trauma, in those of middle or advanced age. It is sometimes associated with coughing or vomiting. In the cases I have mentioned the patients were all past the menopause. There was a history of a fall in one case and of a strain in another. Out of Cuthbertson's¹ forty-one cases, thirteen were over 50 years of age; seven were between 40 and 50; six were under 40. Twelve of the patients were pregnant or had recently been delivered.

Haematomata which simulate pelvic growths are below the umbilicus, and are thus due to the rupture of muscular branches of the deep epigastric artery. Being impressed by the marked lateral extension of the swelling in these cases I consulted Professor Stopford on the point. He says that if the haemorrhage occurs below the fold of Douglas, owing to the formation of the sheath of the rectus at that level, there is nothing to prevent the lateral extravasation of blood deep to the aponeurosis of the oblique muscles. This explains the relatively limited character of haematomata higher up in the rectus muscles. The extravasation of blood cannot cross the linea alba, but the swelling can extend beyond the middle line by pushing the linea alba over toward the sound side of the body.

The most interesting thing about these cases is the diagnosis. The patient complains of pain and the medical man finds the swelling. The trouble is that he seldom knows how long the swelling has been present; for patients frequently have masses of various kinds in the pelvis or abdomen whose presence is not suspected until they complain of pain and submit to examination. The main point is the recognition that these swellings are part and parcel of the abdominal wall. This is generally made by noting that they can still be felt when the recti are in action, and that they become fixed as the muscles contract. Another point is that, when a mass in the abdominal wall is not too large, a resonant note may be obtained right through it by deep percussion. But these signs are not infallible, for a mass within the abdomen that has become adherent to the wall gives the same signs as one which is a part of the wall. Even physical signs can tell lies, and must be checked.

This point decided, the next question is, What other swellings may be found in the wall of the abdomen? My first employment after qualification was to do duty for the house-surgeon of a hospital in a country town. He called my attention to a girl with a so-called ovarian cyst who was being prepared for operation next morning. The girl told us that the swelling was there sometimes, but not always. It was cystic, in the mid-line, and reached just to the umbilicus. It was still felt, and was fixed when the recti were in contraction. Being very young then, and full of book learning, I suggested that it might be a cyst of the urachus communicating with the bladder. Strange to say, it was, and we massaged the contents into the bladder and drew it off with a catheter.

A girl, aged 13, was brought to the Northern Hospital, Manchester, with a swelling above the pubes, which was part of the abdominal wall. The mother had been told that it was a pregnant uterus, and, when assured that this was not the case, she took the child away. But, later, the patient reached the Children's Hospital at Pendlebury, where the late Mr. Joseph Collier opened an abscess and found in the centre of it a rusty needle.

The commonest swellings in the abdominal wall are new growths—namely, those masses of spindle-celled tissue called desmoids. They are generally single, but I have seen three in the recti of one patient. Slow-growing and painless, they are easily recognized. They were frequently excised formerly, but they yield to treatment by irradiation in most cases.

Another new growth in the abdominal wall was seen in a patient from whom I had removed an ovarian cystadenoma six years previously. She came back saying she had another tumour upon which her corsets pressed uncomfortably when she sat down. It was a solid encapsulated mass under the scar of the former operation, and, on section, its structure was that of the solid portions of a cystadenoma.

Thus, before completing the diagnosis of a haematoma, it is necessary to exclude new growths, inflammatory masses, and developmental errors; for they can all produce swellings

in the abdominal wall which simulate tumours of pelvic origin. As to treatment, a small haematoma in this position may doubtless be left alone. But should we wait for the larger ones to become infected before opening and emptying them? I think not. If the mass of blood-clot is of considerable size the patient will be sound and well again much sooner under active surgical than under an expectant treatment.

REFERENCE.

¹ *Journ. Amer. Med. Assoc.*, December 19th, 1925.

RECTAL ANAESTHESIA.

BY

ROBERT B. COLEMAN, M.B., Ch.B.,
MEDICAL OFFICER, C.M.S. HOSPITAL, OLD CAIRO.

FROM the course of the correspondence on rectal anaesthesia appearing in the *BRITISH MEDICAL JOURNAL* during the last few months it appears that few surgeons practise it, and from communications received by me it would seem that some failures have been encountered. Such failures must, I think, be due to faulty method of administration, and it may probably be useful to describe that used at the C.M.S. Hospital at Cairo, where it has invariably proved perfectly safe. It has been the routine method since I first saw it used by Dr. Stiven at the Government Hospital, Port Said.

We confine it almost entirely to operations on the head, neck, chest, or upper extremity. Spinal anaesthesia by stovaine, which we find so eminently satisfactory, with an experience of nearly 8,000 cases, as described in the *JOURNAL* of March 21st, 1925, is our routine procedure for all operations up to the costal margin. Naturally, however, the ether method can be used for most operations.

The mixture used is three parts of ether to one part of olive oil, and the amount given is regulated by the weight of the patient, the allowance being one ounce of the mixture for every 20 lb. body weight. In actual practice we find this estimate is rather on the conservative side, and in cases requiring more perfect anaesthesia we often order a small quantity in excess of this, up to half an ounce for an average adult. We consider that about eight ounces is a maximum dose; this means six ounces of ether.

The anaesthetic is given to the patient in the bed, but some care is necessary in choosing a suitable room. The ideal condition is to have a small private ward, the windows of which can be darkened by shutters or blinds. It should be in a quiet place, and if possible not too far from the theatre, and preferably on the same floor, to avoid disturbing the patient by lift or stairs. If given in a general ward this should be darkened and quietened if possible, and screens kept round the bed. The stretcher and the macintoshes, etc., are put under the patient previously, so that he may be moved to trolley or carried without risk of waking.

An enema and rectal washout having been given some hours previously morphine with atropine is injected hypodermically an hour and three-quarters before the time fixed for the operation; fifteen minutes later administration of the mixture is commenced.

The mixture, slightly warmed, is run into the rectum high up by a catheter attached to a tube and glass funnel, which should not be raised to any appreciable height. All the apparatus should be well warmed before use to avoid cooling of the mixture. It is important that this should be given slowly, and it is reckoned that the administration should take twenty to thirty minutes. This is by no means always an easy matter, especially as sometimes the patient attempts to strain and return it, but with patience and tact it can generally be accomplished. It is found to facilitate the giving of the whole dose if it is preceded and followed by just a little olive oil. The administration can safely be entrusted to a competent sister, nurse, or orderly. At the completion the catheter is clipped, and great care is taken to withdraw it gradually, so as not to excite straining. A damp cloth is put over the patient's face to prevent excessive evaporation, and he is allowed to lie quietly till required for the theatre. With the above

timing the administration should be completed an hour before he is removed to the theatre, which must be done as noiselessly and as smoothly as possible.

In the great majority of cases nothing more is needed. The surgeon finds the anaesthesia very satisfactory, and it lasts for several hours if need be. Often there is a little corneal reflex, but in these cases, beyond perhaps a light movement on the part of the patient when the first incision is made, usually there is no further difficulty. In a few cases it is found necessary to give just a small amount of general anaesthetic on an open mask at the commencement of the operation. This would naturally be ether in most countries, but in this climate we seldom use ether for general anaesthesia, preferring chloroform, which is remarkably safe here. A few drops are usually sufficient, and then it can be discontinued.

At the end of the operation, before the patient leaves the theatre, a rectal speculum is passed and the excess of the mixture run out, and, immediately on return to the ward, very thorough and repeated washing out of the rectum and colon is carried out, and finally saline solution is left in. This cleansing of the rectum is very important, and should not be delayed. Probably neglect of this point has been responsible for the report of gangrene of the rectum which is stated to have occurred in some hospitals. We have never seen rectal complications in any case. Our patients have been of both sexes, and we have used the method in quite a number of children from about 8 years upwards, who take it very well. The cases have included goitre, glands of neck or axilla, mastoid operation, malignant disease of tongue, lip, upper and lower jaw, plastic operations on

nose, face, or ear, amputation of breast, operations on arm, and plating fractures.

It is not our custom to use the method for very small operations, in order to avoid the extra work for the ward staff. One great advantage of spinal anaesthesia for operations below the costal margin is the saving of time in the theatre and lessening the work afterwards in the ward. Rectal anaesthesia means considerably more work in the ward, both before and after.

The advantages of the method are marked both for the patient and for the surgeon. Those for the patient include the absence of apprehension and absence of coughing, straining, and vomiting, both at the operation and afterwards. For the surgeon it is a tremendous advantage to have a clear field in head and neck operations, when so often the anaesthetist is much in the way. In operations on the neck the face can be covered up at the start and not uncovered again. In operations on the nose and mouth the naso-pharynx can be well plugged with a stout tube for respiration through the middle of the plug, and there need be no time lost in continually mopping out the blood or anxiety in keeping the airway open. Also the surgeon has plenty of time. This might possibly be a doubtful advantage if it tended to make the surgeon slow in his work—never a good thing for the patient—but it is a great boon in some ticklish plastic operations on the face. The only real disadvantage is the extra work on the ward staff and the preliminary time involved, as described above.

My colleagues, Mr. F. O. Lasbrey and Mr. J. E. Bateman, are equal advocates of the method with myself.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SEROUS MENINGITIS: REPEATED LUMBAR PUNCTURE: RECOVERY.

THE following case, recently under my care, seems of sufficient interest to warrant publication.

The patient, a boy aged 9 years, was first seen on March 18th. There was a history of a rash resembling measles four days before (a sister developed typical measles the following week), and on March 17th the child complained of pain in the back of the neck, though he was playing as usual all day. When seen on March 18th he was unconscious and breathing stertorously, all reflexes were abolished, the plantar response being dorsiflexion, the pupils widely dilated, and urine and faeces passed involuntarily. There was very slight rigidity of the back and neck muscles and at times there was nystagmus of a slow rotatory type. There was some bronchitis. The temperature was 103°; the pulse (100) varied greatly in quality, at times being full and strong, at others weak and thready. The urine was normal.

Next day the coma seemed deeper, and there was definite rigidity of the neck. There was no vomiting and the optic discs appeared normal. After lumbar puncture the child could be roused by strong stimuli. Next afternoon he was seen by Dr. Beaumont of Wimpele Street, who removed about 5 ounces of perfectly clear cerebro-spinal fluid under enormous pressure. Bacteriological examination showed this to be sterile, and cells 2 per cubic millimetre.

The child was greatly improved for thirty-six hours, but on March 22nd he was again deeply comatose, and the chest full of moist râles; he was apparently drowning in his own secretions; 2 ounces of cerebro-spinal fluid were removed, still under increased pressure, and after the child had been fed by stomach tube he was placed on his face for the rest of the day with the foot of the bed raised; a considerable quantity of mucus drained away from the lungs. The next day the breathing was much easier and he could be roused, but as there was still great rigidity of the neck another ounce of cerebro-spinal fluid was removed, and immediately he was able to swallow for the first time for six days. The improvement was maintained, and the next day, when the last lumbar puncture was done (half an ounce being removed), he showed resistance. Convalescence was rapid, but he became so irritable and restless that three days later he was transferred to a nursing home, from which he was discharged quite well a week later. As there was a vague history of a possible fracture-dislocation of the cervical region of the spine three years previously he was x-rayed, but nothing abnormal was found. He has remained perfectly well since. The case seems to have been one of serous and not tuberculous meningitis, as we provisionally diagnosed.

Peacehaven.

DOROTHY M. ANDERSON, M.D., D.P.H.

TREATMENT OF YAWS BY NOVARSENOBILLON.

DURING the past year, when stationed in Nigeria, West Africa, where yaws abounds and also large ganglia on the hands, I have treated successfully many cases of yaws, some of them serious, with injections of novarsenobillon, and have been struck with the rapidity of recovery—generally in four or six days, and after one injection.

One patient had large ganglia on the back of the hand, and as the yaws disappeared so did the ganglia, and did not return. When I last saw him, ten months afterwards, there was no sign of either yaws or ganglia. Another case of ganglia on both hands without yaws received one injection and in less than a fortnight was completely relieved of both pain and swelling.

I have used this drug also in contracted tendons, and one patient, who had complete contraction of both knees and was quite unable to walk, recovered complete use of his legs and was doing his ordinary farming after two months. He received two injections.

J. C. FRANKLIN,
West African Medical Service.

ACUTE INTUSSUSCEPTION SUCCESSFULLY TREATED BY RECTAL INFLATION.

THE treatment of acute intussusception by inflation with air by the rectum receives such scant notice in any of the textbooks to which I have referred that it will be worth while to record the following case.

A male child, aged 9 months, perfectly healthy, was suddenly seized with acute pain and vomiting at 11 a.m. on April 2nd. I saw him at 12.30 p.m. He was evidently suffering from paroxysms of severe abdominal pain, as evidenced by the drawing up of his legs and loud screaming, at intervals of a few minutes; his colour was ashen, and he showed the ordinary symptoms of severe shock. The abdomen was quite soft, and he only showed signs of tenderness on palpating the right side; by the rectum nothing abnormal could be felt. Acute intussusception was considered to be the cause of the trouble. At 2 p.m. an anaesthetic was given, and a sausage-shaped tumour extending across the abdomen from the right side, above the umbilicus, could then be distinctly felt. With an ordinary Higginson syringe air was injected slowly into the rectum, until the abdomen was appreciably distended, care being taken to prevent the air escaping by the side of the nozzle of the syringe. The syringe was withdrawn, and a cigarette-holder, the nearest available and suitable article in the house, was inserted into the rectum, to allow of the escape of the air. On examining the abdomen after this had been done, no sign of a tumour could be felt. Half a pint of warm soap and water was now injected into the rectum, and