which would otherwise prove fatal from cerebral anæmia may be tided over.

As an instance of the cure of hernia cerebri the case also opens up the question of the correct treatment of this condition, concerning which very little information is to be found in the text-books, where the pathology of hernia cerebri is also very imperfectly accounted for.

Hernia cerebri occurs in two chief circumstances: (1) in the presence of intracranial sepsis due to meningitis, local encephalitis, or abscess; and (2) in the presence of tumours or gummata of the brain. In each instance an aperture must exist in the skull and dura mater, either as the result of a depressed fracture or the removal of bone by necrosis or operation. In tumour or gumma the hernia may occur after trephining whether the growth has been removed or not. In abscess it may form even while the abscess is draining thoroughly. In most cases, however, in which it occurs with abscess post-mortem evidence goes to show that drainage has either been imperfect or else a second unopened abscess has coexisted.

The actual causes which lead to the protrusion of the hernia are two in number: 1. In all cases there is a rise of intracranial tension, as shown by the flattening of the convolutions at the time of operation, the optic neuritis, and the gradual changes in the pupils, pulse, respirations, and temperature which occur and which are due to pressure anæmia of the brain. 2. In some cases there may also be local softening and swelling of the area of the brain which becomes herniated, rendering it more liable to become extruded. After the removal of tumours of the brain a transitory hernia may occur. It is due to the rise of general tension caused by the injury and hæmorrhage at the time of operation; and also to the congestion which may occur locally in consequence of thrombosis of adjacent cerebral veins. After the skull has been opened and a gumma found and left untouched a hernia may occur owing to the general rise of intracranial tension due to the tumour alone. It will rapidly subside, however, subsequently if potassium iodide is given, as in a case I have observed in which marked optic neuritis and a post-operative hernia due to a cerebral gumma disappeared concurrently.

In cases of cerebral abscess complicated by hernia the usual cause which leads to the formation of the hernia and prevents it from subsiding is the rise of intracranial tension resulting from imperfect drainage. The difficulty of draining such abscesses with tubes owing to their becoming blocked by the semi-diffuent brain substance in a comparatively short time is only too well known, and in such cases I should suggest making a large opening in the skull and dura mater and removing a wedge of brain substance so as thoroughly to lay open the abscess cavity and to remove its wall if possible, afterwards plugging with gauze from the bottom. In a case of temporo-sphenoidal abscess in which I adopted this treatment no hernia cerebri formed in spite of the presence of meningitis of the base. The latter affection ultimately proved fatal six days after operation, being due to a separate infection resulting from necrosis of the inner wall of the petrous bone which was the seat of advanced disease resulting from otitis.

In hernia cerebri accompanying septic meningitis and in local encephalitis due to compound fractures and other causes raised intracranial tension and local softening and œdema of the brain are both present and they both tend to produce a hernia. To prevent its formation or to lead to its subsidence the intracranial pressure must be relieved: (1) by making a large opening in the skull and dura mater; (2) by subduing the virulence of the infection, which can best be done by affording efficient drainage by means of the large opening aforesaid; and (3) by tapping the lateral ventricle, a procedure which was followed by the cure of such a hernia in a boy I observed with a cerebral abscess. The abscess was drained but symptoms persisted and a rapidly increasing hernia cerebri appeared. A fruitless search for more pus led to the ventricle being tapped and recovery forthwith ensued.

For the prevention and treatment of hernia cerebri, therefore, a free opening in the skull and dura mater appears to be necessary in all cases for the following reasons:—

1. In cases of tumour in which the tumour is removed; to tide over the subsequent period of increased intracranial tension which is liable to occur and to lead to a hernia, with dangerous pressure symptoms, if only a small opening is made.

2. In cases of tumours which cannot be removed; to relieve tension and thus to prevent the formation of a hernia and

also to prevent or to delay the onset of headache, vomiting, and blindness due to optic neuritis which would all rapidly come on if nothing were done or a small opening in the skull were made.

3. In cases of abscess to provide a reasonable means of reaching and dealing with the abscess cavity while affording at the same time an outlet for the temporary rise of intracranial pressure which follows operative interference.

4. In cases of septic meningitis and local encephalitis to afford the only means of reducing the rising intracranial tension and diminishing the virulence of the septic processes present by affording free drainage and a temporary exit for the swollen intracranial contents.

The rapid cure of the hernia in the case now recorded can only be ascribed to the free drainage afforded. It is probable also that the relief of tension at this period afforded by the large aperture in the skull may also have prevented death from compression.

The questions of shaving off the hernia itself or applying lead weights or caustics to it which have frequently been discussed, and which indeed are often the chief details of treatment referred to, are of practically no importance, as the herniated mass is only the outward sign of the pressure within the skull which is the real source of danger. The mass is extracranial and it can do but little harm unless it blocks the whole aperture in the bone and dura mater and so prevents drainage, in which case the latter should be removed more widely. The recommendation to cut off the hernia to afford drainage because it only consists of granulation tissue and a very slight trace of disintegrated brain tissue is histologically correct but it is based on false surgical principles, as no better drainage is obtained and the hernia rapidly re-forms though amputated repeatedly.

QUEEN'S HOSPITAL, BIRMINGHAM.

A CASE OF RETENTION OF URINE DUE TO THE PRESSURE OF A FIBROID TUMOUR OF THE UTERUS AT THE AGE OF 25 YEARS.

(Under the care of Dr. C. E. PURSLOW.)

THE patient, a single woman, was admitted into the Queen's Hospital, Birmingham, on Dec. 16th, 1903. She stated that she was 25 years of age in the previous September. She had always enjoyed good health with the exception of a winter cough. Menstruation began at the age of 14 years and had always been regular, the last period occurring a fortnight before admission. The loss had been moderate and the periods had always been attended by pain; there had been no increase in either loss or pain lately. Three weeks before admission she found herself unable to pass urine. Mr. A. G. C. Irvine of Selly Oak was sent for and he passed a catheter; at the same time he made a vaginal examination and detected the presence of a tumour. A week later the catheter was required again and subsequently, while waiting for admission to the hospital, there were further attacks of retention of urine necessitating the use of the catheter on each occasion.

On admission the patient was a healthy-looking woman except that she had a slight dusky flush on each cheek. Examination of the chest showed that the heart was enlarged, the apex beat being displaced outwards, and that there was a well-marked presystolic thrill with a loud double mitral murmur. Nothing could be felt on palpating the abdomen but on making a vaginal examination a smooth rounded mass could be felt filling up the posterior part of the pelvis; bimanually this could be identified as a uterine tumour. The sound passed four inches in the normal direction and on the front aspect of the tumour. Uterine fibroid was diagnosed and the circumstances were held to justify surgical interference.

Operation was performed on Dec. 19th. The abdomen was opened in the middle line and the uterus and tumour were removed by panhysterectomy. The right appendages were removed but those on the left, appearing to be healthy, were allowed to remain. The patient made an excellent recovery, the wound healing by first intention and she has since returned to her situation and is now performing all her duties as formerly. There has been no further trouble with micturition.

The uterus with the tumour, after removal, weighed 1 pound 9½ ounces. The tumour was seen to be situated in the posterior wall of the uterus separated by a thin

layer of tissue from the uterine cavity, the latter being spread out over its anterior surface. Dr. Stanley Barnes, pathologist to the hospital, kindly made a microscopical examination of the tumour and reported that it was a fibromyoma, containing more unstriated muscular tissue than is usually found in those tumours.

Remarks by Dr. PURSLOW.—The noteworthy point about the case is the age of the patient. So far I have been able to discover only one recorded case in which retention of urine due to the pressure of a uterine fibroid has occurred at so early an age and that is mentioned by Dr. C. J. Cullingworth in a paper entitled "An Analysis of 100 Cases of Uterine Fibromyoma," which appeared in the first volume of the *Journal of Obstetrics and Gynaecology of the British Empire*.

As regards treatment all authorities are agreed that repeated attacks of retention of urine due to the pressure of a uterine fibromyoma are an indication for surgical interference. Hysterectomy was performed in this case as the situation of the tumour and its relation to the uterine cavity appeared to contra-indicate myomectomy.

I am indebted to Mr. Irvine for kindly supplying some of the notes of the case and to Mr. E. L. Clay, obstetric house surgeon, for valuable assistance in its treatment.

Reviews and Notices of Books.

Handbuch der Allgemeinen und Lokalen Anaesthesie für Aerzte und Studierende. (Handbook of General and Local Anaesthesia for Practitioners and Students.) By Professor F. Z. DUMONT of Berne. With 116 illustrations. Berlin and Vienna: Urban and Schwarzenberg. 1904. Pp. 234. Price 7 marks.

Die Chloroform und Aethernarkose in der Praxis. (Chloroform and Ether Narcosis in Practice.) By Dr. KOBLANCK of Berlin. Wiesbaden: J. F. Bergmann. 1904. Pp. 42. Price 1.20 marks.

Professor Dumont's work is divided into three main portions dealing respectively with general anaesthesia by inhalation, general anaesthesia by spinal injection, and local anaesthesia. The book is clearly written but is marred by being too much of a compilation, with too little of the author's own experience and observations. The illustrations are good. Local or regional anaesthesia is very fully dealt with and obviously many substances have been used for this purpose abroad with which we are unfamiliar in this country. Yet their very multiplicity suggests that no one of them has proved to be satisfactory, and, indeed, Professor Dumont's excellent discussion of local and general anaesthesia in comparison shows him to be, generally speaking, an enthusiast for the latter rather than for the former process. In this connexion the tables which he quotes from Mikulicz are deserving of notice. Mikulicz found to his surprise that the occurrence of lung troubles after laparotomy was not in the least affected by employing local instead of general anaesthesia. Only in gastrostomies did there appear to be any difference in favour of the local method. In all other cases results slightly favoured general anaesthesia or were almost the same with the two processes. If other surgeons could repeat Mikulicz's comparison a most important lesson might be learned with regard to those after-effects that are urged as a contra-indication of general anaesthetics in laparotomies. Careful notes, however, must be provided of the nature of the general anaesthetic employed and the method by which it is administered. These are wanting in Mikulicz's tables as quoted by Professor Dumont. The author speaks favourably of ethyl chloride as a preliminary to ether but unfortunately gives no information as to how wide his experience has been of this anaesthetic sequence. "Combined narcosis"—i.e., anaesthesia by means of ether or chloroform preceded by morphine in various forms and combinations—seems to be a very favourite method on the

continent. The advantages which Professor Dumont claims are lessened secretion of mucus and the like, prevention of reflex syncope, diminished after-sickness, and great economy of chloroform. He seems to think highly of ethyl chloride and quotes statistics of 16,000 cases with one death. Ethyl bromide he considers a very dangerous anaesthetic. Generally speaking his favourite anaesthetic seems to be a mixture of ether and chloroform in the proportions of 1 to 2 parts.

Dr. Koblanck's little book does not call for much comment. Its scope is, as indicated by the title, strictly limited. Nor is there in it much evidence of experience or of any new observations. Dr. Koblanck prefers to avoid general anaesthetics in face operations, an opinion in which many surgeons will disagree with him. He considers gout a serious contra-indication for ether and chloroform but does not explain why. His consideration of the mental or psychological attitude of the patient in relation to the taking of anaesthetics may be alluded to as being particularly worthy of perusal.

A Text-book of Clinical Anatomy for Students and Practitioners. By DANIEL N. EISENDRATH, A.B., M.D., Professor of Clinical Anatomy in the Medical Department of the University of Illinois, &c. With 155 illustrations. London, Philadelphia, and New York: W. B. Saunders and Co. 1903. Pp. 515. Price 21s. net.

Professor Eisendrath's is the latest addition to the number of text-books of applied anatomy of which there has been so plentiful a supply of late years. It is a lavishly illustrated octavo volume of convenient size but of great weight. In the words of the author "its object is to serve as a bridge for both practitioner and student from the descriptive anatomy, as it is usually taught in the first two years of a medical course, to its daily application at the bedside, in the clinic, or in the operating room." We think that Professor Eisendrath has achieved his design and at the same time has succeeded in presenting his matter in an attractive and interesting manner. The arrangement adopted is regional and in dealing with each region the parts to be recognised by sight or touch are first indicated; directions for surface-marking the deeper structures then follow; and finally a short exposition of the main clinical applications of the anatomical facts completes the section.

We have tested the information supplied in many directions and on the whole find it fairly full and accurate. There is nothing of striking novelty to note. There are some points, or rather, we should say, many, which will need amendment in future editions. We will mention a few of these. In Fig. 8, illustrating the relations of the cranial nerves, Meckel's ganglion is misnamed otic. The assertion that the nasal bones reach only to the level of the inner canthus is surely inaccurate. The attribution of stertor to buccinator paralysis ignores the soft palate which is the chief factor. To state that "the aorta reaches the vertebral column on the left side of the upper dorsal vertebra" is not illuminating. The surface marking given for the axillary artery in Fig. 96 is surely incorrect. The caudate lobe of the liver is certainly not the lobe so labeled in Fig. 72. The same figure gives an erroneous idea as to the complexity of the root of the mesentery. The surface relations of the lung in the right axilla as given on p. 153 do not agree with those in the accompanying illustration, which are more correct. The subclavian vein and artery do not lie beneath the pectoralis minor, as stated on p. 154, neither does the brachial plexus lie in front of the subclavian artery (or even in front of the axillary) in its second stage.

We are bound to state, and the few examples quoted above form our justification, that the book shows evidence of want of sufficient revision. This is a great pity as the plan is good and the applications are mostly up to date. The illustration of surface markings by photographs direct from the