

## PRIMARY SARCOMA OF THE STOMACH.

WITH REPORT OF TWO CASES.

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THE interest of these two cases centres, first, in the fact that they are examples of a comparatively rare type of disease; second, that they presented symptoms of marked disagreement; and, third, that neither gave indications sufficiently suggestive of the pathological lesions existent. Without further comment, the history of each case will be first given.

CASE I.—Miss A. P., aged fifty-seven years, a teacher by profession, was seen in consultation with a local practitioner. The case was considered probably one of a large ovarian cyst, and the patient was accordingly removed to a private nursing home for operation. She was admitted in October, 1909. She had always enjoyed good health, and with the exception that she had recently suffered from occasional attacks of frequency of micturition, her only complaint was one of increasing discomfort from enlargement of the abdomen. She was perfectly clear and emphatic regarding the entire absence of any gastric symptoms, and being a particularly intelligent lady such a statement may be regarded as possessing the truth. Menstruation had ceased two years previously. Prior to that her periods had been regular and normal, accompanied only with some pain on the first day. Since the menopause there had been no symptoms referable to the uterus. Her previous history was free from any disturbances of a local or constitutional character. The lower part of the abdomen was very prominent, and a large swelling could be felt filling the hypogastric and

lower umbilical regions with a leaning towards the right flank. The tumor felt quite smooth on the surface and appeared movable. There was no indication of fluctuation. Pressure caused no pain, nor from the regularity of her bowels did it seem to have any obstructive effect upon the intestines. Both flanks were resonant. An examination *per vaginam* revealed a small but freely movable uterus; both fornices were empty, and the tumor seemed to be entirely without the pelvic cavity.

The abdomen was opened by a curved incision below the umbilicus. A smooth rounded tumor was at once encountered presenting a somewhat dark mottled and striped appearance. The hand introduced into the abdomen felt a nodular projection at the upper part, with attachments below to the omentum and above to the stomach. The growth was felt to be free from any connections with the pelvic viscera. A small median incision carried upwards permitted the tumor to be brought out. After tying off the few omental adhesions, the growth was then discovered to be united by a solid pedicle, about the diameter of the thumb, to the greater curvature of the stomach some two inches or so from the pylorus. The part of the gastric parietes involved was excised, and the aperture closed by a double row of sutures. The patient made an uninterrupted recovery.

The specimen when examined after removal was found to be a large unilocular cystic tumor with smooth external wall, and filled with laminated clot. It measured  $14 \times 14 \times 11\frac{1}{2}$  cm., and was adherent to the wall of the stomach. A portion of the stomach wall with tumor tissue invading it, of the size of a walnut, was also submitted for examination, and on section presented a somewhat gelatinous appearance with healthy-looking mucosa covering it. Section of the wall of the cyst showed, under a low power, a fibrous stroma supporting a cellular element. In parts of the section the structure was of a somewhat loose character; in others more dense and cellular. At the periphery the fibrous character was more apparent, and the outer part of the tumor area had an appearance not unlike that of a spindle-celled sarcoma. In the central part of the section thin-walled congested vessels were fairly abundant, and extravasations of red blood-corpuscles were also apparent. Spaces resembling fat cells were also seen in the section. With the high power the characters of the cells which composed the tumor

were found to fall into two groups—cells of connective-tissue origin, fibroplastic and definitely spindle in shape; and larger cells of spherical shape with sharply staining nucleus and a large protoplasmic body deficient in chromatin. Well-formed blood-vessels were present in the section, and in a few places small nodules of lymphoid cells were also present. The characters of the section would suggest a tumor of mesoblastic origin, viz., a mesothelioma. Microscopic examination of the stomach wall showed that the mucous membrane and submucous layers were unaffected by the tumor involvement, but the muscular wall showed extensive infiltration. Areas of tumor cells extended between the muscular bundles, and in parts replaced them. Under the high power the same character of cells was noticed as above described in the cyst wall, but the larger spherical cells were more abundant.

CASE II.—R. H., aged sixty-three years, was admitted to the Victoria Infirmary in July, 1903, suffering from a tuberculous stricture of the rectum. At this time there were no gastric symptoms, his trouble being entirely referable to the rectum. The stricture was successfully excised, and he remained well for some years. He then began to be troubled with prolapse of the rectum and some incontinence of feces. For this he was again admitted to the Infirmary in September, 1909, *i.e.*, six years after his first admission. During this period of residence he complained of very distinct gastric symptoms—he had a distaste for food and felt occasional pain in the epigastrium; the latter, however, seemed to have no association with the ingestion of food. He did not vomit, nor did he feel any inclination to do so. There was no tenderness in palpating the epigastrium, nor could anything be felt; he was, however, quite definite and positive in his statement that a lump occasionally appeared on the “left side of his belly” just below the costal margin. As the condition of the bowel was solely under consideration, the gastric symptoms did not receive the amount of attention they deserved. He was in a very low and enfeebled state of health, and succumbed after the operation attempted to relieve the prolapse. A postmortem was obtained, when the following conditions in connection with the stomach were found:

Adherent to the stomach was a large cystic tumor, somewhat larger in size than a child's head, springing from the greater

curvature of the stomach, with smooth external wall, unilocular, filled with blood-stained fluid, and soft tumor tissue resembling in appearance partly organized blood-clot. The mucosa was healthy. The microscopical examination of the tumor showed its character to be that of a spindle-celled sarcoma, fairly dense in consistency. Throughout the section were noted a number of new-formed thin-walled vessels filled with blood, and in parts extravasations of blood were seen. The section through the stomach wall showed tumor infiltration of the serous and muscular coats. The mucosa was found uninvolved. There were no evidences of tumor formation in any other part of the body.

*Remarks by Mr. Maylard.*—Primary sarcoma of the stomach, as judged by recorded cases, seems a very rare disease, and more particularly so if the pyloric region be excluded. In other words, cases such as those just described, of well-defined and distinct non-ulcerative growths springing from the mid-gastric parietes, are extremely exceptional. Probably one of the earliest recorded cases, or, at least, one of the earliest successful cases of removal of a tumor of this nature from the stomach, is that of Billroth's in 1881. Since then isolated cases have from time to time been reported, and if foreign records be excluded, very few have been published in the English language. In the past they appear to have been more frequently met with in the post-mortem room than in the operating theatre; and a really correct appreciation of the frequency of the disease, therefore, could only be obtained by a combined investigation of surgical and pathological records. There are two published cases which I will refer to more particularly, because in certain points they markedly resemble my own. In one, recorded by Hartley (*ANNALS OF SURGERY*, vol. xxiii, 1896, p. 609), the tumor was a spindle-celled sarcoma, like, therefore, my second case. In the other, recorded by Cantwell (*ANNALS OF SURGERY*, vol. xxx, 1899, p. 596), the clinical resemblance to my first case was most striking; in neither were there any symptoms attributable to the stomach, indeed, the sole complaint made by each was the increasing discomfort engendered by the abdominal distention. Strangely, also, a

further agreement existed in the fact that in both instances it was thought likely that the tumor was connected with the genital organs. I must own that no other thought entered my head; for although a vaginal examination showed the pelvic organs free, it simply left the impression that the supposed ovarian cystoma had swung itself free of the cavity of the pelvis. We were further misled by the patient's statement that she first noticed the swelling in the right flank. It must be deemed a remarkable fact, as much in my own case as in that of Cantwell's, that such large tumors could hang from the gastric parietes without interfering with the normal functions of the viscus and causing some sort of dyspeptic symptoms.

*Remarks by Dr. Anderson.*—Both the tumors presented a marked similarity in their external appearances, being cystic in character and covered by a smooth external peritoneal lining, and both springing by a definite pedicle from the wall of the stomach, the mucosa of which in both cases was uninvolved. The second case presented the definite microscopical appearances of a spindle-celled sarcoma; the first case, on the other hand, showed the presence of characters of a spindle-celled sarcoma and endothelioma in different parts. The following quotation from a paper upon the subject by McCormick and Welsh (*Australasian Medical Gazette*, July 20, 1906) is of interest. These authors state: "It is sometimes hard to decide whether the growth has started in the stomach or has taken its origin in some adjacent structure. In the case of the spindle-celled sarcomata, they rarely present this difficulty of interpretation, and their origin in the submucosa is more generally accepted. They commonly take the form of localized growths which sooner or later project from the outer surface of the stomach, and when, as so often happens, they grow from the posterior wall, they pass into the lesser sac of the peritoneum, which they may come to distend. As they increase in size, they frequently become pedunculated and may form adhesions to adjacent structures."

It is in connection with the first case, in which both spindle

and endothelial cells are present, that the difficulty arises. I described it in the account of one section as a mesothelioma, and from this I infer that it had its origin in or beneath the serous coat. Similar difficulties in reviewing the tumors of the round-celled sarcomata group have been experienced by the above-named authors; but here the question was whether the case was a primary sarcoma or secondary infiltration of the stomach wall of the nature of that seen in lymphocythæmia. But the clinical history and present satisfactory condition of the patient are more in favor of the opinion I have expressed.