

from the paralysis in the arm was good and rapid. Improvement in the lower limb was much slower and less complete, but she left hospital on Oct. 29th walking fairly well with the aid of a stick.

CASE 2.—The patient was an old woman with a large ovarian cyst almost filling the abdomen. The cyst wall had ruptured, setting free a large quantity of colloid material into the general peritoneal cavity. The tumour had evidently undergone malignant changes, and masses like boiled sago had infiltrated the uterus and pouch of Douglas. The cyst was removed on Sept. 22nd, 1913. The operation was simple and lasted less than an hour; there was no shock. The Trendelenburg position was not employed. The operation was performed at 9 A.M. On the following morning she was noticed to have right hemiplegia (including the face) with aphasia. Coma with difficulty in swallowing appeared on the next day, and death took place on the morning of the 26th. On the evening of the 25th the temperature, which had up to that point remained normal, rose to 37.7° C.

Post mortem the entire left cerebral hemisphere showed white softening; there were no signs of hæmorrhage. The aorta above the valve cusps presented slight atheromatous changes. There was no sign of sepsis in the peritoneum.

The occurrence of two such rare accidents so near each other at first suggested there must be some cause common to the conditions under which both operations were done. Beyond the fact, however, that the temperature in the theatre was extremely high and the humidity great, there was no striking peculiarity that I am aware of. Much the same conditions occur every August and September in Alexandria, and besides, on one of the intervening days (Sept. 18th) an ovariectomy for dermoid cyst with twisted pedicle was done by the same *personnel* and followed a normal course.

As regards the cause of the hemiplegia, one naturally first thought of the three common possibilities: hæmorrhage, thrombosis, and embolism. There appears to me to be no special reason why cerebral hæmorrhage should occur *after* operation, although one can imagine that at the time of operation the Trendelenburg position or vomiting might favour such an event. The post-mortem findings, too, in Case 2 put this out of the question. If embolism was responsible one has to imagine that a thrombus displaced from the pelvic veins either traversed the lung capillaries without producing symptoms, or else passed directly to the brain *via* a patent foramen ovale or ductus arteriosus. At the necropsy the foramen ovale was not noticed to be patent, but unfortunately the hospital pathologist was not present, and my own attention was not especially directed to that point.

Schenk read a very complete paper on Thrombosis and Embolism following Operation at the American Gynæcological Society in 1913, and the subject was also touched on in the recent discussion on Bland-Sutton's paper on the Visceral Complications in Hysterectomy for Fibroids at the Medical Society of London.¹ One fact appears from the study of these papers, and that is that thrombosis and pulmonary embolism are markedly more common after myoma than after other pelvic operations. Thus, in laparotomies for pelvic conditions of all kinds thrombosis occurs in 2.28 per cent., whereas after myoma operations the percentage rises to 3.7, or even 5 per cent.

With regard to certain theories that have been put forward, it may be mentioned that in both my cases the abdominal wounds were sutured in layers. In the hysterectomy case the retraction of the abdominal walls was vigorous, in the ovariectomy

case slight or not at all. It would be out of place to go into the causation of post-operative thrombosis in general, but it appears to me that the anæmic condition of most cases of fibroids may be a predisposing factor, and, furthermore, if slowing of the blood stream be accepted as one of the causes, may not the modern fashion of adopting a semi-recumbent or sitting-up posture increase the tendency in the same direction?

Alexandria.

SECONDARY HÆMORRHAGE FROM DEEP EPIGASTRIC ARTERY AFTER OPERATIONS FOR APPENDIX ABSCESS.

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I AM not aware that attention has been called to this most serious happening.

On May 15th, 1913, I was called in by Dr. H. E. Giffard, of Egham, to operate on a boy, aged 16, suffering from a large appendix abscess. A secondary operation was required to open a collection of pus per rectum a week later. The boy was making good progress till the evening of the 25th, when I received an urgent message that he was bleeding badly. I found he had lost a large amount of blood, and it was spurting from the lower angle of the abdominal wound. This hæmorrhage was controlled by compression between the finger and thumb till chloroform could be administered. Two deep thread sutures were then passed through the whole thickness of the abdominal wall at the inner edge of the wound, and all hæmorrhage ceased. The boy made a good recovery.

The second case occurred recently and was seen in consultation with Dr. D. H. Anderson and Dr. T. E. Cottu of Maidenhead. The patient, a strong young man, aged 28, had been operated on by Dr. Cottu on Dec. 3rd, 1913, for appendix abscess, the incision being the anterior vertical one through the rectus sheath. He made excellent progress till the afternoon of the 13th, when a large amount of hæmorrhage occurred. Dr. Cottu examined the wound under an anæsthetic, and as the condition of the wound forbade any hope of direct ligature succeeded in arresting the bleeding by plugging. The patient's condition was very serious. When seen the next day in consultation this plugging was removed and there were no signs of hæmorrhage. As the whole area was in a most septic condition, it was judged advisable to keep the patient under close observation and not to disturb the parts further. On the evening of the 16th hæmorrhage again occurred and came from the deep aspect of the abdominal wall at the lower angle of the wound. Ligatures failed to hold, and two large pairs of artery forceps were left on the bleeding spot. This controlled the hæmorrhage, but in spite of transfusion the patient never rallied and died two hours later.

Conclusions.—Both operations were done by the vertical incision through the rectus sheath. In future in all cases in which this incision has to be carried somewhat low down, when the drainage-tube of necessity must lie in close proximity to the deep epigastric vessels, it is my intention to divide these vessels between ligatures when first seen. If immediate suture fails to arrest the bleeding it seems to me the obvious course is to tie the artery through a separate incision. In the first case

¹ THE LANCET, Nov. 1st, 1913, pp. 1249, 1256.

immediate suture sufficed. In the second case the state of the tissues and the almost moribund condition of the patient forced the expedient of leaving on the bleeding spot a pair of forceps.

Windsor.

RUPTURE OF THE HEART BY EXTERNAL VIOLENCE.

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CONSIDERING the great frequency of injuries to the thorax, it is remarkable how seldom the heart suffers in consequence. Wounds of the heart muscle may be inflicted by instruments or bullets penetrating the thoracic wall from without, and spontaneous rupture of the heart has been described, usually associated with a pathological condition of the muscle. Injuries to valve segments have resulted in rare cases from blows upon the chest, and Bernstein and Ravenstorf in Germany have both described cases of rupture of the heart by traumatism. Rupture of the heart as the result of external violence to the chest walls is undoubtedly an event of sufficient rarity to warrant its occurrence being recorded.

The patient in the case now reported was brought into hospital in a dying condition, and only survived a few minutes. She was a sparely built, emaciated woman between 60 and 70 years of age; her scalp was almost completely replaced by old cicatricial tissue, which extended down over the forehead and cheeks, and almost wholly replaced the left auricle and closed over the external auditory meatus. No external bruising was present, and the only history obtainable was that of having been knocked down by a cart, one shaft of which had probably struck her in the right mammary region. Possibly an hour had elapsed from the time of the accident till her death in the reception room of the hospital.

A necropsy was made 48 hours later, and the following report summarises the conditions found.

Thorax.—The second, third, fourth, fifth, and sixth ribs of the right side were fractured, each about $\frac{1}{2}$ – $\frac{3}{4}$ inch from the costo-chondral junctions. The anterior fragments of the third and fourth right ribs were driven inwards into the thoracic cavity for a distance of about $\frac{1}{2}$ inch, but the costal pleura over their ends was not ruptured. There was some hæmorrhage into the subpleural tissues over the sites of these fractures. The fourth right costal cartilage was fractured through its junction with the sternum. From the lower border of this latter fracture another fracture arose which passed across the sternum to terminate at the upper edge of the fourth left costal cartilage. There was no tearing of the tissues in the immediate neighbourhood of this sternal fracture. The sixth left rib was fractured at a point $1\frac{1}{2}$ inches from its costo-chondral junction; the costal pleura was thereby torn, and there was a little hæmorrhage into the subpleural tissues in the immediate neighbourhood.

Pericardium.—About 10 ounces of fluid blood were present in the pericardial sac, but the pericardium was otherwise healthy.

Heart.—There was slight general dilatation of the heart, and the cardiac muscle was pale and soft. A microscopical examination of the cardiac muscle

revealed some brown atrophy of the muscle fibres, but this could not be considered more excessive than one would expect in an individual of this age. No valvular lesions were present, and the coronary arteries were healthy. Patches of atheroma were present throughout the aorta. In the anterior wall of the left ventricle there were two ruptures, half an inch apart, extending across the wall parallel to one another in a horizontal and downward direction from the middle line outwards. The edges of these wounds were somewhat irregular and ragged.

The *upper wound* measured $1\frac{1}{2}$ inches long on its epicardial surface, and extended right through the wall of the left ventricle and caused some tearing of two branches of the anterior papillary muscle. Its endocardial orifice measured only about $\frac{3}{4}$ inch. The inner end of this wound was situated $\frac{1}{2}$ inch to the left of the interventricular groove and 1 inch below the auriculo-ventricular groove; its outer (or left) end was $1\frac{1}{4}$ inches below the auriculo-ventricular groove and reached to within $\frac{1}{4}$ inch of the left border of the heart. The *lower wound*, lying $\frac{1}{2}$ inch below the upper, was $\frac{1}{2}$ inch long and extended to a depth of only $\frac{1}{8}$ inch. Its inner end was about the same distance from the interventricular groove as that of the upper wound. Above the upper wound, extending up to the auriculo-ventricular groove, there were some patches of hæmorrhage under the epicardium, and there was also hæmorrhage into the tissues of the superior mediastinum around the origins of the great vessels from the aorta. There were no other injuries present anywhere.

The *lungs* showed emphysema and some old cicatrisation at both apices with a few adhesions. The *spleen* was slightly enlarged and soft, and the *kidneys* granular, but none of the other organs showed anything of note.

The case presents several features worthy of remark. There can be little doubt that the blow on the chest was delivered with considerable violence, yet there was no bruising visible externally. The chest wall was freely mobile and the transverse fracture of the sternum corresponded in level more or less closely with the rupture of the wall of the left ventricle, yet the parietal pericardium was intact, and there was no tearing of the tissues in the immediate neighbourhood of this fracture. There was no gross disease of the coronary arteries or of the cardiac muscle, and the brown atrophy made out microscopically in the fibres of the latter was probably normal for a person of such years. Considering these facts along with the characters of the wound—the irregular and ragged edges—and the tearing of two branches of the anterior papillary muscle, it seems reasonable to assume that the mechanism of the lesion was rupture by bursting.

Glasgow.

CENTENARIANS.—There are at least four centenarians living in Surrey, according to the *Surrey Advertiser*—Mrs. Stovold, of Elstead, and Mrs. Ann Peters, of Great Bookham, who have just celebrated their hundredth Christmas; Mr. John Durant, of Weybridge, who attains his 104th birthday on Feb. 2nd; and Mr. John Whitehead, of Wimbledon, who is 100 years of age. Mrs. Rose Wood, of Chertsey, died on Dec. 31st last. She would have completed her 103rd year had she lived till March next. Miss Emma Elkins, who in July last entered upon her 101st year, died recently at Prestbury, Gloucestershire.