In most cases the diagnosis can be made with sufficient accuracy to decide the question of operative interference. A movable tumor of the kidney, usually presents enough physical evidence in addition to that from the history and the uterine examination to base a reasonably certain diagnosis. The distinction, however, between a movable tumor of the kidney and a dilated gall-bladder is not always easy. The same remark may be true of a tumor of the pancreas or the spleen. In one case I found a dilated gall-bladder containing gall-stones where I fully expected to find a diseased kidney. This being the only case in my experience where I have been wrong in placing the disease, I think I may safely maintain that it is very seldom that there can be a serious doubt as to the location of the lesion.

It is not so easy to make an accurate diagnosis of the nature of the lesion itself, nor is it essential generally, from the very fact that in many instances an accurate idea of the condition is beyond human skill. We need to consider only those points which may or may not justify the risks of an exploration. I venture to repeat my views upon this subject in connection with the kidney already expressed in remarks upon the gall-bladder and the vermiform appendix: that in cases of disease of doubtful nature, affecting but one kidney, the patient is entitled to the benefit of the doubt, and should have the advantage of an exploration, at least. These remarks apply to doubtful cases, and not to those often seen where the nature of the disease is plain and its hopelessness conspicuous.

Explorations by needles and other devices, notably Dr. Mixer's punch, at times give the lacking information, but the method should only be used in cases of doubt, and never in such a way as to pass through the peritoneum, on account of the occasional presence of enormous venous trunks and the danger of hæmorrhage into the abdominal cavity, together with the liability to peritonitis. A sufficient contraindication to exploration lies in the detection of metastasis, remote or near, or a well-marked cancerous cachexia. A wasting of tuberculous origin, however, does not justify non-interference.

At times it is very evident that one kidney only is the seat of disease requiring radical relief, but which kidney it is cannot be made out. In such cases a median incision may be made large enough for digital exploration of both kidneys, followed by a second cut in the right or left, as the case may be. The best plan, I think, would be an incision over one kidney for the removal of that one, if diseased, followed by a similar cut on the other side if the lesion is there. By this method there is an even chance that the first will be the only cut necessary.

MALIGNANT DISEASE OF THE PROSTATE, WITH REPORT OF A CASE OF CARCINOMA.¹

BY CHARLES M. WHITNEY, M.D.

THE patient, whose case is the subject of this paper, was a native of Ireland, fifty-eight years of age, and a carpet-weaver by trade.

He entered the City Hospital on March 18, 1891, and during his stay there was under the care of Drs.

¹ Read before the Surgical Section of the Suffolk District Medical Society, January 4, 1893.

George W. Gay and William P. Bolles, who have kindly permitted me to refer to the notes of the case.

His family history was negative. His personal history, up to the onset of the present trouble, was also negative, except for an attack of *la grippe* the previous winter, which left him debilitated. There was no venereal or tubercular history.

About three months before entrance he began to have severe pains across the lower part of the abdomen, the hips, and in the rectum. His bowels, previously regular, became constipated and the pain was always relieved after a free evacuation. At about this time he suffered from frequent micturition and a slight degree of rectal tenesmus. The symptoms increased in severity, and micturition became difficult at times, sometimes stopping and again starting. There was loss of strength and some loss of flesh. For a short time before entrance he complained chiefly of creeping sensations in the legs and in the heels. He was unable to sit or to lie on his back, on account of soreness across the back of the pelvis. There was no hæmaturia, or passage of blood from the rectum.

At his entrance he presented the following physical appearance: a man of good color, fairly developed and nourished. Heart, lungs and abdomen negative. A rectal examination, under ether, revealed a prostate rather below the usual size, smooth and regular in outline. Upon the right side in the region of the seminal vesicle, was an irregular mass, hard, not movable and about the size of the index finger. The urinary examination showed the following characteristics: pale, acid, 1,021, no albumen.

During his stay in the hospital he had one attack of retention, which was relieved by the catheter. No blood followed this procedure. He left the hospital on April 20th, comparatively comfortable by the use of morphia suppositories.

He re-entered the hospital on May 11th, desiring operative relief. His pain had increased in severity, and was referred to the end of the spine and to the region of the right anterior superior spine. A rectal examination showed a slight increase in size of the growth and that it more closely approached the prostate. On account of the apparent limitation of the disease, an attempt to remove the whole or a part of the growth was determined upon.

The operation was done by Dr. Gay, on May 15, 1891. An incision, two inches in length, beginning just anterior to the anus was made, and a careful dissection made until the growth was exposed. On account of its firm attachment to the surrounding parts, it was impossible to remove more than a small portion of the growth. The bladder was not opened.

The history after the operation was uneventful, except for an attack of epididymitis.

On account of the situation of the growth, its shape, and the entire absence of any apparent enlargement of the prostate, the clinical diagnosis of cancer of the right seminal vesicle was made. The piece of the growth removed at the operation was examined by Dr. Sears, who made the following report: "Piece of dense tissue, whitish, tinged with red, numerous small opaque areas. The microscope showed dense fibrous tissue, containing masses of epithelial cells, some glandular with epithelial lining, some completely filled with epithelial cells. In other places irregular masses of epithelial cells in connective-tissue framework. Diagnosis, probable cancer of the prostate."

From his discharge from the hospital in June, 1891, until his death in September, 1892, he was under my care at his home. There was extreme pain, relieved only partially by morphia. The bowels were obstinately constipated, requiring frequent enemata. Spasmodic twitching of the lower limbs was of daily occurrence, and was quite as troublesome as the pain. The local condition showed a steady increase in the size of the growth, involving especially the prostate, which reached the size of a small orange. The perineal wound which had healed superficially, reopened, due probably to ulceration of the bladder wall, and most of the urine escaped through this channel. Several examinations of the urine showed simply chronic cystitis; and no cancer cells were found, although careful search was made. There was no hæmaturia. The inguinal glands were not enlarged. The patient became extremely emaciated, was confined to his bed for ten months, developed a marked cancerous cachexia, and died of exhaustion on September 11, 1892.

The autopsy was performed by Dr. Wm. H. Prescott, who has kindly furnished me with the notes of it:

... "There was a small cavity between the fundus of the bladder and abdominal walls just above the symphysis, with shreddy walls, and filled with puriform liquid having a urinous odor. Walls of cavity formed by connective-tissue, which was very thick. There was no communication between this cavity and the bladder. The pelvis was nearly filled with a mass firmly matted together, in which the rectum and bladder could be made out and a tumor about the size of an orange and very firm. . . . Kidneys very small and firm, capsule adherent; two cysts filled with a clear fluid in cortex; pelvis much dilated. . . . Ureters dilated to the size of little finger. Retroperitoneal glands enlarged. Several nodules in the liver and spleen about the size of a small marble, otherwise normal. Supra-renal capsules slightly enlarged and containing nodules similar to those in liver. . . . Around the back of the bladder and occupying the position of the prostate and vesiculæ seminales was a tumor the size of a small orange."

Professor Councilman kindly examined the specimen, particularly in reference to the primary origin of the growth, and made the following statement:

"The tumor has evidently originated in the prostate, all of which is involved and in which there is only a little normal glandular epithelium to be seen. The cells of the tumor in the prostate are small and have the general character of the epithelium in this part. From the prostate the tumor has extended upwards to the seminal vesicles, portions of which are not involved. In other portions there is a typical growth of the same character as in the prostate. Posterior to the wall of the bladder, between the two lobes of the seminal vesicle and just above their separation, is a distinct abscess cavity, probably in the walls of bladder. The metastatic tumors have the same character as the growth in the prostate. Anatomical diagnosis: carcinoma, primary in the prostate, with extension into the vesiculæ seminales and posterior bladder wall; with secondary cancer of spleen, liver and adrenal glands; abscess in bladder wall, opening into peritoneum; peritonitis; interstitial nephritis; dilatation of ureter."

This case presents several interesting points; the absence of prostatic enlargement in the early stage of the disease; the existence of an apparently independent growth in the vicinity of the seminal vesicle; the

variation between the clinical and anatomical diagnoses, the absence of hæmaturia, and the early appearance and persistence of severe pain.

It is probable that the growth originated in a small nodule close to the capsule of the gland, and that it extended to the right seminal vesicle, and later involved the whole prostate.

It is probable that other and severer symptoms referable to the bladder would have supervened as the case progressed, had it not been for the perineal opening and thorough drainage of the bladder. For this reason alone, a cystotomy would seem justified in cases of this kind. The constipation which was persistent and severe could not be explained wholly from the use of opiates, for it existed prior to their use, or from the obstruction of the growth in the rectum. It was probably due to some reflex inhibition of the nerves in that region.

Malignant disease of the prostate is one of the rarer surgical affections.

The testimony of the surgeons of largest experience is unanimous on this point.

Harrison² states that "malignant tumors are rare, either as primary growths or secondary deposits or extensions of tumors involving other organs."

Gross:³ "Carcinomatous formations of the prostate are extremely uncommon. . . . Sarcomatous tumors are still more rare."

Bryant:⁴ "Cancer of the prostate occurs but seldom."

Erichson:⁵ "The prostate is very rarely attacked by cancer."

Ashhurst:⁶ "The affection (cancer) is one of great rarity."

Agnew:⁷ "Cancer of the prostate is almost invariably secondary to carcinomatous disease on other parts of the body, and even this is exceedingly rare."

Discarding the older statistics of Tanchou⁸ as unreliable, we find that in Billroth's clinic,⁹ out of 548 cases of malignant growths, 290 of which occurred in males, only one affecting the prostate was found. In the Heidelberg clinic,¹⁰ in an experience of eight years, only six cases were found, three each of carcinoma and sarcoma.

Secondary disease occurs even more rarely than primary. Fenwick¹¹ states that only four cases are reported, one each by Mercier, Longstaff, Guyot and Lebert.

Thompson,¹² after eliminating all doubtful cases, collected 23 cases of malignant disease of the prostate.

A careful search of available literature up to date has resulted in the collection of 50 cases, nine of which are sarcomata, making in all 73 cases. Doubtless many more cases have come under the observation of surgeons who have not reported them.

Of the two forms, carcinoma is by far the most frequent.

² Internat. Ency. Surg., vol. vi, 1886, p. 389.

³ Syst. Surg., 6th edition, 1882, p. 796.

⁴ Pract. Surg., 3d edition, 1881, p. 611.

⁵ Science and Art Surg., 8th edition, 1885, p. 1026.

⁶ Prin. and Prac. Surg., 3d edition, 1882, p. 944.

⁷ Ibid., 1881, p. 506.

⁸ Recherches sur le Traitement Médical des Tumeurs Cancéreuses du Sein, Paris, 1844.

⁹ Beiträger zur Statistik der carcinoma, mit besonder Rücksticht auf die dauernde Heilbarkeit durch operativ Behandlung, Nach Beobachtungen an der Wiener chirurg. Klinik des Prof. Dr. Billroth, von Dr. A. Wundtwarter.

¹⁰ Stoin.: op. cit.

¹¹ Brit. Med. Jour., 1887, 1, 619.

¹² Dis. of Prostate, 6th edition, 1890, p. 186.

No.	Reporter.	Age.	Duration.	Condition of prostate.	Condition of other organs.	Treatment.	Reference.	Remarks.
1	Clark, W. B.	54	....	Large mass, blocking ureters.	Atrophy left kidney, abscess prostatic nodule in liver, abscess in mediulla.	Cystotomy? Not fully reported.	Path. Trans., xxxvi, 229, 1885.	....
2	Bernard, W.	75	yrs.	Considerable enlargement in left lobe.	Ulceration of bladder, nodule in liver.	Palliative.	Dublin Jour. Med. Sc., Jan., 1884.	Hæmaturia severe, anuria for eleven days.
3	Beach, H. H. A. and Fitz, R. H.	60	2 yrs.	Enormous tumor, cylindrical cell cancer.	Involvement of seminal vesicle, dilated ureter, nodule in liver.	Palliative.	Boston Med. and Surg. Jour., June 21, 1888.	Tumor extended above pubes.
4	Oswald, R. J. W.	23	3½ yrs.	Enlarged.	No autopsy. Growth over rib, back of neck, and on buttock.	Colotomy for relief of obstruction.	....	Relief after operation, death in 3 ms., cause supposed to be series of kicks from a horse in perineum.
5	Favell and Jackson.	63	6-7 ms.	Enlarged, scirrhous.	No autopsy.	Palliative.	Lancet, London, 1885, i, 543.	....
6	Carver.	66	5 yrs.	Medullary cancer.	Glands enlarged, pelvic, iliac mesenteric.	Palliative.	Lancet, London, 1886, 788.	Constipation a prominent symptom.
7	Harrison, R.	64	2 yrs.	Enlarged.	No autopsy.	Cystotomy, mass size of filbert, removal.	Lancet, London, 1884, ii, 483.	Death after 14 ms., incontinence of urine after operation.
8	Stonham, C.	57	1½ yrs.	Growth backward.	Bulb of urethra nodule in liver.	Prostatectomy by Heath, partial removal.	Tr. Path. Soc. Lond., xxxix, 194, 1887-8.	Death from anuria in 30 days.
9	Hill, B.	64	1 yr.	Right lobe enlarged, scirrhous.	....	....	Ibid, 1888-9, xi, 181.	Frequent hæmaturia, incontinence, anuria for 10 days, death.
10	Spanton.	57	2 yrs.	Sarcoma, size fetal head.	....	Operation, mass size of fist removed.	Lancet, 1882, 1032.	Death.
11	Fenwick, E. H.	56	....	Scirrhous right lobe enlarged.	....	....	....	....
12	Fenwick, E. H.	53	6 wks.	Right lobe encephaloid size orange.	....	Operation refused.	British Med. and Surg. Jour., 1887, 873.	Of very rapid growth.
13	Fenwick, E. H.	62	?	Large, irregular mass.	....	Colotomy.	Ibid.	Considerable relief, alive at report.
14	Fenwick, E. H.	74	....	Carcinoma.	....	....	Ibid.	Painful defæcation chief symptom.
15	Maynard, A. E.	62	1½ yrs.	Encephaloid, cyst-like outgrowth in bladder.	Lymphatic glands and seminal vesicle involved.	....	Glasgow Med. Jour., 1881, 374.	....
16	Belfield, W. T.	48	3 ms.	Slight enlargement.	....	Supra-public cystotomy, removal of villous growths in bladder.	Chicago Med. Jour., 1881, iv, 455.	Complete relief of symptoms for 8 weeks, recurrence, death in 4 mos.
17	Spanton.	5	13 wks.	Size man's fist, sarcoma.	Destruction of prostatic urethra.	Supra-public aspiration.	Tr. Path. Soc. Lond., 1890-i, xlii, 218.	....
18	Morris, H.	72	....	Size orange.	Extension to bladder.	Supra-public.	Med. Press and Circ. Lond., 1890, N. S., xlix, 529.	Considerable relief, alive at time of report.
19	Barton, J. K.	64	....	Extended above pubis, size cricket-ball.	Extension to neck of bladder.	Palliative.	Dublin Jour. Med. Sc., 1881, 3 s, lxxi, 553.	....
20	Bubb.	69	1 yr.	Scirrhous.	Abscess left kidney, cystic r. kidney, abscess supra-renal capsule, nodule in bladder.	Palliative.	Brit Med. Jour., Lond., 1881, 849.	Incontinence of urine was the chief symptom.
21	Billroth.	30	5 yrs.	Size egg.	....	....	Reported by Stein, Arch. f. Klin. Chir., Bd., 39, 545.	.....
22	Billroth.	56	1 yr.	Hard enlargement.	Bladder infected.	Operation, total extirpation, with sharp spoon.	Ibid.	Death in 4 days.
23	Demarquay.	52	....	....	Rectum and fundus bladder.	Operation, total extirpation.	Ibid.	Death in 7 days.
24	Barth.	9 ms.	4 ms.	Sarcoma.	Tumor pressed on rectum and produced obstruction.	Supra-public operation.	Ibid., 1891, xlii, 758.	Death.
25	Barth.	17	5½ ms.	Sarcoma.	....	Operation, kind not stated.	Ibid.	Death in six weeks.
26	Barth.	27	5 ms.	Sarcoma.	....	Palliative.	Ibid.	Death in a few weeks.
27	Lisrink.	64	1½ yrs.	Cancerous.	....	Operation. Partial removal of growth.	Ibid., xxxix, 545.	Passage of large amt. of blood by stool the

17	Spanton.	5	13 wks.	Size man's fist, sarcoma.	Destruction of prostatic urethra.	Supra-pubic aspiration.	Tr. Path. Soc., Lond., 1890-1, xlii, 218.	recurrence, death in 4 mos.
18	Morris, H.	72	...	Size orange.	Extension to bladder.	Supra-pubic.	Med. Press and Circ., Lond., 1890, N. S., xlix, 529.	Considerable relief, alive at time of report.
19	Barton, J. K.	64	...	Extended above pubic, size cricket-ball.	Extension to neck of bladder.	Palliative.	Dublin Jour. Med. Sc., 1881, 3 s, lxxi, 553.	...
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25	Barth.	17	5½ ms.	Sarcoma.	...	Operation, kind not stated.	Ibid.	Death in six weeks.
26	Barth.	27	5 ms.	Sarcoma.	...	Palliative.	Ibid.	Death in a few weeks.
27	Lisrink.	64	1½ yrs.	Cancerous.	...	Operation. Partial removal of growth.	Ibid., xxxix, 545.	Passage of large amt. of blood by stool the chief symptom before operation.
28	Küster.	53	...	Cancerous.	Bladder and glands involved.	Operation. Total extirpation of prostate and bladder walls.	Ibid., xlii, 385.	...
29	Stein.	79	3 yrs.	Cancer.	Rectum perforated.	Supra-pubic, partial removal.	Ibid., 1888, xxxix, 544.	Death in a few days.
30	Stein.	27	9 wks.	Sarcoma.	...	Median section, partial removal by sharp spoon.	Ibid., 545.	Relief for four weeks.
31	Stein.	42	5 yrs.	Sarcoma?	...	Total extirpation.	Ibid., 545.	Death.
32	Stein.	47	...	Sarcoma?	Left testis involved.	...	Ibid., 547.	Death in nine months.
33	Stein.	64	9 ms.	Scirrhus, size of hen's egg.	...	...	Ibid., 549.	Death in twelve days.
34	Wesseler, F. W.	50	1 yr.	...	...	...	St. Louis Med. and Sur. Jour., 1882, xlii, 278.	...
35	Gray, G. H.	36	2 yrs.	Sarcoma?	...	...	Ibid., 1877, n. s, xiv.	Reported as cancer, but more closely resembles sarcoma.
36	Fenwick, E. H.	59	1 yr.	Left lobe.	Extends to left seminal vesicle.	Autopsy. Specimen.	Tr. Path. Soc., Lond., 1886-7, 199.	Death from uræmia.
37	Hughes.	35	1 yr.	Weighted 5 pounds, 2 ounces. Sarcoma. Round cell.	Extends to posterior bladder wall. Nodule in liver.	Perineal section.	Med. and Sur. Reporter, Phila., xlvii, 688.	No clinical history. In response to a request growths sent to F. T. Paul for the purpose of classification.
38	Parker.	...	...	Cancer.	...	...	Brit. Med. Jour., 1884, i, 48.	Ibid.
39	Parker.	...	...	...	...	...	Ibid.	Ibid.
40	Parker.	...	...	...	...	...	Ibid.	Ibid.
41	Craigmer.	...	...	...	...	...	Ibid.	Ibid.
42	Paul, F. T.	...	...	...	...	...	Ibid.	Ibid.
43	Williams.	...	...	...	...	...	Ibid.	Ibid.
44	Turner, F. C.	...	...	...	...	...	Ibid.	Ibid.
45	Paul.	...	...	...	...	...	Ibid.	Ibid.
46	Hartshorn and Tyson.	64	4 yrs.	Sarcoma. Cancer, size of orange.	Bladder ulcerated.	...	Amer. Jour. Med. Sci., Phila., n. s, lviii, 440.	Severe hæmorrhages from bladder. Death from this cause.
47	Casper.	54	3 ms.	Large tumor, extending to coecum.	...	...	Le Bull. Med., Paris, 1888, li, 560.	...
48	Casper.	69	...	...	...	...	Ibid.	Bladder pushed up to umbilicus.
49	Casper.	34	...	...	...	...	Ibid.	...
50	Whitney.	58	1½ yrs.	Size of orange.	As quoted.	...	Ibid.	Urinary incontinence.

In regard to the age at which this affection is most frequent, it may be said, in general, that sarcoma in this region is a disease of infancy and early boyhood, and that carcinoma is one of later adult years, usually occurring in men over fifty. Carcinoma does, however, frequently occur in children, and is of very rapid growth. Thompson states that only three cases of carcinoma have been observed between the ages of eight and forty. That this is not the experience of other good observers is shown by the statistics of Jolly as quoted by Jullien.¹³ He tabulates the cases as follows:

0 to 7 years	8 cases
10 to 20 "	0 "
30 to 40 "	3 "
40 to 50 "	3 "
50 to 60 "	13 "
60 to 70 "	10 "
70 to 80 "	1 "

Wyss¹⁴ has collected 24 cases, with the following results:

0 to 10 years	35%
20 to 30 "	5%
40 to 50 "	10%
50 to 60 "	30%
80 to 90 "	10%

My own cases investigated with regard to the question give a somewhat similar result:

	Carcinoma.	Sarcoma.
0 to 10 years	0 cases	2 cases
10 to 20 "	0 "	1 "
20 to 30 "	1 "	2 "
30 to 50 "	3 "	3 "
50 to 60 "	14 "	1 "
60 to 70 "	11 "	0 "
70 to 80 "	4 "	0 "

The symptoms of malignant disease are usually extremely obscure in the early stage. Pain is usually an early and constant symptom, and occurring in connection with any enlargement of the organ should give rise to a suspicion of the existence of this affection. As the growth extends, symptoms referable to the bladder and rectum are noticed; frequent and often painful micturition, with occasional attacks of hæmaturia, especially after instrumental manipulation. Occasionally incontinence is present. Constipation and rectal tenesmus are noticed, especially when the direction of the growth is toward the rectum.

Reflex disturbances of the sacral plexus are not infrequent, shooting pains down the thigh, vaso-motor changes in circulation in the extremities, cold feet and legs, and spasmodic muscular contractions. The urinary examination is not of much diagnostic value.

The rectal examination usually shows a tumor of varying size, firm in consistency, often nodular and irregular in outline, in the region of the prostate.

Tenderness is not usually present. The diagnosis between this condition and hypertrophy of the prostate is not easy and can only be made after several observations of the patient. Severe pain, emaciation, and a steady growth of the tumor would aid in distinguishing between these conditions. In younger patients tuberculosis, chronic inflammation and certain forms of rectal growth, may frequently simulate this condition.

The duration of this affection varies with the age: in children it is exceedingly short, averaging from three to seven months, while in adults it is from one to two years, rarely four or five. In sarcoma, the

course is rapid at all ages, averaging seven months, very rarely lasting a year.

The treatment of these growths can often be merely palliative, directed to the relief of pain, and to the obstruction caused by pressure on the bladder and rectum. The bladder should be regularly emptied by catheter in cases of complete or partial retention; the rectum should be unloaded by enemata, and the stools kept soft by laxatives by the mouth.

Several different operative measures have been of late recommended for the complete or partial removal of these growths. Total extirpation has been done three times; once by Billroth, who was the first to attempt it, and twice by Stein. In two cases, death occurred in twenty-four hours; in one, life was prolonged nine months, with partial relief. Perineal cystotomy and partial removal by curetting has been done several times. Colotomy has been recommended by Fenwick, who has performed it several times as a method of relief for the obstruction to the action of the bowels. Other methods which have been done with varying success, are suprapubic exploration alone, and combined with a perineal incision. This method has been found to give the best results as regards the removal of the largest amounts of the growths.

Any operation to be of value must be early and radical; but when it is remembered that in eighty or ninety per cent. of cases confirmed by an autopsy other important organs or glands were involved, and that the diagnosis of this affection in its early stage is a matter of the greatest difficulty, the ultimate success of any operation is a matter of grave doubt.

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LACERATIONS OF THE VAGINA BY COITUS.¹

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MOST text-books have little or nothing to say on this subject, and the recently published "American System of Gynecology" makes no mention of it. Holmes in his "System of Surgery," Vol. II, page 749, says that the vagina has been torn, with the hymen, in the attempts at coitus for the first time, sometimes with alarming hæmorrhage.

In the "Real-Encyclopädie der Gesamten Heilkunde," No. 14, page 375, the author says: "Whether the vagina can be torn by coitus appears questionable, although some old observations exist according to which, through roughly practised coitus, laceration of the vagina and death from hæmorrhage have occurred. The rupture is either limited to the vagina, or it involves the cervix and vaginal vaults. The lower part of the vagina may be the seat of rupture, with rupture of the perinæum. In the vaginal vaults occurs not seldom transverse separation of the vagina from the uterus. In rare cases the vagina may be entirely torn from the uterus."

Barnes, in his "Diseases of Women," page 870, describes a specimen in the museum of St. George's Hospital of laceration of the vagina from coitus in an old woman: "There is a rent passing along the upper two inches of the vagina, dividing the mucous membrane and the adjoining fibres of the muscular coat. The rent deepens as it ascends, and on a level with the os uteri has broken through into the peritoneal cavity. The hole in the peritoneum is not quite large enough to admit the little finger."

It may be said, then, that laceration of the vagina does occur occasionally from undue violence in the act of coitus, and gives rise to symptoms of sufficient gravity to require medical advice. Minor lacerations of the hymen, involving to some slight extent perhaps the vaginal wall, but insufficient to cause alarming hæmorrhage, are probably not infrequent. Cases of the graver kind, requiring immediate treatment for the arrest of hæmorrhage or later plastic repair, are occasionally reported in periodical literature; but I have made no attempt to collate these cases. I recall one case reported within a year by Mann, of Buffalo, in which the patient entered the hospital with a recto-vaginal fistula which was attributable to violent coitus.

My own experience with this lesion is limited to two cases, which are briefly as follows:

CASE I. Several years ago I was called to one of the leading Boston hotels to see in consultation a young woman on her wedding journey. The physician first called to the case, in the night preceding my visit, had found the patient with a profuse vaginal hæmorrhage, which proceeded from a rent in the wall of that passage. He employed pressure by means of a tampon, and at the time of my visit with him some hours later the bleeding had practically ceased. On examination I found a longitudinal tear extending from just within the introitus about two inches along the left-latero-posterior vaginal wall. The rent was of sufficient depth

to receive the index finger, and on manipulation still bled moderately. As the couple wished to resume their journey as soon as possible, it was thought best to continue the simple tampon pressure; but were the patient to have remained for a few days in town, it would have been more satisfactory treatment to have closed the rent with sutures. There was a definite history in this case of the laceration having occurred the night previous to my visit, in the act of coitus.

CASE II. In September, 1892, a young married woman consulted me at the Boston City Hospital, on account of hæmorrhage from the vagina which had lasted for four or five weeks. She had consulted two physicians, both of whom had treated the case as one of metrorrhagia without success. The last physician had inserted a soft-rubber doughnut pessary for the relief of a supposed uterine displacement. On the removal of this pessary a foul discharge of retained and decomposed blood followed. After thorough disinfection of the vagina the source of the hæmorrhage was discovered. Starting from the cervico-vaginal junction on either side was a rent extending laterally for three-quarters of an inch: the sound entered these rents about a quarter of an inch, and there was a continuous oozing of blood from them. The cervix had apparently been pushed forcibly upward and backward, and the transverse lacerations of the vaginal vaults thus occasioned. The parts were cleansed with a two per cent. solution of creolin, iodoform powder was blown into the rents, and the vagina was packed with cotton tampons wrung out of a ten per cent. mixture of iodoform and glycerine. Three days later all bleeding was found to have ceased, and in a fortnight the parts had entirely healed.

I have recently seen in a private patient another case of injury by coitus, in all probability, although there is no history to that effect, and the existence of the lesion is unknown to the patient. In this case the hymen was rather thick, and of the so-called annular type; that is, there was a small central aperture. This hymen I found attached to the right side of the introitus vaginæ only, it having been entirely stripped away from the left side; it had retracted somewhat, and was attached, as by a hinge, on the right side. As the woman had never borne children, and in the absence of any history of known injury or operation, it is probable that at the first complete coitus, the thick annular hymen, instead of incurring the usual radial lacerations, was entirely torn away from its attachment on one side.

The treatment of lacerations of the vagina consists primarily in the arrest of hæmorrhage, which is sometimes profuse. In small tears, with only moderate venous oozing, pressure with firmly applied tampons is sufficient to arrest the bleeding. But in large rents involving arteries or large venous plexuses, it is best to expose the parts with speculum and retractors, and close the laceration with sutures; by this method the hæmorrhage is more promptly controlled, and the integrity of the parts restored. Extensive lacerations followed by sloughing and fistulæ require secondary plastic operation.

CHOLERA IN FRANCE.—It is reported that two-hundred cases of cholera, with seventy deaths, occurred during the last half of March at Lorient, near Brest. The health of the town has been bad for a long time.

¹ Read before the Obstetrical Society of Boston, February 11, 1893.