Glycrrine injections were first used by various surgeons as a means of preventing cystitis in cases of paresis of the bladder, with the result that they were found to stimulate the detrusor and cause paretic bladders to functionate again. Franck has made use of glycrrine injections in a number of cases of post-operative bladder paresis with marked success. The injections were at first made through a catheter, but Franck has found that it suffices to inject 4 to 6 drachms of glycerine along the urethra with just sufficient force to overcome the sphincter. About half the injection returns when pressure is taken off the urethra, so that only a small quantity actually reaches the bladder. An injection is usually followed by spontaneous urination within twenty minutes, and once relieved, the paretic condition does not tend to return.

J. W. STRUTHERS.

ON SUBCUTANEOUS AND INTRAVENOUS FEEDING WITH GRAPE SUGAR BY KAUSCH'S METHOD.

Berendes (Zentralbl. f. Chirurg. No. 37, 1910) states that it has been the practice in Kausch's clinique for some time to add grape sugar to infusions of saline solution in cases in which patients have been unable to take nourishment by the mouth. The solution has been given subcutaneously or intravenously, and over forty cases have been so treated. The sugar is mixed with normal saline solution in the strength of 5 to 7.5 per cent. When given subcutaneously it causes no more pain than an infusion of saline alone, though its absorption is rather slower. Intravenous injections do not cause pain, but patients sometimes complain of a feeling of warmth and general discomfort during the injection. When the amount injected does not exceed 50 grms., i.e. 1 litre of a 5 per cent. solution, sugar does not appear in the urine unless the injection is repeated on several successive days, and even then only a very small amount is excreted, approximately 5 per cent. of the whole amount injected. The method apparently offers a safe means of supplying 200 to 300 calories daily to patients unable to take nourishment by the mouth.

J. W. STRUTHERS.

OBSTETRICS AND GYNECOLOGY.

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TREATMENT OF INOPERABLE CANCER OF THE CERVIX, UTERI, AND VAGINA.

Drs. Cheron and Rubens-Duval (L'Obstétrique, N. S. iii. pp. 728-743, 1910) regard the introduction of Domenici's method of applying radium
as an epoch-making event in the history of radiumtherapy in cervical and vaginal cancer. Domenici's method of far-penetrating radiation by radium (rayonnement ultra-pénétrant du radium) by means of the special tubes devised by him had given remarkable results: the pain, the foul discharge, and the hæmorrhage had diminished or disappeared, and in one case he had even been able to make an inoperable case of cervical and vaginal cancer operable,—hysterectomy which had been impossible in August 1908, being able to be performed in December of the same year. At first Chéron and Rubens-Duval followed Domenici's plan of making the applications of radium for a period of from 12 to 24 hours or longer, with intervals of from 3 to 5 weeks, using for each application from 5 to 8 cgrms. of radium. Encouraging improvement in symptoms followed as a rule; but they were gradually led to employ larger (massive) doses (20 to 30 cgrams. of bromide of radium), being convinced that although both strength of dose and duration of application were important, the former was the more important. In fact they now regard the use of massive doses as the indispensable complement of the method of far-penetrating radiation. A special technique was rendered necessary if these large doses were to be given safely, and the details thereof are fully described in the article which is being abstracted; all the rules of asepsis, also, have to be rigidly followed. At first the operators feared too marked a reaction, and put ice on the abdomen of the patient, but they found after a time that this was unnecessary. Domenici's tubes were placed inside the cervical canal, and as the quantities of radium employed were increased it was found necessary to increase the filtration. Fifty patients suffering from inoperable cancer were treated; of these 31 had too extended lesions or were insufficiently dealt with (i.e. had doses given to them afterwards recognised as too small) to give more than signs of amelioration; but of the remaining 19 patients all save one showed satisfactory results. The one patient who exhibited little improvement had large but not massive doses, and was perhaps refractory to the action of radium. The remaining 18 patients all showed cicatrization of their lesions. The mode of action of the radium is to substitute for the epithelio-matous tissue a sclerotic one. The authors regard the use of radium in relation to surgery under two headings: (1) In operable cases the proper treatment is, of course, operation; but even in some of these it might be well to employ the radium in order to arrest the cancerous process and so make the operative interference easier and more effective. (2) In inoperable cases the radium treatment is the sole resource. In border-line cases Wertheim's operation alone gives cures, and it is still a serious operation, and cannot guarantee absence of recurrence. Radiumtherapy in such inoperable cases is capable of causing a considerable reduction in the size of the neoplasm, of transforming it into
fibrous tissue, and of cicatrizing the ulcerations. The surgeon will find later operative procedures rendered much easier by this treatment, and the radiumtherapy, on the other hand, can be facilitated by preparatory surgical procedures such as curettage (e.g. in cases of cauliflower growth filling the vagina) or dilatation of the cervical canal. In this way surgery and radiumtherapy are mutually helpful in cases of cervical and vaginal cancer. Minor surgical procedures in operable cases make it possible to apply the radium more thoroughly, and the radiumtherapy in its turn may make an inoperable case an operable one (e.g. by hysterectomy). Further, even if, unfortunately, hysterectomy is followed by recurrence, the radiumtherapy may yet once more do good.

RADIONUMTHERAIPY IN BLEEDING FIBROIDS OF THE UTERUS.

Dr. Chéron, one of the authors of the paper above epitomised, has also written on radiumtherapy in bleeding uterine fibroids (La Gynécologie, ann. xiv. pp. 415-424, 1910). Using Domenici's far-penetrating radiation by means of radium (le rayonnement ultra-pénétrant du radium de Domenici), he has obtained good results. In a typical case, viz. a small interstitial fibroid in the anteverted uterus of a woman not yet near the menopause, Dr. Chéron employs a Domenici tube (one allowing the passage of only β (hard) and γ rays, by reason of filtration through 10^-5 of silver) containing sulphate of radium; this is introduced into the cervical canal, its upper end not going beyond the isthmus, but in quite exceptional cases it may be placed inside the body of the organ. To obtain rapid hæmostasis 0.05 gr. of pure sulphate of radium is left in position for from 6 to 8 hours, and this procedure is repeated about 12 times, with intervals of 2 or 3 days. The action may be supplemented by flat appliances placed on the abdominal wall, and containing about the same quantity of the radium salt, the rays of which have to pass through a filter of 2 mms. of lead. Slight variations in the technique are made for dealing with fibroids in a retro¬verted uterus, with subperitoneal fibroids, with large inoperable ones, and with cases in which the cervix is so sclerosed that the tube cannot be passed in. The results of the treatment have been twofold. The checking of the bleeding in small fibroids is easily effected, two months sufficing, and Dr. Chéron obtained such a result even in cases which had been previously repeatedly curetted with no success. In some cases the menopause was established, and in others there was simply a checking of the menorrhagia. There was always difficulty in obtaining hæmostasis in the large fibroid uterus. The second result is diminution in the size of the growth, and as the radium rays do not appear to influence fibrous tissue directly it must be regarded as due to the effect on the vessels. The decrease in size, therefore, is delayed.
The indications for using radiumtherapy in uterine fibroids are thus grouped by Chéron: (1) In the case of serious accidents which necessitate rapid haemostasis, *e.g.* women suffering from bleeding fibroids in whom surgical interference is contra-indicated on account of grave anaemia or cardiac or renal disease; and (2) in patients whose fibroids do not call for surgical interference, or, at any rate, do not require hysterectomy or myomectomy. If radiumtherapy be properly used it has no dangers—indeed there would be no justification in recommending it if it had any. The risks of excessive reaction, resulting in vaginal or intra-uterine radiumdermitis are small if the Domenici tube is properly surrounded with tarlatan to prevent secondary radiation.

**Intravenous Injection of Corrosive Sublimate in Puerperal Infection.**

S. Polizzotti (*Annali di ostetricia e ginecologia*, ann. xxxii. vol. ii. pp. 445-486, 1910) sketches the history of the use of intravenous injections of corrosive sublimate in cases of puerperal fever from the year 1893, when the practice was introduced by Baccelli, up to the present time. The good results obtained by D’Erchia had not always followed in the hands of other observers, and some obstetricians had feared that evil effects would ensue in the kidneys. The writer records four cases in which this plan of treatment was carried out and in all of which recovery followed; careful bacteriological researches were carried through. The good effect was regarded by Polizzotti as due to three kinds of action: in the first place the opsonic index was raised, the opsonising substance producing such changes in the bacteria as rendered them phagocyttable and less resistant; in the second place leucocytosis was stimulated; and in the third the corrosive sublimate acted in an antitoxic way. The small number of cases, however, prevented the author from stating his belief in more confident terms.

**Vaginal Fibromyomata.**

Professor Emilio Alfieri (*Annali di ostetricia e ginecologia*, ann. xxxii. pp. 185-204, 1910) gives details of two cases of fibromyoma of the vagina which throw some light upon the origin of such tumours in this vicinity. In one of the patients the tumour affected the urethro-vesico-vaginal septum, was of the size of a turkey’s egg, and had an elastic but non-cystic consistence; the catheter passed easily into the bladder above the tumour. It was easily removed, and the rest of the operation resembled an anterior colporrhaphy; under the microscope it was found that it was a simple myoma. In the other patient, a married woman who had had no children (the previous patient had one child eleven years before), the tumour, which was of the size of
a mandarin orange, lay in the posterior vaginal wall; there was a congenital retro-lateroversion of the uterus to the left side, along with endometritis and cervical stenosis. The tumour was enucleated cautiously but without difficulty, and at the same time the cervix was divided and the interior of the uterus curetted. The tumour was a fibromyoma of the vaginal walls, which had evidently originated in the fibro-muscular substance of these walls and gone on growing in their thickness. In this respect it differed from the former tumour, which had no relation save that of contiguity with the tissues of the anterior vaginal wall. Alfieri is of opinion that the last-named growth had a Gartnerian origin.

PREGNANCY IN THE BLAZEK SISTERS.

Dr. F. Mirto (Annali di ostetricia e ginecologia, ann. xxxii. pp. 374-387, 1910) comments upon certain phenomena in the labour by which the pygopagous twins (Rosa Giuseppa Blazek) gave birth to a child. These twin sisters were united by the sacral and iliac bones in such a fashion that the two vertebral columns formed a V. The two pelves had nearly the same measurements, and the mammary glands were normally developed. The genito-urinary organs opened in a common triangular space which was separated from the single anal orifice by the perineum. The coccyx could be felt to be single. The external genital organs had a triangular shape. There was a single clitoris and a single urethral orifice in a common vestibule; but although the vulva was single there were two separate vaginal canals. From physiological signs it was evident that the rectum was single for a considerable distance up, and that there were two bladders. The pregnancy of one of the sisters terminated in a natural labour, and during the puerperium there was milk in the mammary glands of both sisters, in fact the secretion was more marked in the one who had not been pregnant. During pregnancy the non-pregnant sister continued to menstruate and her general nutrition was unaffected, whilst the pregnant sister lost flesh. These interesting phenomena in parabiosis (as the peculiar semi-common life of a pygopagus may be called) throw some light upon the causes of mammary activity in pregnancy and seem to show that they differ from the causes underlying the general nutrition of the body as a whole.

THE ABDOMINAL INCISION IN CÈSAREAN SECTION.

Dr. Asa B. Davis (Amer. Journ. of Obstetrics, lxi. pp. 978-996, 1910) refers to 59 Cèsarean sections performed in the Lying-in Hospital, New York, between November 1908 and August 1910; 5 mothers died and 5 children, a mortality of a little over 8 per cent. in each (it was not exactly the same, for there were two sets of twins). At first in a
few cases the operator delivered the uterus from the abdomen before opening it, but in the great majority of the patients the organ was opened in situ. Gradually the size of the skin incision was reduced and its position was placed higher in the abdominal wall. In November 1904 Davis first practised the small high median incision entirely above the umbilicus, and this plan he now follows entirely. The length of the incision is from 8 to 10 cms. (3\(\frac{1}{2}\) to 4 ins.), beginning above and terminating at the umbilicus; it is explained that this is sufficient, because the abdominal wall is thin at this place and stretches easily. One or two gauze pads are placed in the abdomen to keep back the omentum and intestines, and the assistant, with his hands external to the abdomen, squeezes the uterus forward into the wound. The uterus is opened by a median incision in its anterior surface, beginning just below the fundus and proceeding downwards; it is made slightly longer than that in the skin. The hand is passed into the uterus, the anterior thigh of the foetus is grasped and the child delivered breech first. The rest of the operation follows the ordinary lines, and the abdominal wound is closed in three layers. The advantages claimed are less liability to hernia formation and to adhesion between the abdominal and the uterine wound; further, the abdominal contents do not easily escape at the time of operation.

PATHOLOGY.

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SOME PRACTICAL APPLICATIONS OF THE THEORY OF ANAPHYLAXIS.

Until recently the term "anaphylaxis" conveyed to others than those specially engaged in the investigation of the phenomenon a vague idea of something which is connected with serums and immunisation by means of serums. This vague conception is now condensing into more material form, and anaphylaxis is becoming recognised as a very real danger which has to be guarded against in serum therapy.

Even at the risk of repetition it is advisable to explain shortly what is now conceived to be the nature of the phenomenon.

Anaphylaxis is an over-sensitiveness of the animal organisation to the presence of foreign proteins, which have entered it without in the first place undergoing modification in the alimentary canal.

Von Pirquet and Schick of Vienna were the first who observed and investigated the condition.

An experiment detailed by Friedberger, from whose paper (Münch. med. Wochenschr., 1911, No. 50, 51) the greater part of what follows is