viscera, and in one breast a tumor which was said to have existed about fifteen months. The gland itself was atrophied, and was traversed by numerous opaque lines, following the course of the ducts. These were of firm consistency, due to thickening of the walls. The interior was filled with inspissated or cheesy material, recalling the condition found in tuberculosis of the epididymis. Numerous bacilli were found lying in the cells.

The first case is to be regarded as one of primary tuberculosis, while in the last one it is doubtful where the original seat of infection was.

The author thinks the giant cells which were found in the tissues originated in part from the epithelioid cells and in part from the union and subsequent fusion of the epithelium lining the glandular alveoli and ducts.

A CONTRIBUTION TO THE ANATOMY OF THE PAROVARIAL CYSTS.

Killian⁵ gives the results of a study of a series of five cases. As a rule, the peritoneal covering was found to be smooth, although in two cases the remains of adhesions were evident. These are certainly rare and their existence has been denied by some. In all the cases the infolding of the internal surface was very distinct. This has been explained as due to a contraction of the involuntary muscular fibres of the wall. But these were so sparingly present that they could exert but little influence, while the microscopic examination showed the internal layer of the connective to be thrown into ridges. The Fallopian tube lay in close proximity to the cyst and was apparently increased in length. The fimbriated extremity was somewhat elongated as well as the ovary.

The end of the ovary turned towards the uterus was always found at some distance from the cyst wall. And this is not accidental, as might at first sight appear, for it must be remembered that the parovarium is normally situated near that end of the ovary which is farthest removed from the uterus.

In regard to the cells lining the interior, it is to be remarked that the ciliated ones, which theory demands, were not found. Well-marked cylindrical forms, however, were seen in these cases, but these were always associated with the lower and more cubical ones. The latter were the most constant, being present in all cases. In two cysts there was a single layer of flat epithelium. All stages from high to low forms of cell were found in the same specimen. These are supposed to arise from a thinning of the cyst wall, by which means the cells covering it are pulled out.

In one case a sort of papillary form was found like that occurring in a true ovarian cyst; and in another an unquestionable formation of gland tissue. It has usually been supposed that the accessory cysts which are occasionally found, were derived from other canals, as the normal parovarium has from ten to fifteen in all. But the author is inclined to regard them as retention cysts, from the glandular form mentioned above.

If one wishes to decide whether a cyst is of parovarian origin or not, there must be taken into account, first, whether its position in regard to the neighboring organs is analogous, and second, whether its anatomical structure is referable to it. In regard to the latter point, the author was unable to find any structure that was absolutely characteristic of it, unless it is ciliated epithelium, which must occur very infrequently.

⁵ Arch. fur Gynäkologie. Vol. 26, p. 460.

He is therefore forced back upon its position, as before stated, in relation to the tube and ovary, as the chief point in diagnosis.

Hospital Practice and Clinical Memoranda.

CASE OF GLANDERS. BOSTON CITY HOSPITAL.

OCCURRING IN THE SERVICE OF E. H. BRADFORD, M.D.

REPORTED BY ROBERT W. LOVETT, M.D., *House Surgeon*.

W. C., twenty-three years old, an Irishman by birth, had been employed for some months as hostler in the stables of one of the city horse-railroads. He was an intemperate fellow, and so often involved in rows and disputes that he was discharged from the company's employ August 4, 1885. During the last few weeks of his work in the stables he had been given the care of a horse, sick with what appeared to be influenza. Patient was in the habit of picking the scabs from this horse's nose, beside giving him pills and washing away the thick nasal discharge. But the horse grew worse and was sold as suspicious and unprofitable, probably about July 20th, but this date is uncertain. At this time the horse had developed no ulcerations or other positive signs of glanders, but he was regarded with so much suspicion that the patient had been cautioned as to the danger of inoculating himself, especially as he had at that time a sore hand which was generally bandaged.

After his discharge from the stables the patient went upon a considerable spree, secluding himself in his room and drinking heavily, but August 9th, he declared himself sick and took to his bed, complaining of pain in his back and of fever. He had no chills, but some vomiting, and August 11th, he was seen by a physician who pronounced the attack lumbago, and sent him to the City Hospital, where he was admitted.

At the time of admission he presented the appearance of a man in the early stage of typhoid fever. His temperature was 101; he complained of pain in his left side and his back, and his tongue was thickly coated. He had no cough, and the examination of his lungs and heart showed nothing abnormal. There was tenderness over the epigastrium and flanks, and a markedly tender point in the back over the tenth dorsal vertebra. The urine was normal.

He was given rum and quinine in moderate doses, but his fever gradually increased and his general condition became worse. August 15th there were found a few sonorous râles in both chests, and in the left side of the back there was an area of marked dullness extending from the ninth to the twelfth ribs and to the left of the spine for about two inches. This area was tender and slightly bulging.

For about a week there was no marked change, his condition was typhoidal but his mind was clear. His fever was still high, and August 21st a swelling of the dorsum of the right hand, looking like a cellulitis had appeared. There was also a small abscess upon the left calf and acute pain in the left foot was complained of. On August 22d, sixteen days after the first attack, one or two pustules were noticed upon the shoulders looking not unlike large acne pustules, and there were some reddish diffuse swellings upon the dorsum of the left hand. The sweating had begun to be profuse and

the breathing was becoming more rapid. At this time there was no noticeable nasal discharge and there had been no nosebleed. Both heart sounds were weak and variable and there was a systolic murmur at the apex of the heart. The glands of the neck were not swollen, nor was there any glandular enlargement, except in the inguinal glands.

August 23, the eruption was much more noticeable: the pustules were larger, and vesicles and papules were to be seen. There were not more than ten pustules in all this time, and these were situated upon the face and arms. The swelling in the left lumbar region was more prominent and fluctuation was felt. There were several reddish nodules, the size of a cherry, noticed upon the thighs and legs to-day, and reddish blotches with induration upon the feet and hands. He had a slight nosebleed at this time, and sniffed from time to time as if a mild coryza had begun. Examination showed uniform redness of the pharynx. At this time the patient was taking his nourishment very well, being fed every hour, and in addition to this he was given twelve ounces of brandy, and thirty grains of quinine daily. His breathing was rapid and rather shallow and his sweating was profuse. Altogether his appearance was that of a man suffering from severe septic poisoning. He answered questions intelligently although slowly and thickly, and seemed glad to be let alone and lie in a sort of half doze. There had been no diarrhoea and no tympanites.

Between the 23d and 25th of August the development of the eruption was very marked. Upon the 24th, vesicles, pustules, and papules abounded upon the arms and face while tubercles predominated upon the legs. The papules became vesicles and these in turn pustules, very rapidly, and throughout the eruption this seemed to be the course. The tubercles did not break down. Some of the vesicles and pustules were umbilicated, and on the right shoulder a number of pustules had united and broken down, leaving an ulcer with ragged everted edges.

Toward the night of the 25th, low typhoid delirium came on, and respiration became very shallow.

The morning of the 26th the patient was very much weaker and semicomatose. Tracheal râles came on at noon and the patient became a little cyanotic. He died at 6 P.M., August 26, twenty days after the onset of the disease and four days after the appearance of the eruption.

From first to last there was no marked glandular enlargement, and no severe coryza, symptoms of septic poisoning seemed to predominate over everything else, accompanied by markedly rapid breathing and profuse sweating. The development of the eruption was surprisingly rapid.

The accompanying chart indicates the course of the temperature, pulse and respiration.

An autopsy was made twenty-two hours after death by Dr. Gannett. Pustules, vesicles, and ulcers abounded upon the surface of the body, the ulcers evidently the result of the breaking down of pustules. The nodules and tubercles upon incision proved to contain pus between the subcutaneous fat tissue and the muscles. One of these nodules had reached the size of a walnut.

An incision made over the swelling in the left lumbar region showed nothing abnormal in the superficial layers, but the deeper layers of muscles from the spine of the left scapula downward were infiltrated with

pus over an area the size of the hand. Between the ninth and tenth ribs an opening from here communicated with a cavity in the perivertebral connective tissue to the left of the vertebral column from the

ninth to the eleventh ribs and along those ribs for a short distance to the left of the vertebral column. In addition there was found cloudy swelling of the heart, liver, and kidneys, and acute hyperplasia of the spleen with a certain amount of chronic endocarditis.

Some pus was taken during life from a pustule upon the left arm by Dr. Ernst and cover glass preparations made from it showed large and small micrococci and a number of small bacilli. Cultivations made from the pus of a nodule taken from the same arm after death, gave rapid and vigorous growth upon the second day as two distinct colonies; the first was yellow, glistening, and raised above the surface of the culture medium, the second was white. Under the microscope both colonies were seen to be made up of micrococci. About the seventh day a third colony made its appearance, growing very slowly, and of a brownish yellow color. Under the microscope this colony was found to be made up of fine rods about the size of the bacillus of tuberculosis, which answered to the description of the bacillus of glanders, both under the microscope and under cultivation.

— "Luminous doctors' signs are prominently advertised in the pages of a contemporary. That is just the kind of doctors who run the least to such things. As a rule, it is where the "inward and spiritual grace" least abounds that there is the greatest ostentation of the "outward and visible sign."