is duly accredited with her share in the performance; and a host of lotions and ointments are dismissed as plagiarists.

I have been in the habit of comparing surgical dressing to the dress of individuals; the simplest suits best; the elaborate appears most ridiculous; and I strongly suspect that as much of the drapery displayed now-a-days is unnecessary and expensive, so also are many of the contents of a dresser's panier. By divesting ourselves and our wounds of excessive dress and dressings, we prepare both for repose and the reparative process.

I have said this much from the firm conviction that in surgical dressings much that is done had better be left undone; dressings are not to eclipse the beneficent repair of Nature, but need only (if used at all) be neat, pure, and simple to be effective.

■ ARMY MEDICAL DEPARTMENT.—Surgeon-Major Stanley having been placed under orders for embarkation, Surgeon Steele has been ordered to proceed to Brecon, to take over charge of the station hospital there.—Surgeon-Major Goodwin has returned to Dublin, and assumed medical charge of the station hospital at Arbour Hill.

CASE OF IDIOPATHIC OR PROGRESSIVE PER- NICIOUS ANÆMIA TREATED UNSUCCESSFULLY BY PHOSPHORUS: DEATH: NECROPSY.*

By J. B. BRADBURY, M.D., F.R.C.P.,
Physician to Addenbrooke's Hospital, Cambridge, etc.

THE pathology and treatment of the disease called "idiopathic" or "progressive pernicious" anæmia are still so little understood, that it is of the greatest importance to record accurately every case of this affection, so that perchance in time some one may, from a careful study of a group of such cases, be able to draw a correct inference as to the origin and successful treatment of this obscure malady. It is with this object in view that I have ventured to relate an instance of the disease before the Medical Section of the Association.

CASE.—Emmanuel Littleboy, aged 40, married, living at Wimbington, in Cambridgeshire, was admitted into Addenbrooke's Hospital on June 7th, 1876, under my care. His wife and three children were quite healthy. Previously to the present attack, he had never been laid up with illness since the age of 15, when he had an attack of ague. From this he completely recovered, and was quite strong and healthy up to eighteen months ago. The first thing noticed was a condition of jaundice accompanied by giddiness and nausea. There was also some vomiting. The appetite was bad, and there was considerable weakness; but he was able to be up and go about. He remained in this state about a month, and then, feeling better, he resumed work. Last January, a similar attack occurred, and lasted a month. He got better by degrees, and was able to work till May 20th. On that day, whilst at work in the open air in the morning, he became suddenly giddy and had to lie down; he was able, however, to resume his work that afternoon; but, on the following day, he felt so weak and faint, that he remained at home. Since then, there had been some bilious vomiting and the giddiness has remained. He had lost flesh somewhat, but was still fairly nourished. There was no history of any hæmorrhagic attacks or of syphilis. On admission, the temperature was 99.2 deg. Fahr.; pulse 84. The skin was dry and sallow looking. The tongue and mucous membrane of the mouth were very pale; the conjunctivæ were not tinged yellow. Respiration tranquil. The urine was clear, and contained no bile-pigment nor albumen, and was of specific gravity 1015; its reaction was acid. Nothing abnormal could be detected in the lungs. The heart's apex beat a little external to the nipple-line, behind the sixth rib. There was a soft blowing murmur with the heart's first sound heard all over the cardiac region. The liver and spleen were apparently not enlarged. The abdomen was soft and not tender.

On June 8th, he was placed upon full diet, and ordered a mixture containing tincture of the perchloride of iron (ten minims), spirit of chloroform, and infusion of quassia.

June 9th. After getting up this morning, he fainted and fell, cutting his right nostril. On June 13th, he was ordered four ounces of port wine and beef-tea, in addition to his ordinary diet. The next day, he had an attack of epistaxis from the right nostril, which again induced syncope. The dose of iron was increased to fifteen minims thrice daily. On June 15th, he was placed upon phosphorus, one-thirtieth of a grain capsules, twice daily after food; but, by an oversight on the part of the dispenser, capsules containing only one-sixtieth of a grain were given. He was so faint this morning, that it was necessary to give him half an ounce of brandy.

June 16th. He was rather wandering in his mind yesterday afternoon, but to-day his mind was clear. There was no return of the hæmorrhage or fainting.

June 17th.—The urine contained, after standing, numerous bacteria; it was strongly acid, and there was a large increase in the amount of phosphoric acid precipitated by molybdate of ammonia, as compared with that of the previous day.

June 18th. Bowels inactive. In other respects, he had improved. There was no delirium. He took eggs instead of meat, for which he had no appetite. The ankles were rather swollen. A remarkably foul smell was noticed about him, which was also observable at the time of his admission. When freshly passed urine was examined, no bacteria were found in it.

June 19th. He was ordered a capsule thrice daily.

June 21st. He was improving. His strength was somewhat better. For the last three days, the weather being very fine, he had been placed on the colonnade in front of the hospital for the benefit of the air. The patient's blood (drawn by pricking the finger) had been examined

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Sheffield, August 1876.

under the microscope on several occasions. The white corpuscles were about the size of ordinary red corpuscles. There was a decided diminution in the number of the red corpuscles, but the relative number of white corpuscles was not increased. The red corpuscles were larger than normal. Scarcely any were circular or biconcave. Some were rather pear-shaped, and others threw out a tail-like projection from either end. They had less tendency to aggregate in *rouleaux*, and were paler than in health. The diminutive and more deeply coloured red corpuscles regarded by Eichhorst (*Centralblatt für die Medicinischen Wissenschaften* for June 24th), as pathognomonic of this disease, were not present in this case.

June 22nd. The skin had a decided greenish tinge. There was no sallowness of the conjunctiva or sclerotic. The tongue and mucous membrane of the lips and mouth were very pale. He was unable to get out during the day, as he nearly fainted whilst being dressed.

June 23rd. He was rather delirious last night. This morning, whilst his bed was being made, he fainted in the chair where he was sitting; his lips twitched and his eyes were fixed. On return of consciousness, he was at first unable to speak, and slept soundly for an hour. He was ordered an ounce of brandy.—9 P.M. Pulse very feeble, 100; temperature, 100 deg. He was wandering slightly.

June 24th. He was delirious last night. The bowels had not acted since yesterday morning. Temperature, 99 deg.; respirations, 20; pulse, 100. There were slight sordes on the teeth. His general condition was considerably worse. He passed his urine involuntarily. There was venous pulsation in the neck. The phosphorus was omitted and a quinine mixture ordered (two grains three times daily).—Evening. He had passed more urine involuntarily in bed. He was lying on his right side. He ate a little fish for dinner, and felt faint afterwards. Pulse 100.

June 25th. He was worse. The pulse was much feebler. He still lay on the right side. He had had three more epileptiform attacks. He was ordered a drachm of tincture of perchloride of iron every hour. After two doses of the iron, he vomited freely. It was, therefore, stopped. He gradually sank and died at 7 P.M.

Necropsy Fifteen Hours after Death.—The body was fairly nourished and of waxy hue all over; there was no oedema of any part of the surface.—*Pleura*: There were adhesions on both sides, especially at the apex of the left lung. The right pleural cavity contained about two ounces and the left rather more of a reddish-yellow serous fluid.—*Lungs*: The right lung was very bulky, weighing 52½ ounces. It was anæmic, pitted deeply on pressure, and, on section, a very large quantity of watery serum exuded. There were slight ecchymoses on the surface and patchy redness in portions of the cut surfaces. It was crepitant throughout and floated in water. The left lung was intensely anæmic, and the upper lobe quite collapsed. The lower lobe pitted deeply and contained much serum, but this was not the case with the upper lobe. The weight of the lung was nineteen ounces and a half. On cutting through the pulmonary vessels, not a drop of blood escaped. The bronchi were healthy. The *Pericardium* was healthy; there were no adhesions. The heart was enlarged, and its muscular structure appeared natural; it was not anæmic. It weighed sixteen ounces. All the four cavities were absolutely empty. The endocardium was rather thickened, especially in the auricles, and markedly pale. The right ventricle was slightly dilated, the left somewhat hypertrophied. There was very slight thickening of the mitral valve. The organ was otherwise healthy. There was no staining of the aorta.—*Liver*: The liver was large and firm; it weighed seventy ounces. It cut hard, but the section appeared normal. Nothing abnormal was revealed by microscopical examination. The gall-bladder was full of bile. On cutting the vessels at the porta hepatis, no blood whatever escaped. The *kidneys* were large and firm; the right not so anæmic as the left; otherwise healthy. The weight (with capsules) of the right was seven ounces and a half, of the left eight ounces. The suprarenal capsules were healthy, but perhaps somewhat smaller than natural. The *spleen* was large and soft and tore readily; its weight was twelve ounces. The pulp was soft. The *alimentary canal* was healthy throughout. There were no ecchymoses. The intestines contained plenty of bile, and their walls were rather thin. Peyer's patches were very indistinct. The *pancreas* was healthy. There was no enlargement of the lymphatic glands in any part of the body.—*Brain*: The brain was exceedingly anæmic. There was a slight excess of fluid beneath the meninges. On the left hemisphere, there was an ecchymosis about the size of a shilling beneath the membranes. The whole surface of the brain was rather wetter than natural. The substance of the brain was exceedingly pale on section. There was no unusual amount of fluid in the ventricles. There was no blood whatever in the sinuses. The *muscles* were of natural colour and well developed. The *veins* were more transparent than natural, and contained but very little blood, which

was of a pinkish colour and exhibited no tendency whatever to clot. The microscope showed an extreme reduction in the number of red blood-corpuscles, which were very irregular in shape. Scarcely any were normal; the majority were pear-shaped, some triangular, and others, again, somewhat fusiform, sending out, as it were, a process from either end. They showed but little tendency to collect into *rouleaux*. The white corpuscles appeared to be somewhat reduced in number as regards their proportion to the red.—*Marrow*: The red marrow from the right tibia looked no paler than natural. It was made up almost entirely of granular spheroidal cells about the size of white blood-corpuscles, and very like them in appearance. Some cells were of a distinctly reddish colour. There were a few oil-globules and some free granules. Some of the larger cells contained a single nucleus, but no nuclei were apparent in the majority of the cells without the use of reagents. The red marrow from the sternum contained plenty of oil-globules, and was made up of cells larger than those from the tibia. The large cells were distinctly nucleated. Some of the cells were twice as large as an ordinary white blood-corpuscle. There were very few coloured cells, and these were not so distinctly coloured as those from the tibia. The yellow marrow had the normal appearance.

REMARKS.—I think there can be little doubt as to the case being one of that form of anæmia first described by Addison (New Sydenham Society's edition of his works, 1868, p. 212) as "idiopathic," and since called by Biermer, Immermann, and Pepper "progressive pernicious." We are still quite in the dark as to the causes of this malady, hence the specific name of "essential" has also been given to this kind of anæmia.

Although allied to Addison's disease, leukæmia and the anæmia lymphatica of Hodgkin, it is yet different from them, as there is neither bronzing of the skin nor disease of the suprarenal capsules, nor an increase of white corpuscles in the blood, nor any enlargement of the lymphatic glands. Idiopathic anæmia is characterised by an absolute diminution in the red corpuscles of the blood, either from these not being formed in the requisite numbers, or from their too rapid disintegration. Besides the change in the red corpuscles, other constituents of the blood most probably undergo organic changes, as evidenced by its want of coagulating power after death. If anything, the relative number of white corpuscles is diminished and their size diminished. Physiologists have not yet discovered the mode in which the red corpuscles are formed, nor the locality of their formation, although there is a growing belief that some of them at least result from the transformation of the pale corpuscles. Of late, it has been discovered by Neumann and Bizzozero that transitional forms to the red corpuscles exist in the marrow of the cancelli of bones, and hence pathologists have looked to this tissue for the solution of the mystery. The appearances of the red marrow from the tibia and sternum in the case I have related corresponded very closely with those given by Professor Pepper (*American Journal of the Medical Sciences* for October 1875, p. 332) from the radius and sternum in one of his cases; but, on comparing these appearances with those of healthy marrow as given in the eighth edition of Quain's *Anatomy* and elsewhere, I find them almost identical. Of course, I am not prepared to say there may not be some slight increase in the number of the lymphoid cells, as I am not sufficiently acquainted with the microscopical appearance of normal red marrow; but, so far as I can judge from the descriptions in books, the differences are not sufficiently great to warrant one in calling idiopathic anæmia "merely the simple medullary form of pseudo-leukæmia" (Pepper). Let us now see if the present case lends support to any other pathological theory. I think it does. The spleen has long been considered as the death-place of the red corpuscles, and recently the liver, among its other functions, has come to be regarded also as one of the localities where these corpuscles are destroyed. In my patient, it was found on *post mortem* examination that both these organs were enlarged. The splenic pulp was very soft. Perhaps, then, this disease is not one in which the morphological elements of the blood are generated in too small numbers, or in which the requisite transformation from pale to red does not take place, but rather an affection in which too rapid destruction goes on, or, at any rate, the process of destruction exceeds that of formation. Has the yellow tint of the skin and that imparted by the blood to the fingers, etc., any connection with the rapid destruction? I notice that some pathologists, failing to find any other satisfactory explanation of this disease, are inclined to take shelter in that "refuge for the destitute," viz., the nervous system. Idiopathic anæmia, say they, is a neurosis. Lebert thinks it not improbable that the disease is a special neurosis of the great sympathetic, like exophthalmic goitre (*Archives Générales de Médecine* for April). Dr. Broadbent thinks "there is lacking some influence for want of which the reactions between the blood and the blood-forming organs fail to be effected". (*Practitioner*, January 1875.)

My patient had suffered from ague twenty-three years previously to the commencement of the attack of anæmia which proved fatal. He also came from a district in Cambridgeshire in which ague used to prevail, but in which it is now almost unknown. It is highly improbable, therefore, that exposure to paludal miasma was the cause of his illness. The blood had not the appearance described by Eichhorst as characteristic of this affection, as I have stated in the notes. Dr. Grainger Stewart has failed to discover these appearances in two well marked and ultimately fatal cases which occurred in his practice (BRITISH MEDICAL JOURNAL, July 8th, 1876). In some cases of this disease, fatty degeneration of the heart has been observed; but, in my case, the heart was somewhat hypertrophied and the muscular tissue was firm and of a good colour.

The patient's illness commenced with so-called "bilious attacks", of which he seems to have had several; some at considerable intervals. After his admission, no evidence of jaundice could be detected beyond the sallowness of the skin, which was the sallowness of anæmia, and not that of jaundice. This hue of the skin has been noted by other observers. The giddiness, somnolence, and epileptiform attacks which occurred towards the termination of the illness, bear out the theory of cerebral anæmia being the proximate cause of these conditions. The only hæmorrhage the patient had was that from the nose a few days before his death. There were no ecchymoses of the skin or mucous membranes, but slight ones of the right pleura and of the membranes of the brain, over a circumscribed spot on the left hemisphere, were found at the necropsy.

With regard to the treatment of the case little need be said. Iron had been given before his admission, and was tried the first week after it, but without the least apparent benefit. It is true that at first large doses were not given; but this was done purposely to avoid irritating the stomach, an effect which was produced when drachm doses of the perchloride were given on the day of his death. Iron seems to have no curative effect in this form of anæmia. Phosphorus was the drug next resorted to. I was induced to give it upon the recommendation of Dr. Broadbent, who, in the *Practitioner* for January 1875, has recorded two cases of this disease treated successfully by this drug. As to its *modus operandi*, but little is known. It would seem, however, when given in medicinal doses, to influence favourably the processes of blood-formation and nutrition. The patient was a little better for the first few days after its administration, but the improvement did not continue, either from the dose being too small or the disease having progressed too far before the phosphorus was tried.

Transfusion was thought of, and a consultation was held by Dr. Humphry and myself as to its advisability. The results recorded by Professor Pepper and Gussow were not, however, thought sufficiently encouraging to induce us to operate. Besides, it was felt that the only real use of transfusion would be to prolong life whilst some remedy was fairly tried, and, phosphorus having apparently failed, it was difficult to tell where to look for another.

IRREDUCIBLE FEMORAL HERNIA: OPERATION: RECOVERY.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

THE publication in the JOURNAL of October 7th of the report of an operation for the cure of an irreducible femoral hernia, leads me to record an instance of a similar kind which occurred in my practice ten years ago.

S. A., cook in a gentleman's family, and forty-five years of age, had been the subject of a lump in the right groin for about eight years. This gradually enlarged, latterly somewhat quickly, associated with local pain, especially on lifting a weight. Also, she often suffered from pains in the stomach and "spasms". The swelling interfering with her comfort and occupation, she consulted Mr. E. W. Tait of Highbury Park, who asked me to see her.

The tumour, of the size of an egg, but somewhat irregular in shape and indurated, occupied the site of a femoral hernia.

Operation, June 1866.—The patient having been chloroformed, a longitudinal incision was made along the centre of the swelling and the structures divided till the sac was reached, and was found to contain a small quantity of fluid and a mass of omentum, thickened and nodulated. On tracing the tumour to the crural ring, it was found to be continuous through this with the structures within the abdomen by a slender pedicle. This pedicle or stem having been tied with a silk ligature, the tumour was cut away. The ends of the ligature were brought out at the lower angle of the wound, and the latter was closed by suture.

Very little suppuration occurred; the ligature came away in due time; and the patient made a good recovery.

In very many instances of herniotomy necessitated by strangulation, I have, after reducing the bowel, cut away large masses of omentum without unfavourable consequences. In one instance in which the omentum was firmly adherent to the bottom of a scrotal sac, I placed a double ligature on this structure and divided it between them. This plan allowed the lower portion to subside into the scrotum, while the upper, being lodged at the ring, enabled the patient to wear a truss after his restoration to health.

If, from any cause, omentum cannot be reduced, or it be deemed undesirable to reduce it, it should be treated by one of the above methods, in order to enable the patient thereafter to wear an effective truss, upon which his future comfort and safety will much depend.

CASE OF INTUSSUSCEPTION SUCCESSFULLY TREATED BY INFLATION: WITH REMARKS.*

By THOMAS EASTES, M.D., F.R.C.S., Folkestone.

THE following are some notes I took of an interesting case of intussusception recently under my care.

August 6th. I was called at 10.30 A.M., to see W. T., a boy aged 3. I found him lying down, apparently in pain. His mother informed me that he had been quite well until 2.30 A.M., except that for two or three days he had had slight diarrhoea; but this had not been sufficient for her to seek medical advice for him. Between 2 and 3 A.M., he woke up complaining of great pain in the abdomen; this pain was not constant, but it troubled him again very frequently until my arrival. At 5 A.M., he was sick; there was no food in the vomit, and it consisted chiefly of greenish glairy mucus. At 6 A.M., his father procured some castor-oil, and it was immediately given him. At 6.30 A.M., the bowels acted, and a fairly natural motion was passed. At 7 A.M., or soon after, blood and glairy mucus passed from the bowel with much straining, and twice again before 10.30. The pain was paroxysmal and very severe, making the boy twist and roll himself about all over the couch, and scream to his mother for relief.

On examination, the pulse was a little accelerated; the abdomen was flaccid, and easily examined thoroughly. In the right inguinal region, a firm sausage-shaped swelling was felt, not apparently more than an inch in diameter, and two or three inches long; it was directed upwards, parallel with the side of the abdomen. Three drops of liquor opii sedativus were given to the child; and the mother had strict orders to give him nothing but a tablespoonful of milk every half-hour, and a little ice to suck; and to save everything passed or vomited.

At 1 P.M., the swelling was felt as before in the right inguinal region; but there was now a much firmer and rather larger sausage-shaped mass in the left inguinal region. Its apparent diameter was about two inches, and it could be traced up to the splenic flexure of the colon and partly across towards the median line. It was lost there, and could not be felt again till the swelling previously noticed in the right inguinal region was reached. Each lump was tender, but especially that in the left inguinal region. The symptoms had not improved, except that the child had had some sleep from the opiate, but the pain had been as bad as ever since the sleep, and blood and glairy mucus oozed from the bowel frequently. Three more drops of opiate were given, and only small quantities of milk and ice allowed. At 4 P.M., the parents were told of the very serious nature of the child's illness, and it was explained to them that, if the bowel could not be returned to its proper position, death was almost inevitable; also that I intended, with their consent, to try to remedy the state of things by blowing air into the bowel with a pair of bellows, and, if that did not succeed, to resort to the graver operation of opening the abdomen and pulling the small bowel out of the greater, into which it had been drawn.

At 4.45 P.M., my brother, Mr. George Eastes, who was then staying at Folkestone, kindly met me at the house and administered chloroform to the child. When the child became insensible, I examined the rectum with the forefinger, and could reach well into the commencement of the sigmoid flexure; and with the other hand could press down the mass on to the tip of my finger, but could not actually touch the end of the invaginated part without two layers of bowel-wall intervening. I now, with the help of the father, proceeded to force air into the rectum. The apparatus used consisted of an ordinary pair of bellows, over the nozzle of which I fastened one end of a yard of India-

* Read before the conjoint meeting at Rochester of the East and West Kent Districts of the South-Eastern Branch.