rhage, to allow this packing to remain only twenty-four hours, removing it gently at the end of that time in order not to disturb the flap of mucosa. The flap will usually be found sufficiently adherent in twenty-four hours to permit of this procedure, and since a gauze packing must of necessity be a source of considerable irritation to the intranasal structures, with especial reference to the lower turbinate, it is apparently indicated to remove the gauze as soon as it may safely be omitted. Secondary hemorrhage from this plastic operation has been quite rare in my experience, but two cases, and one of these a hemophilic, having come under my observation.

After removing the packing, any secretion or blood which may have accumulated may be gently removed with cotton pledgets, and a tampon of absorbent cotton introduced into the vestibule. This tampon should be changed by the patient as often as it becomes moist. In the course of the after-treatment, it will occasionally be noticed that there is a small area left by shrinkage of the flap, and in this area small granulations may appear. A single application of solid nitrate of silver is usually sufficient to reduce these, the interval becoming rapidly covered by epithelium. Primary union occurs in a great many cases, so that complete healing of the wound takes place in from four to ten days where a perfect flap has been preserved. When a considerable amount of the flap has been lost, the course of after-treatment is proportionately prolonged.

It is true that this operation consumes more time, and is therefore more tedious to both patient and operator, than in removing spurs with the aid of the saw. But, on the other hand, the after-treatment of the plastic operation is shorter and less painful than even the most rapid result to be expected from the saw operation. The hemorrhage, both at time of operation and secondarily, is markedly less than with the latter procedure. Moreover, the time necessary for the plastic operation is not very great; in fact it will very rarely exceed forty minutes, from fifteen to thirty minutes being a fair average. The resection operation requires a somewhat greater length of time, since usually a more extensive procedure is indicated. That operation, however, should not consume more than one hour even in difficult cases; but the longer time required for the actual operation is more than compensated for by the gratifying end result, viz.: the rapid union.

The technique of the resection operation has been discussed and greatly improved upon in the last two years, although on somewhat different lines, by Drs. Otto T. Freer of Chicago, and Leon E. White of Boston, whose respective articles in the *Journal of the American Medical Association* and the *Boston Medical and Surgical Journal* are very comprehensive and instructive. I may also refer to a well written discussion on this subject by Charles N. Spratt, M.D., of Minneapolis, published in *American Medicine*. (I am indebted to Messrs. Codman and Shurtleff for kindly furnishing the accompanying illustrations.)

Clinical Department.

A CASE OF INTRAPERITONEAL RUPTURE OF THE BLADDER.

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THE following case of rupture of the urinary bladder is reported because of several unusual features and because of its interest to the general practitioner:

Mrs. R. M. C., aged twenty-two, was brought to the Massachusetts General Hospital at about 7 P.M., Aug. 23, 1903. Her history taken at that time is as follows:

The patient had always been well except for a miscarriage two years ago, when three months pregnant. Four days before entrance she was delivered of a healthy child at full term after a moderately hard labor. The attending physician had difficulty with an adherent placenta, but what was taken to be the whole placenta was delivered after some time, with the loss of considerable blood. The physician left the patient in the evening with the uterus well contracted, but on his return the next morning the uterus was greatly enlarged and "the bed was soaked with blood." Another physician was called in consultation and advised curetting the uterus. This was done and some small pieces of placenta were obtained. The uterus contracted well and remained of moderate size. From the time the patient was curetted until she entered the hospital she had constant pain across the lower abdomen. No vomiting. The bowels had not moved since the day the child was born.

Physical examination showed the woman to be well developed and nourished, but very anemic. Nothing abnormal was found in the chest. The abdomen was full, with little rigidity, but with considerable tenderness on deep palpation, especially over the lower half of the abdomen. There was some shifting dullness in the flanks.

Vaginal examination showed a slight tear of the perineum; vagina very moist; os soft, admitting the tip of the finger easily. Bimanually the uterus was enlarged with a hard mass in the left horn. Tubes apparently normal. Lochia foul. Pulse 120. Temperature 98.6°. Leucocytosis 35,000.

The patient was given an enema soon after admission and a very good result obtained. I saw the patient at this time, but did not feel that it was necessary to operate.

The following morning, Aug. 24, the patient seemed very much better; her temperature was 98° and pulse 88. The pain in the abdomen continued, but was much lessened. During the day she had two small movements. The examination of the urine made on this day has been lost.

Aug. 25. The patient was comfortable except for a slight pain in the right side of the abdomen. Small movement of the bowels. Abdomen still full, but soft.

Urine: Pale, acid, 1017, a trace of albumin, no sugar. Sediment: excess of small, round cells, very many leucocytes, many blood globules, occasional large epithelial cell, occasional hyaline and finely granular cast.

Aug. 26. Abdomen somewhat distended. Small movement after calomel. Patient says she is very comfortable except when she attempts to lie on either side, at these times the pain is so severe she has to get on to her back at once. Temperature 98.2°. Pulse 105.

Urine: Pale, acid, 1014, albumin $\frac{1}{4}\%$, sugar absent. Sediment the same as found in the urine yesterday.

Because of the increase in the amount of albumin, the lower specific gravity and the appearance of the patient, it was thought at this time that the kidneys must be responsible for the patient's condition.

Aug. 27. The general condition of the patient became much worse during the night. Temperature 98.4°. Pulse 120 and very feeble.

It was quite evident that something must be done if the patient's life was to be saved, and a rapid laparotomy was decided upon.

The patient was lightly etherized and the abdomen opened by a median incision. The abdomen was found to be filled with a slightly cloudy fluid. The bladder was at once examined and found to have a vertical gaping wound in the middle of the posterior wall. This wound was about 1½ inches long, and the edges were thickened and stiffened by the reparative process so that the wound gaped wide open. The patient was put in Trendelenberg's position and two rows of chromicized catgut Lembert sutures were used to close the wound. The patient was then lowered, the abdomen hurriedly washed out with salt solution, and a gauze wick placed, running from the pelvis up over the wound in the bladder. The intestines were much congested and the peritoneum looked edematous, but there was evidence of a septic peritonitis in only one small area of the pelvis. The uterus was well contracted and of normal appearance. The patient stood the operation very badly, did not respond to stimulation of any kind afterward, and died in about four hours.

This case was most confusing throughout; her history would lead one to think of sepsis, but her appearance and symptoms made sepsis seem impossible. The albumin and casts in the urine and her appearance suggested that her kidneys might be the cause of her condition. The symptom which should have had more weight given to it, the shifting dullness in the flanks, was unfortunately given little attention. In the history obtained from the patient and her physician there was nothing whatever to indicate any injury to the bladder. During her stay in the hospital the patient urinated without difficulty and blood was never present except an occasional blood globule microscopically. On the day before the operation the patient complained of being unable to sleep on either side without abdominal pain. This symptom is very suggestive of ruptured bladder, but is a symptom of any irritating fluid in the peritoneal cavity and not pathognomonic of ruptured bladder.

We have in this case as causes of ruptured bladder: childbirth, which is a very rare cause, and the patient complained of no pain until the morning after the delivery; curettage of the uterus, which was done the morning following the delivery, seems to me an impossible cause; and rupture of an over-distended bladder which without trauma practically never takes place. We have, then, in our history no satisfactory cause for a rupture of the bladder. It will be noted, however, that pain in the abdomen began at about the time she was curetted, that is, the morning after the delivery. Several days after the death of the patient the attending physician told me that when he made his visit on the first morning he was shocked to find the uterus up to the um-

bilicus, and the patient very anemic. He hurriedly piled some books on to the bed, one on top of another, and threw the patient over on to them on her abdomen and held her down.

Unfortunately, this was not known until after the death of the patient, but it is my belief that it was a dilated bladder which was felt and not the uterus, and that the bladder was ruptured when the patient was thrown on to the pile of books.

For the reported cases of intraperitoneal rupture of the bladder the reader is referred to the paper by Samuel Alexander in the *Annals of Surgery* for August, 1901, page 209, and the paper by the author in the *Annals of Surgery* for 1903, page 215.

Reports of Societies.

AMERICAN PEDIATRIC SOCIETY.

SIXTEENTH ANNUAL MEETING AT DETROIT, MICH.,
MAY 30, 31, JUNE 1.

(Continued from No. 18, p. 498.)

FIRST DAY — (Continued.)

SOME OBSERVATIONS ON EPIDEMIC VULVO-VAGINITIS IN INFANTS AND CHILDREN.

DR. A. C. COTTON, Chicago, presented this report of an epidemic which occurred in the hospital from August, 1902, to September, 1903, during which period 319 children were admitted to the hospital. The cases known to be infected amounted to 19, 1 male and 18 females, their ages varying from six months to thirteen years. The average duration of the cured cases was 116 days, the shortest period of discharge being 40 days, the longest 252 days. The first discharge was observed on Aug. 8, from the urethra of a boy two years old, who was under treatment for a rectal fistula. Seventeen days after his first operation the discharge occurred. Gonococci was next found in the vulvo-vaginal discharge in a typhoid fever patient two days after admission, and five days after the report of the first case. These two patients seemed to have given rise to the epidemic. Dr. Cotton gave the following conclusions: Every hospital for children must be protected against infection from without by well arranged detention wards, in which the newly admitted patient may be submitted to the closest scrutiny for a period of at least fourteen days to determine his freedom from acute infectious disease before admission to the general ward. A complete hospital should have ready for use properly located isolation wards to which patients may be removed upon the first appearance of suspicious symptoms of an acute infection. Gonorrhea was a most formidable disease in a children's hospital, and female infants were peculiarly susceptible to this disease. A patient in a children's hospital showing gonorrhea should be properly isolated and placed in charge of a special nurse. The interne or nurse while treating a gonorrhea patient should be relieved from other duties in the wards. The efficiency of any isolation may be questioned which did not individualize strictly, not only in regard to the treatment, care and manipulation of the patient, but also as to the use of clothing, bed linen, feeding utensils, thermometers, douche pans, etc. The same care by nurse and physician in sterilization was necessary, as would be