PRIMARY SARCOMA OF THE VERMIFORM APPENDIX.

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ALTHOUGH cases of primary malignant disease of the vermiform appendix have been recorded frequently of recent years, the great majority are examples of carcinoma. Harte, writing in 1908, collected 120 cases, 114 being carcinomata and only 6 sarcomata. I have been able to find records of two other cases, which, with the one recorded below, bring the total up to 9.

The following is a short account of my case.

A delicate, emaciated boy of 17 years was sent to Ancoats Hospital on January 7th, 1909, by Dr. Gregory of Longsight. He had been constipated for ten days, but the bowels had acted after aperients. He had severe colicky pains in the abdomen, and the day before admission began to vomit. On that day also Dr. Gregory felt a mass extending across the abdomen at the level of the umbilicus.

On admission the patient complained greatly of pain in the abdomen, which was slightly distended. There was evident visible peristalsis, the coils of intestine forming ladder patterns. The right flank was dull on percussion, and an indefinite mass could be felt there. The temperature and pulse-rate were both slightly elevated.

Operation.

On the following day the abdomen was opened through the right lower rectus, and an intussusception was found commencing in the caecum and extending to the trans-

The patient did well for four days and then leakage occurred, and a subphrenic abscess developed, which was opened by the transthoracic route on January 15th. A faecal fistula persisted for about nine months, healing at times, and breaking open again, but the wound has been soundly healed since November, 1909, and the patient enjoys good health and shows no sign of recurrence. About the end of 1910 several small nodules appeared on the right side of the chest, which on microscopic examination proved to be normal lymphatic glands. These have since disappeared.

Examination of Specimen.

The distal half of the appendix was converted into a solid mass, the lumen being obliterated, and the peritoneal coat thickened and pearly white. The basal portion was invaginated into the caecum, and was much swollen and engorged. Several enlarged glands were present in the ileo-colic angle, which on section had a dark red, mottled appearance. The whole of the caecum and ascending colon was thickened and oedematous, as a result of the intussusception which had been present.

Microscopical examination of the tumour in the appendix revealed a tumour-mass of round cells completely replacing the mucous and submucous coats of the organ and invading the muscular wall. The lumen was entirely filled by the growth, which had the appearance of a lymphosarcoma. The muscular and peritoneal coats were much thickened. The enlarged glands were the seat of secondary growths, and in addition showed well marked haemolymph changes.

I am indebted to Professor Lorrain Smith for kindly examining

the specimen and expressing an opinion on the nature of the growth.

An analysis of the 9 recorded cases shows that in the majority the growth was a round-cell sarcoma, four being classified as round-cell sarcoma, and two as lymphosarcoma; and it is possible that all were really examples of lymphosarcoma, as this is the type of tumour which might be expected to originate in an organ so rich in lymphatic tissue as the appendix. One case was called an

Fig. 1.—A, Tip of appendix divided longitudinally, showing a, thickened peritoneal coat; b, tumour mass. B, Invaginated base of appendix. c, Secondary glands in ileo-colic angle.

Fig. 2.—High power view of primary tumour in appendix, showing edge of tumour invading the muscular wall.

verse colon. This was easily reduced, and was then seen to have begun as a partial invagination of the appendix into the caecum.

The tip of the appendix was about the size of the terminal phalanx of the thumb, and was white and glistening from thickening of the peritoneal coat, and there were several enlarged glands lying along the inner side of the ascending colon. The condition was regarded as a malignant growth, and as it was necessary to interfere with the blood supply of the colon in order to remove the glands thoroughly, the caecum, ascending colon, appendix, glands, and terminal portion of the ileum were removed in one mass. The divided ends of the bowel were closed and a lateral anastomosis established between the ileum and the colon.

Fig. 3.—Low power view of gland, showing secondary growth and haemolymph changes.

endothelial sarcoma, and two were classified as fibrosarcoma or spindle-cell sarcoma, but in both these latter cases inflammatory changes were present, and the diagnosis seems to be doubtful.

The process seems to begin in the submucous coat of the appendix, and to extend outwards into the muscular coat, the mucosa being next affected, while the peritoneal covering remains unaffected for a long time. The whole organ was involved in six of the cases, and in two of these (the cases of fibro-sarcoma) the process had spread from the appendix to the surrounding parts. The tumour was located twice in the distal half of the appendix, and once

in the proximal half and the adjoining part of the caecum. In three instances secondary growths were present in the neighbouring lymphatic glands.

The patients varied in age from 6 to 55 years. In the small number of cases recorded the male sex predominates, 6 being males and 3 females.

The symptoms calling for treatment were usually those of recurrent appendicitis—namely, attacks of pain in the appendix region. This was the case in six instances, and in one operation was performed during an acute attack. Carwardine's patient suffered from colic and diarrhoea with loss of flesh for five months, and my own patient was operated on for acute intestinal obstruction set up by an intussusception which apparently originated in a partial invagination of the appendix into the caecum, similar to that which was present in Carwardine's case. On one occasion only was the condition discovered accidentally at a *post-mortem* examination. A definite mass was felt before operation in five cases.

The extent of operation deemed necessary was much greater than in primary carcinoma; simple appendicectomy was performed on two occasions only, the appendix and part of the caecum were removed twice, the whole of the caecum twice, and the ileo-caecal region and ascending colon twice.

The results of operation also go to show that the condition is more malignant than primary carcinoma. Five cases were reported free from recurrence a few weeks, five months, five months, two and a half years, and four years after operation. Two cases were followed by recurrence six weeks and two years after operation, and one patient died in a few hours of operative shock.

That primary sarcoma of the appendix is a more truly malignant tumour than primary carcinoma is borne out by the greater extent of the original growth, the greater frequency of secondary deposits, the more extensive operation required, and the higher percentage of recurrence.

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THE IMPORTANCE OF DRAINAGE IN SEPTIC CONDITIONS OF THE UTERUS.

BY

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DR. A. W. RUSSELL, in his presidential address to the Glasgow Obstetrical and Gynaecological Society, stated on the authority of the Registrar-General that in the year 1908 119 deaths from puerperal fever occurred in Glasgow, and that the deaths in Scotland from this cause during the ten years 1899-1908 numbered nearly 3,000, being in fact 2,612. Dr. Russell naturally says, "What a toll to pay to defective method!"

Dr. Robert Jardine, in his excellent work on *Clinical Obstetrics*, the third edition of which was issued last year, furnishes statistics of thirty years' work in the Glasgow Maternity Hospital. In the outdoor department during the thirty years 1869-1898 there were 41,111 cases, with a total mortality of 188 patients, the deaths during the three decades being respectively 60, 72, and 56—the last figure giving a mortality of 1 in 218 cases. The deaths ascribed to septicaemia were 46, being for the three decades 18, 14, and 14—the last figure giving a ratio of 1 in 894 patients.

During the thirty years mentioned, there were 10,179 indoor patients, with a total mortality of 213, or 1 in 48. There were 95 deaths attributed to septicaemia, being for the respective decades 20, 31, and 44—the last figure giving a proportion of 1 in 107; that is to say, the proportion of deaths from septicaemia in the indoor department was eight times greater than that in the outdoor department of the hospital.

The difficult and complicated cases are, of course, removed to the hospital, but these figures prove the seriousness of septicaemia in the puerperal state, and that our control of it is still very inadequate.

I have recently been looking up Smellie's *Midwifery*, annotated for the Sydenham Society by Dr. A. H. McLintock, issued in 1876. Dr. Smellie may be said to be the father of scientific midwifery, and it was his proud boast that he studied Nature closely, and imitated her methods. "In a word," he says, "I diligently attended to the course and operations of Nature which occurred in my practice, regulating and improving myself by that infallible standard." Smellie was born in or near Lanark in 1697, and practised there, finally removing to London, where he practised and taught the science and art of midwifery for many years. Smellie stated that of 1,000 women left entirely to Nature, only one would die in childbirth. The outdoor department of the Maternity, we have seen, gave a mortality of 1 in 894 patients, not far away from Smellie's standard. It is to be presumed that in the outdoor work all very difficult cases were removed to the hospital and go to swell the mortality bill of the indoor department.

Smellie knew nothing about germs, and there is not much reference to puerperal fever in his work. Cases are undoubtedly cited of that nature, although not known by that name. Smellie says: "Most of the complaints incident to women after delivery proceed either from the obstruction of the lochia in the uterus or of the milk in the breasts, occasioned by anything that will produce a fever." Smellie was alive to the danger of the lochial discharge ceasing too soon, and its connexion with "restlessness, fever, a full, hard pulse, pains in the head and back, nausea, and difficulty in breathing."

In 1795, according to Dr. Jardine, Dr. Alexander Gordon, of Aberdeen, published his views regarding the contagious nature of puerperal fever, maintaining that there "was a specific contagion or infection altogether unconnected with a noxious condition of the atmosphere." About 1843 Oliver Wendell Holmes recognized the same fact, and published minute instructions for the guidance of the physician by way of prevention. In 1847 Semmelweis published his views, fully corroborating previous observations.

Lister's observations and work in the Glasgow Royal Infirmary from 1861 and onwards completely revolutionized our whole conception of diseases, and threw an immense flood of light on sepsis, not only in general surgery, but also on obstetrics. Diseases were not generated *de novo* in the human body, but came from without, being imported in various ways, by the air we breathe, the water we drink, or the food we consume, or by opening up channels to infection by our hands, instruments, or clothing.

Regarding the various causes which are held to produce general puerperal septicaemia, I may mention the following: Erysipelas and scarlet fever are notorious among the zymotic diseases, and as a rule, if the virus be introduced into the generative tract, are fatal. Sewer gas escaping into the lying-in chamber is apt to bring on a fever resembling puerperal septicaemia. Dr. William Playfair, in his work on *Midwifery*, cites several cases to support this view, and showed that wide oscillations of temperature occurred. We have all read or heard of doctors who had to abandon the practice of midwifery for a time, to get rid of the infection they were carrying about with them. This fact has never been contradicted, so far as I know; and those who come much in contact with septic cases, either in hospital or private work, other things being equal, are much more liable to convey infection to patients than others not so circumstanced. In this respect the family practitioner has the advantage of the specialist. Excluding infectious diseases proper, we narrow down the causes of puerperal septicaemia to the direct conveyance of septic matter to some part of the genital organs by the nurse or