Regarding the therapeutic significance of these results, I may point out that the differences in solvent power between the various waters is almost infinitesimal, and that in any case the differences in question are not necessarily determined by the percentage of sodium salts they contain. The method itself, however, appears to me to be open to criticism. In the first place, the absence of continuous and prolonged agitation involves a marked divergence from the conditions under which the solvents would be present in the blood; and secondly, the chemical compounds that come into contact with the biurate in the test bottle are by no means necessarily identical with those that after absorption come into contact with it in the tissues. In illustration of this point, it may be stated that spinach was given in a case of chronic gout, the patient being at the time on a fixed diet, without any apparent effect on the solubility of the biurate, as evidenced by the excretion of uric acid in the urine. Hence inferences from chemical experiments, such as those under consideration, as to the activity of a supposed biurate solvent, should be modified by administering the substance to a gouty patient, and only when a positive result is obtained can a favourable conclusion be arrived at in regard to its therapeutic value.

REFERENCE.

1 A. P. Luff, *Gout: its Pathology and Treatment*, p. 230.

BONE CROCHET HOOK ($4\frac{1}{2}$ INCHES LONG) ACCIDENTALLY LODGED WITHIN THE PERITONEAL CAVITY.*

By HENRY BRIGGS, M.B. EDIN., F.R.C.S. ENG.,

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THE total number of intraperitoneal foreign bodies to which any clinical interest has been attached has been small. This is due chiefly to two sets of circumstances. Within the opened abdomen the easy concealment of a sponge or instrument is ever present in the minds of the operating surgeon and his assistants. In the closed abdomen the anatomical relations of the peritoneal folds and the abdominal viscera do not encourage foreign bodies which may be lying, primarily, in the alimentary or genital canal to become, secondarily, wholly intraperitoneal. Nevertheless, sponges and instruments have been left behind by operating surgeons; and knives and the handle of a broken utensil, primarily swallowed, have by ulceration become, secondarily, wholly intraperitoneal. The former has supplied by far the larger group of cases. Reports, gathered from patients and communicated by correspondents to the medical journals, have suggested that instruments have been frequently used *per vaginam* by women upon themselves.

As an example of an almost singular risk of self-conducted vaginal manipulation of instruments, I have to report a case, recently under my care, at the Hospital for Women, in which a bone crochet hook was forced completely through the vaginal roof into the peritoneal cavity.

History.—A domestic servant, a single woman, aged 34, in service in Manchester, went home to stay with her mother at Runcorn. Next morning, Tuesday, March 7th, 1899, she "applied iodoform ointment to the ulcerated neck of her womb." For this purpose she used a single bone crochet hook, holding the hooked end in her right hand, and passing into the vagina the blunted end covered with the ointment. She had often before applied the ointment in this way. She always assumed during the process a squatting posture. On the occasion just referred to, when the crochet hook was within

further notice of the occurrence. There was not even a stain of blood, she said, until the next menstrual period commenced two days later, after the regular monthly interval, and ceased as usual the following day. She felt pain in the right iliac region on walking, and more particularly on sitting. She walked to Dr. Robinson's house in Runcorn on the Thursday; he advised her to go to the Hospital for Women, Liverpool. She delayed her journey till the Friday afternoon. On admission she complained of a little pain in the lower abdomen and of painful micturition.

Physical Signs.—There was no constitutional disturbance; the temperature and pulse were normal; she moved about in bed without obvious discomfort. Abdomen free from distension. Externally, tenderness and a local resistance, on pressure, under the inner fifth of Poupart's ligament, on the right of the pubes, suggested the site of one end of the crochet hook. Bimanually, the crochet hook could be traced, rather indefinitely, across the top of the right broad ligament, from the inner end of the right crural canal in front to the right fourth sacral foramen behind. At this stage of the investigation the patient was interrogated as to the length of the crochet hook. A crochet hook of the usual length (my charge-nurse had one) would not lie in a pelvis of average size in the position indicated. The patient explained that her crochet hook was shorter than the one nurse produced.

X-rays.—There were good reasons for the expectation that an x-ray photograph would confirm the presence and position of the foreign body within the pelvis. Dr. Thurstan Holland obtained the excellent result copied in the figure; a nurse's crochet hook, as a control experiment, was also photographed on the edge of the plate (see the figure).

Diagnosis.—I communicated the result of my clinical examination to Dr. Thurstan Holland before, at my request, he confirmed the diagnosis by an x-ray photograph, and added the useful information that the hooked-end of the crochet hook was most probably directed backwards, against the sacrum.

Operation.—March 14th (eight days after the accident), with the patient in the lithotomy position, I incised the vaginal roof, through the posterior fornix, and placed my left index finger within the pouch of Douglas, and on the hooked end of the crochet hook. My finger was used as a guide for a single tenaculum which "hooked" hook to hook, the hooked end, and enabled me to at once withdraw the crochet hook. A little serum, approximately 1 ounce, containing floccules of lymph, escaped. The opening in the vaginal roof was left lightly packed with cyanide gauze for forty-eight hours. A normal pulse and a normal temperature were recorded throughout the uncomplicated recovery. She left the hospital for home on March 27th.

Remarks.—The rectum, uterus, and bladder were explored and found empty, or unconnected with the foreign body. The crochet hook lay within the peritoneal cavity. How did it get there? I did not detect traces of an aperture of entrance.

Crochet hook (half size).

the vagina, she, from the squatting posture, reached over towards the top of a table close by. She afterwards knelt down, and immediately, on passing the finger well into the vagina, discovered that she could only just touch, and could not grasp, the hooked end of the crochet hook. She stood up and walked about, and, from her sensations, felt sure the position of the crochet hook within her was changed. She postponed

* Read before the North Wales Branch of the British Medical Association.

There can be no doubt that the crotchet hook had penetrated the vaginal roof, through the posterior fornix, (a) judging from this case alone, for two reasons: (1) the position the crotchet hook occupied in the peritoneal cavity, and (2) the length of the crotchet hook, $4\frac{1}{2}$ inches, (b) associating this case with the report of a similar case before the Royal Medical and Chirurgical Society¹ in May, 1855, by Mr. Erichsen and Mr. T. Bryant, where a pointed cedar pencil, $5\frac{1}{2}$ inches long, lay for eight months within the abdomen after having penetrated the right posterior fornix-vaginæ and transfixed two coils of small intestine. When contrasted with the crotchet hook, the extra inch in length of the cedar pencil would account for the latter having reached a higher level on the anterior abdominal wall, through which, by incision, Mr. Erichsen removed the pencil, death ensuing four days later from septic peritonitis and faecal extravasation. If the circumstances attendant upon the intraperitoneal entrance of the foreign body in either of the cases were considered, it would appear very probable that the crotchet hook ($4\frac{1}{2}$ inches) or the cedar pencil ($5\frac{1}{2}$ inches) was first completely lodged within the vagina, the upper end raising or propping up the posterior fornix and the lower end resting on the pelvic floor or perineum; whilst a sudden, perhaps almost violent, change in the patient's posture raised the intra-abdominal pressure and drove the foreign body through the vaginal roof. My patient from a squatting posture raised herself to reach over a table top and then knelt down; Mr. Erichsen's patient was disturbed during her manipulation of the vaginal foreign body. My patient had used a blunter instrument; she had the advantages in diagnosis of the x-ray photography and in treatment, of pressure from her doctor not to delay, and in her case of operation by the vaginal route.

The only other example of a primarily vaginal foreign body in any way resembling those I have described I find mentioned by Dr. Freund,² of Strassburg, who discovered accidentally when operating, by abdominal section on the left Fallopian tube, a portion of the shanks of a hairpin which had penetrated the uterus and tube.

REFERENCES.

¹ *Medico-Chirurgical Transactions*, xxxix. ² *Centralblatt für Gynäkologie*, December 17th, 1887.

TWO CASES OF INTRACTABLE UTERINE HÆMORRHAGE FOR WHICH VAGINAL HYSTERECTOMY WAS PERFORMED.

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MR. BLAND SUTTON in the *BRITISH MEDICAL JOURNAL* of April 8th, p. 839, draws attention to cases of persistent uterine hæmorrhage which do not yield to the curette, and which are not characterised by any marked naked-eye changes in the uterus. Histological examination however shows changes in the uterine wall, and he applies the term "fibrosis of the uterus" to this condition.

I have met with two such cases, in each of which I performed vaginal hysterectomy, and as in one of the cases a careful histological examination was made which bears out the views of Mr. Bland Sutton, I have thought that it may be of interest to briefly narrate the cases.

CASE 1.—The first was a woman, aged 46, who was admitted to the Queen's Hospital, Birmingham.

History.—She had had eight children, the last eight years ago, and since the birth of the last child there had been six miscarriages, the last one being eighteen months ago. When not pregnant during the last five years she had been almost constantly losing blood, and for six weeks before admission there had been no intermission of the bleeding. She had been treated by rest in bed, drugs, and curetting had been several times performed, but with no permanent effect.

Operation.—As the patient was getting very anæmic and was having fainting attacks it was decided to perform vaginal hysterectomy, and this was done on August 14th, 1897. The patient made a good recovery and there has been no further vaginal hæmorrhage.

The main interest of the case lies in the result of an examination of the uterus. To the naked eye this organ appeared normal. A careful microscopic examination was kindly made by Dr. Douglas Stanley, Pathologist to the Queen's Hospital, whose report, dated November 11th, 1897, was as follows:

"I have examined the sections of uterus. The endometrium

shows considerable alteration of the epithelial cells, which are round or irregular and proliferative, forming a deep layer, in which are found vessels with poorly-developed walls. Under this there seems to be some fibrotic degeneration of the uterine tissue, and here the vessels show evidence of chronic inflammatory thickening; further away from the mucous surface there seems to be no alteration of the tissues."

CASE II.—P. G., aged 35 years, I saw in consultation at her own home in May, 1897.

History.—She had had three children, the last confinement having taken place eighteen months previously; this was brought on prematurely by a fall, and she had complained of pain in the right side of the abdomen ever since. She menstruated profusely one month after the confinement, and since then she had suffered from somewhat severe menorrhagia.

Operation.—On May 23rd, 1897, I curetted the uterus. This was followed by some improvement in the menorrhagia, but it later became as bad as before, and as she was losing strength and having fainting attacks it was decided to perform vaginal hysterectomy. This was done in the Queen's Hospital on November 5th, 1898. The ovaries and Fallopian tubes were apparently normal, and were not removed.

The patient made a good recovery, and there has been no further hæmorrhage.

The uterus after removal appeared somewhat enlarged, but otherwise no abnormality was visible to the naked eye. No histological examination was made.

In both these cases the menorrhagia commenced as a sequela of parturition or miscarriage, and they both bear out the views enunciated in the above-mentioned paper of Mr. Bland Sutton that the change in the uterine wall is secondary to "infective chronic metritis."

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TREATMENT OF CORYZA.

I HAVE found by repeated experience that coryza can be aborted by using locally a solution of belladonna tincture (*P.B.* 1899) in water. The strength used by me is $\frac{3j}{\text{iss}}$ in $\frac{3j}{\text{ss}}$ of water. The method of using it is as follows: The nose having been well cleared out and a Wallas's irrigator containing about a dessertspoonful of the solution applied to one nostril, close the other nostril and the mouth, and, while gradually raising the distal end of the irrigator, make a long inspiration until the air, in bubbling through the solution, carries with it a coarsish spray. Afterwards spray the other nostril in the same way and then, having well cleared out both nostrils, repeat the process. Thereafter the coryza will cease, that is to say, if the treatment has been commenced on the first or second day of the attack. In cases of longer standing it may be necessary to repeat the application more than once or twice. When the coryza has lasted already for some time, and, consequently, the mucous membrane has become thickly coated with a tenacious mucus, it is necessary to remove this accumulation by irrigations of alkaline solutions (sodium bicarbonate with sodium baborate, etc.) before using the belladonna.

The above treatment checks immediately the coryza of hay fever in many cases.

Wimpole Street, W.

WILLIAM E. BURTON.

A NEW METHOD OF CLOSING THE PERITONEUM AFTER LAPAROTOMY.

HAVING on many occasions had to reopen the abdominal cavity for the treatment of ventral herniæ, constriction of intestine, and other pathological conditions the result of laparotomies, I have almost invariably found that the intestine or omentum had become densely adherent to the site of the previously cut surface of the parietal peritoneum. In many cases symptoms of intestinal obstruction, most probably from peritoneal adhesions, have come under my notice where skilled operators had previously adopted the most modern methods of suturing the membrane.

After careful consideration I have discovered a method which has answered admirably in my hands. I open the peritoneum by an incision say 4 or 5 inches in length; being a very elastic membrane, I stretch the opening with my fingers should I require more space.

Having done what is necessary in the abdomen my plan of