Necropsy revealed a ruptured dissecting aneurysm of the aorta. The second case was that of an infant who developed cardiac arrest during circumcision under chloroform anaesthesia. Cardiac resuscitation was successfully performed. The factors concerned in the treatment of cardiac arrest occurring beyond the hospital are discussed and emphasis is placed on active resuscitation being attempted in all cases.

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REFERENCES

- Beck, C. S., Weckesser, E. C., and Barry, F. M. (1956). *J. Amer. med. Ass.*, **161**, 434.
 Clemetson, C. A. B. (1959). *Brit. med. J.*, **2**, 14.
 Goodman, L. S., and Gilman, A. (1955). *The Pharmacological Basis of Therapeutics*, 2nd ed., p. 59. Macmillan, New York.
 Halpern, R., and Weber, A. O. (1961). *J. Amer. med. Ass.*, **175**, 141.
 Hannon, D. W., Brainard, J. B., and Flom, R. S. (1957). *Dis. Chest*, **31**, 655.
 Kouwenhoven, W. B., Jude, J. R., and Knickerbocker, G. G. (1960). *J. Amer. med. Ass.*, **173**, 1064.
 Lee, J. A. (1959). *A Synopsis of Anaesthesia*, 4th ed., p. 105. Wright, Bristol.
 Leighninger, D. S., and Hingson, R. A. (1960). *Ohio St. med. J.*, **56**, 1653.
 Milstein, B. B. (1956). *Ann. roy. Coll. Surg. Engl.*, **19**, 69.
 Palomera, E. S. (1952). *Int. Abstr. Surg.*, **95**, 313.
 Reagan, L. B., Young, K. R., and Nicholson, J. W. (1956). *Surg.*, **39**, 482.
 Safar, P., and McMahon, M. (1958). *J. Amer. med. Ass.*, **166**, 1459.
 Walton, R. S. (1960). *Brit. med. J.*, **1**, 155.
 Wylie, W. D. (1956). *Brit. J. Anaesth.*, **28**, 551.

Medical Memoranda

Case of Ovarian Fibroma and Meigs's Syndrome

Ovarian fibromata represent 2 to 5% of all ovarian tumours (Dockerty and Masson, 1944); less than 20% are associated with ascites, and of these less than 1% with hydrothorax. The cause of the ascites and the mechanism of transfer of fluid to the pleural cavity (right more often than left) are still in dispute (Meigs *et al.*, 1943; Rubin *et al.*, 1944; Meigs, 1954a; Cowan *et al.*, 1954; Reiss, 1960). Meigs (1957) reviewed the problem in some detail.

The following case of ovarian fibroma is reported as illustrating some of the less commonly emphasized features in the natural history of Meigs's syndrome.

CASE REPORT

A married woman aged 71 was admitted to Hackney Hospital, under the care of Dr. J. A. Cardno, on August 21, 1959, after a febrile illness for one week, associated with dry cough, breathlessness, and pain in the right side of the chest. She also complained of abdominal pain and alternating constipation and diarrhoea for six months, with faecal incontinence in recent weeks.

Twenty years ago she had first noted a mass in the abdomen. In 1943 she had an abdominal operation in another hospital, and was told she had an inoperable ovarian cyst. She was transferred to a home for terminal care, but discharged herself after some months, and had

been fairly well and active until the onset of the present symptoms. She had had four normal deliveries, the last one 41 years ago, followed one year later by a prolapse repair. The menopause had occurred at the age of 53, with no vaginal bleeding or discharge since.

On examination she was quite well nourished and not anaemic or cyanosed. The temperature was 99.4° F. (37.4° C.), the pulse 112, and respirations 22. In the chest the right lower zone was dull to percussion, with reduced air entry and crepitations. Apart from a blood-pressure of 220/110 mm. Hg, the cardiovascular system was normal. The abdomen was occupied by a hard craggy mass which extended to the umbilicus. A diagnosis of bronchitis and right-lower-lobe collapse was made, and after treatment with penicillin, analgesics, and expectorants her respiratory symptoms resolved. X-ray examination of the chest showed only thickening of the pleura at the right base.

At this stage a gynaecological opinion was requested. On examination there appeared to be two distinct masses in the lower abdomen, though a possible midline union could not be excluded. The left tumour, larger than a full-term foetal head, arose from the pelvis and extended to the umbilicus and out into the left flank. The right tumour was smaller, but extended to above the iliac crest. Both were stony hard, irregular, and immobile. The liver, spleen, and kidneys were not palpable; there was no ascites or oedema of the legs. Vaginal examination showed that the whole pelvis was occupied by the lower pole of the left-sided mass; it was inseparable from the cervix, which was atrophic and displaced anteriorly and to the left. On rectal examination the mass was outside the rectum, the lumen of which was almost entirely occluded.

A provisional diagnosis of calcified uterine fibroids and right-sided ovarian fibroma was made, but x-ray examination showed only a soft-tissue mass without calcification.

The following summary was obtained from the hospital where treatment had been given in 1943. "Admitted May 4, 1943, with four years' history of abdominal pain and swelling, shortness of breath, and loss of weight. On examination, right-sided pleural effusion; ascites; hard nodular masses palpable in both iliac fossae, continuous with a hard tumour in the pouch of Douglas. Three pints of blood-stained fluid aspirated from abdomen, and two pints from right pleural cavity. At laparotomy a further large amount of ascitic fluid drained. Bilateral ovarian carcinoma invading both pelvic walls was diagnosed and the abdomen closed without biopsy. Further abdominal paracentesis necessary three weeks later; the fluid soon returned, oedema of the legs and vulva appeared, and she was discharged to a home for terminal care seven weeks after admission."

In view of the lapse of 16 years and the symptoms of rectal obstruction, it was decided to re-explore the abdomen. On September 11, 1959, the abdomen was opened by a midline subumbilical incision. There was half a pint (285 ml.) of clear ascitic fluid. A large single irregular lobulated mass arose from the left ovary, with a further extension impacted in and entirely filling the pouch of Douglas. It was firmly adherent to the peritoneum of the pelvic floor and lateral walls, descending colon, back of uterus, and left broad ligament. The uterus and right ovary were atrophic and normal; the rest of the abdominal cavity was free from adhesions or secondary deposits.

With some difficulty the mass was mobilized and excised intact. Both ureters were intimately related to the tumour bed, and were dissected free. A small hole in the anterior wall of the descending colon was repaired. Bleeding was heavy, being finally checked by ligating the left internal iliac artery. A right salpingo-oophorectomy was also performed and 2 pints (1,140 ml.) of blood transfused.

The post-operative course was uneventful, and when she was discharged on October 5 normal bowel habits had been re-established. The patient has been well at subsequent visits.

The specimen (Fig. 1) consists of an irregular lobulated mass measuring 10 by 7½ by 4½ in. (25 by 19 by 11.4 cm.), and weighing 4 lb. 11 oz. (1,930 g.). The cut surface presents the typical white whorled appearance of an ovarian fibroma, and this is confirmed histologically (Fig. 2).

FIG. 1.—Specimen removed at operation.

FIG. 2.—Section enlarged $\times 275$.

DISCUSSION

In retrospect it would appear that this patient in 1943 exhibited the features of Meigs's syndrome. Meigs (1954b) has laid down the following criteria for the diagnosis of the syndrome: (1) the tumour must be benign, solid, and of ovarian origin such as fibroma, thecoma, granulosa-cell tumour, or Brenner tumour; (2) ascites and hydrothorax must be present; and (3) removal of the tumour must be followed by disappearance of the effusions with no recurrence.

Meigs (1954a) himself, however, has included in his review of 84 recognized cases the early ones of Spiegelberg (1866) and Cullingworth (1879), in both of which the diagnosis of ovarian fibroma associated with ascites and hydrothorax was made at necropsy, and in which therefore the third condition could not be satisfied.

Usually in this syndrome the hydrothorax and ascites re-accumulate even after repeated tapping until operative removal of the tumour (Meigs and Cass, 1937). That this is not invariably so is illustrated by Lawson Tait's (1892) case, the first in which operation led to cure. Tait's patient, first seen in 1890 at the age of 36 years, had abdominal distension,

alternating diarrhoea and constipation, cough, dyspnoea, and night sweats. She was emaciated and dyspnoeic, with a left-sided blood-stained pleural effusion, ascites, and a solid pelvic tumour. The left pleural cavity was tapped twice in January, 1890; the abdomen was tapped 30 times in the next 14 months, with the release of between 8 and 14 quarts (9 and 15.9 litres) each time. Operation was not attempted until March, 1891, when, contrary to expectation, her general health had improved. An ovarian fibroma weighing 2 lb. 2 oz. (965 g.) was removed, and complete recovery ensued. At the time of operation there had been no recurrence of pleural fluid since the second tapping in January, 1890.

The present case serves to re-emphasize that, though this syndrome is a "benign" condition, patients are not infrequently found to have profound loss of weight and even cachexia; there may be a change in bowel habit, with spurious diarrhoea, oedema of the vulva and legs, and rapid recurrence of the effusions after tapping. In association with the occasional blood-stained tap, these findings are extremely misleading, and we must pay tribute to the wisdom of Lawson Tait's conclusion "on the advisability of extending the principles of exploratory and confirmatory incision in abdominal disease to an almost universal application." A further feature in the natural history of the disease is that in this case the patient's condition improved in the absence of treatment, so that when seen in 1959 she had no hydrothorax, only minimal clear ascites, and no oedema of the vulva or legs; and she had actually gained weight since 1943.

This case was reported to the Section of Obstetrics and Gynaecology, of the Royal Society of Medicine, on January 22, 1960.

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REFERENCES

- Cowan, I. I., Cron, R. S., Burgess, G. F., and Kariotis, F. G. (1954). *Surg. Gynec. Obstet.*, **98**, 721.
Cullingworth, C. J. (1879). *Trans. obstet. Soc. Lond.*, **21**, 276.
Dockerty, M. B., and Masson, J. C. (1944). *Amer. J. Obstet. Gynec.*, **47**, 741.
Meigs, J. V. (1954a) *Ibid.*, **67**, 962.
— (1954b). *Obstet. and Gynec.*, **3**, 471.
— (1957). In *Progress in Gynecology*, **3**, 424. Grune and Stratton, New York.
— Armstrong, S. H., and Hamilton, H. H. (1943). *Amer. J. Obstet. Gynec.*, **46**, 19.
— and Cass, J. W. (1937). *Ibid.*, **33**, 249.
Reiss, H. E. (1960). *Brit. med. J.*, **2**, 736.
Rubin, I. C., Novak, J., and Squire, J. J. (1944). *Amer. J. Obstet. Gynec.*, **48**, 601.
Spiegelberg, O. (1866). *Mschr. Geburtsh.*, **28**, 415.
Tait, L. (1892). *Med.-chir. Trans.*, **75**, 109.

"If I only make a cursory reference to another category of accidents—accidents at work in industry and agriculture—it is because I wish to draw very particular attention to accidents in the home. The number of such accidents continues to increase: because of the increase in population, because there are more old people, and because more and more potentially dangerous devices and products are coming into use. Women are the main victims of these accidents. In Great Britain, of the 45 accidental deaths which occur every day, 14 are due to traffic accidents, five to accidents at work, and 24 to accidents in or near the home. The home seems to combine all the dangers facing primitive man with the dangers of civilization: water, fire, gas, electricity, toxic products, not to speak of faults of design in furniture and buildings which made them particularly dangerous." (Dr. P. J. J. van de Calseyde, W.H.O.)