ized rubber. As conducting tubes I have adopted a flexible air-tight soft rubber tubing, on the inside of which a round coiled wire is placed, and over the whole a silk covering is woven.

The acoustic power of the instrument when in use, I believe, to have considerably increased by having the connecting joint *f* and all the bells and the other chestpieces which serve as receivers and transmitters of the sounds emitted from the thoracic or abdominal cavity, made also of metal, and covered as the earpieces, with vulcanized rubber.

To make the stethoscope as convenient as possible it is made so that it can easily be taken apart and placed in a medium sized coat-pocket and rapidly put together again, ready for use. One chestpiece in the shape of a bell suffices for ordinary examination, and this can be left on the connecting joint *f* most of the time. Occasionally, however, we desire to make an especially careful examination of either lungs or heart, and to this end I have devised a little armamentarium which includes all that may be needed to make a most careful physical examination of either thoracic or abdominal cavity. Instead of the attachable plessimeter of my former instrument, I have modified Constantine Paul's suction-cup *g* for the purpose of combining instrumental percussion and auscultation. It consists, as you see, of a rubber ball, tube and cup-shaped chestpiece, easily attached to the stethoscope. By pressing the rubber ball a sufficient vacuum is produced to have the piece retained in its position, enabling one to auscultate and percuss at the same time. But the greatest advantage of this combination lies in procuring absolute contact and stability with the cutaneous surface and thus the exclusion of all other external sounds. Besides, for studying as well as for teaching complicated heart sounds it is often convenient to have the chestpiece remain stationary. With a little care several students may alternately put on the headband and earshells without disturbing the chestpiece retained by atmospheric pressure over the point where the abnormal sounds are best perceived.

For lung auscultation I have a somewhat larger bell *h* than the one designed to auscultate the heart, *i*, and for intercostal auscultation this somewhat oval-shaped chestpiece *j* will prove rather convenient. For sensitive chests and for children the soft rubber-bell *k* should be used. It can easily be attached to the heart bell. To define when necessary a very small and circumscribed area of pathologic changes by auscultatory means I have replaced the localizer of the phonendoscope by a little instrument which I call the delineator *l*. When attached to the stethoscope it may not equal the phonendoscopic sounds in loudness, but since it is minus the sound-perverting vibrations, produced by the diaphragm of the phonendoscope, the careful listener will hear all he need to, and this little instrument will certainly serve its purpose quite well in the majority of cases. All the various supplementary chestpieces for lung, heart and intercostal auscultation, the delineator, etc., are finished so that a simple insertion is all that is necessary for their attachment to the stethoscope.

While a plessimeter is not an absolutely indispensable instrument, clinical teachers and all who do a good deal of percussing, will find it at times a great relief in conjunction with a good percussion hammer. The possibility of acquiring a periostitis of the left

index finger by using it constantly as a plessimeter, may thus also be averted. I have attached a convenient handle *m* to a hard rubber plessimeter *n*, and as hammer I give Flint's well-known percusser *o* the preference.

It remains only for me to thank Messrs. Tiemann & Co., for their courtesy in repeatedly altering my stethoscope until it became, what I think, a nearly perfect instrument for mediate auscultation. May it find favor with the profession and serve its purpose well.

955 Madison Avenue.

APPENDICITIS COMPLICATING OVARIAN CYST AND SIMULATING TORSION OF THE PEDICLE, WITH THREE CASES.

Presented in the Section on Obstetrics and Diseases of Women at the Forty-eighth Annual Meeting of the American Medical Association at Philadelphia, Pa., June 1-4, 1897.

BY X. O. WERDER, M.D.

PITTSBURG, PA.

Appendicitis as a complication of an ovarian cyst and accompanied by symptoms strongly resembling those of torsion of the pedicle, does not seem to be of very frequent occurrence; at least I have failed to find any cases recorded in the literature at my disposal. This is my excuse for reporting the following cases which came under my observation and in which the symptoms were supposed to be due to an axial rotation of the tumor when, on the operating table, an appendicitis was discovered to be the disturbing element which led to a wrong diagnosis.

Case 1.—Mrs. C., age 56 years, mother of nine children; one miscarriage; last confinement sixteen years ago, followed by fever; otherwise always healthy. Her present trouble dates from May, 1894, when she was seized with cramps in the abdomen and vomiting, which continued for several days. She had at times most of her pain in the right side. She has had several attacks since then of a similar nature, in the last of which she was attended by Dr. A. Koenig, who discovered a tumor in the abdomen. When I saw her in consultation with him, her acute symptoms, pain, vomiting, temperature 103 degrees, had somewhat subsided, though her abdomen was still very tender on pressure, and tympanitic. It was enlarged by a tumor occupying nearly the mid-region, more to the left, indistinctly fluctuating and painful on palpation. The diagnosis as made was: Ovarian cyst, with possible torsion of pedicle. Her removal to Mercy Hospital was advised for the purpose of operation.

Operation, Aug. 13, 1894. On the right and upper surface of the tumor the omentum and several feet of small intestine with the vermiform appendix, were adherent. The latter was not much enlarged, but congested and filled with pus. It was ligated and cut, and the stump covered by a peritoneal sleeve. The adherent intestines were separated with considerable difficulty, many points requiring suture with fine silk to control bleeding. The cyst wall was unusually red and congested. Convalescence was interrupted by an attack of pneumonia at the base of the right lung, on the fifteenth day. The patient was discharged cured about six weeks after operation.

Case 2.—Mrs. K., age 39 years, mother of seven children, youngest 5 years old. Shortly after last confinement she noticed a lump in the right iliac region that has been gradually growing larger. She was seen in consultation with Dr. Potter Dec. 1, 1896. Two weeks previously she was seized with severe cramps in the lower abdomen, accompanied by vomiting and followed by high fever. The abdomen became tympanitic and extremely painful and tender, requiring frequent opiates to give relief. These symptoms abated during the last few days, though the abdomen, and especially the tumor, were still quite painful to the touch. The tumor occupied the middle of the abdomen, extending above the umbilicus, and showed indistinct fluctuation. She was removed to Mercy Hospital for operation, which was performed Dec. 6, 1896.

The cyst walls were dark in color and the seat of extensive adhesions to abdominal walls, intestines and pelvis. The adhe-

² Knapp; Medical Record, November 1895.

sions were freed, bleeding points of omentum ligated and removed. The appendix, which was about six inches by one half inch thick, hard, red and adherent to cyst, was freed, the meso-appendix ligated near the cecum, stripped from the distal end of the appendix; the appendix also ligated near the cecum, clamped one-half inch further out and removed by cutting between; stump mopped and covered by meso-appendix which was stitched over it. Convalescence was uneventful; out of bed the twenty-first day, discharged the twenty-eighth day.

Case 3.—Mrs. Wm. E. F., age 44 years, mother of three children, youngest 6½ years old; normal convalescence. Last October, after some exertion, she noticed a swelling in her abdomen, which has remained ever since. February 25, I saw her in consultation with Dr. Ryall, who had been attending her through an attack which was started by severe abdominal pains and vomiting, which kept up for several weeks; retention of urine, abdomen tympanitic and very tender. She was very much emaciated and quite feeble, though her acute symptoms had pretty well subsided, excepting her temperature, which remained above normal.

Physical examination showed a fluctuating tumor, filling up the pelvis and abdomen, of the size of a pregnant uterus at six or seven months, which was very tender on pressure. She was removed to Mercy Hospital February 28, and operation performed March 4, after vainly trying to improve her general condition. Extensive omental and intestinal adhesions were separated from the cyst; pelvic and uterine adhesions very firm and difficult to separate, leaving a torn and bleeding uterus. An elastic ligature was therefore passed around it, the body amputated, treating the stump extraperitoneally. The cyst, which was multilocular was exceedingly friable, breaking to pieces at the least touch, in a number of places. Its walls were dark colored, from one-half to one inch in thickness. Microscopic section showed the cyst wall to be necrotic. Contents of the cyst were semisolid, of dirty gray color.

The appendix was adherent to the cyst, tense, enlarged and inflamed, containing an enterolith. The microscope showed catarrhal inflammation. The patient had lost considerable blood during operation and was pretty well collapsed when taken from the operating table, but gradually rallied under active stimulation and improved.

March 7 she showed undoubted evidences of double pneumonia and was in a critical condition for five or six days. She finally improved and made an excellent recovery.

The pneumonia occurring in these two cases was a mere accidental complication, though the lowered vitality and the forced recumbent position for weeks even before the operation, no doubt greatly contributed to its development.

The symptoms, in connection with the knowledge of the presence of an ovarian tumor in these cases, certainly justified the supposition that the complication was due to torsion of the pedicle; especially as the acute stage of the trouble had passed at the time they came under observation. Differentiation would probably have been easier at an earlier stage, as long as the inflammatory area in appendicitis was more localized. The fact that in torsion of the pedicle there is usually a rapid increase in the size of the tumor, marked shock and perhaps a less prompt rise of temperature than in appendicitis, would also probably be of considerable value in differential diagnosis at the outset, but at a later period the symptoms of the two conditions, at least in the cases in which torsion of the pedicle does not lead to a rapidly fatal termination, are so similar that it would scarcely be possible to differentiate them. Fortunately both conditions demand the same treatment *i.e.*, prompt operation; and a differential diagnosis has, therefore, more of a scientific interest than practical importance.

A fact worth noting is that there was undoubted inflammation of the cyst in all cases; in the last two cases this was particularly pronounced, as evidenced by the dark red discoloration of the cyst and the marked thickening of its walls and its unusual friability; in the last case they were actually necrotic in numerous places; conditions strongly resembling those

found in torsion of the pedicle and in malignant disease. Malignant degeneration was seriously suspected, but the microscopic examination was negative on this point. There were no evidences of fresh hemorrhagic effusions into the cyst cavity in any of them. That this inflammation of the cyst cavity was not merely an extension by contiguity seems to be demonstrated by the fact that not only a portion of the cyst, the one in contact with the adherent appendix, was involved, but that the whole neoplasm seemed in a state of active inflammation with marked hyperemia and thickening of its walls, and in one, even at least partial necrosis. We must, therefore, suppose that the inflammation was caused by an infection from the appendix and not by a simple extension of the inflammatory process.

In conclusion, I wish to call attention to the method adopted in treating the stump of the appendix in the last two cases. It is so simple that doubtless it must have been used before me by other men, though I have been unable to find any account of it. It consists in tying the meso-appendix and the appendix separately near its insertion into the cecum. The meso-appendix is then stripped of the distal portion of the appendix down to its ligature, the latter cut off about half an inch above, and the stump covered with the freed meso-appendix, and attached by one or two superficial sutures. By this means the whole stump is completely buried under a layer of peritoneal tissue. This can be done with more rapidity than by inversion or covering the stump with a peritoneal sleeve, and it certainly answers the purpose in every respect. I have followed this plan in all my cases requiring appendicectomy during the last six months, where the meso-appendix had not sloughed away. It has been perfectly satisfactory.

SURGERY ONE HUNDRED YEARS AGO.

AN HISTORICAL STUDY.

BY DR. GEORGE FISCHER.

DEDICATED TO THE GERMAN SURGICAL ASSOCIATION.

TRANSLATED FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

BY CARL H. VON KLEIN, A.M., M.D.

(Continued from Vol. xxix, 1315.)

XIX.—DISEASES OF THE URINARY AND GENITAL ORGANS
AND OF THE RECTUM.

Ischuria was studied with great assiduity by Desault, whose classic essays (*Jour. de Chir.*, i, ii) Richter transferred in part verbatim to his "Elementary Principles." They distinguished: 1. Paralytic retention of the urine, which appeared chiefly in old people, and from that arose the fact that the bladder lost the power of contracting. It might also be the result of venereal excesses, onanism and spinal injuries. External stimulants (Spanish flies, arnica and cold applications on the perineum) were valued, especially the continued use of the catheter to empty the urine. It seemed best to retain flexible catheters, stop up their openings and allow the urine to flow out every three hours; then about every sixth day to take them out and clean them. In case of a long continuance of the trouble it was advised that the patient learn to catheterize himself. 2. Inflammatory ischuria implied the inflammation of the neck of the bladder, the urethra or the rectum. It arises from stone, hemorrhoids, rectal fistula, contusion of the perineum, rheumatism and most frequently in a so-