atmosphere; thus the airman lives in civilian hotels, and after the day's programme of rehabilitation he is free to go out, untrammelled by sentries, camp gates, and the like, the only restriction being the requirement to return to his billet by 10.30 p.m. Late passes and sleeping-out passes are, however, available in reasonable numbers.

A valuable adjunct to the method of rehabilitation is provided by the attitude of the physical training instructors, who, by their continued enthusiasm and high morale, form models of deportment and zest; and these qualities are reflected to a surprising degree by members of their classes.

In this atmosphere superficial psychotherapy is in many cases sufficient to clear up even chronic psychosomatic symptoms. A certain proportion do not improve because of chronicity, previous firm fixation of symptoms, lack of co-operation, or an obvious motivation in the form of a wish to leave the Service. Severe anxiety states, depressions, and obsessional states do not do well at A.C.D.; they require more prolonged and intensive psychotherapeutic measures, and conditions of life which a Service convalescent depot cannot be expected to provide. From this section of unsuitable cases are drawn those for hospital treatment or for invaliding. The rate for return to duty is somewhat higher than that for the whole series of cases analysed, despite the fact that the A.C.D. cases are of a more severe type.

We are convinced that many patients returned to duty after a period of rehabilitation at A.C.D. would otherwise have been invalided or have remained ineffective for a very prolonged period, and that such results indicate the urgent need for similar facilities in relation to the civilian general hospital. In such circumstances both the patient convalescent from severe illness and the chronic neurotic can be handled under optimum conditions and a partial solution, at any rate, of the out-patient problem be achieved. In our opinion psychiatric facilities are an integral part of such a scheme.

Summary

Two thousand consecutive cases seen at an R.A.F. neuropsychiatric centre are analysed into diagnostic groups, and the organic and psychological cases briefly discussed. Among the points raised are the high incidence of affective disorders and the role of predisposition, the importance of psychological factors in surgical treatment, psychiatric aspects of malingering, and the value of rehabilitation in psychoneurotic cases.

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SPONTANEOUS RENAL APOPLEXY WITH RESUSCITATION AFTER CARDIAC ARREST

BY

S. L. GOVERNALE

Major, M.C., A.U.S.; Chief of Surgery, Detachment "A"

AND

A. G. RINK

Lieut.; Executive Surgical Officer, Detachment "A"

(General Hospital, U.S. Army)

Very few cases of spontaneous renal apoplexy are to be found in the literature. Two years ago George Crile jun. reported three cases, and at that time a survey of the literature revealed 17 instances. We wish to add one which came to the surgical service of one of us (S. L. G.). It is of additional interest because of the cardiac arrest during operation, which was relieved by an intracardiac transfusion of 300 c.cm. of blood followed by 500 c.cm. of saline solution.

We consider intracardiac or intraventricular transfusion worthy of trial when all other avenues of intravenous infusion are ruled out because of collapse. Such cases may be encountered in collecting stations, casualty wards, or emergency rooms of civilian or military hospitals.

Case Report

In May, 1939, a woman aged 36 was seized with severe abdominal pain in the right upper quadrant while sitting in a cinema. The pain came on suddenly, just after she started to laugh at an amusing episode in the film. She became weak and was taken home by taxi. A medical man was called in. He stated that she had a large tumefaction in the right upper quadrant of the abdomen. The area was rigid. She had vomited on several occasions. Morphine was given and local ice packs were applied.

About 16 hours after the onset of the pain she was examined by one of us and admitted to hospital. The examination disclosed generalized abdominal tenderness and the presence of a large tumour mass in the right side of the abdomen, which extended from the right subcostal region to the iliac fossa. The right rectus and the right lumbar muscles were rigid. Kernig's sign was positive on the right. Her face was pale and there was evidence of "air hunger."

Laboratory examination revealed 2,000,000 red cells, 12,000 white cells, and 50% Hb. The urine contained an occasional hyaline and granular cast, a few red cells, and albumin+. The patient's temperature on admission was 97.6° F., her pulse 120-130, and blood pressure 80/50. After treatment of shock and observing the patient for 14 hours an operation was performed. A right pararectus incision was made; the peritoneal cavity did not contain free fluid. A large dark mass arose from Morrison's fossa and could be seen to extend caudally to the right iliac fossa, thus completely obliterating the right paracolic gutter. The posterior peritoneum was incised and many black clots evacuated. There was slight oozing in the region of the right renal pelvis. The right renal artery was not identified.

At this juncture the anaesthetist announced that the patient had died. The operator (S. L. G.) massaged the heart through the diaphragm and was able to restore and maintain the heart-beat as long as the massage was applied. Nikethamide (coramine) and metrazol were administered intracardially by means of a Pitkin spinal needle. These injections, plus massage, resulted in cardiac activity as manifested by a to-and-fro movement of the visible part of the needle.

Attempts to transfuse blood via the venae comitantes of the brachial artery and saphenous veins were unsuccessful. The situation was critical, and since an entrance to the patient's circulation was established by the Pitkin needle, the Baxter bottle containing the blood for transfusion was attached to this needle. 300 c.cm. of blood was infused by this route, followed by 500 c.cm. of intravenous saline. The patient's condition improved and the heart began to beat again; the wound was packed and closed in layers, and the needle removed.

The patient died 18 hours after operation and 48 hours after the onset of spontaneous renal apoplexy, from a secondary or recurrent right renal haemorrhage.

Conclusion

The apoplexy was the result of a long-standing malignant hypertensive cardio-renal disease, as brought out by the patient's history, the episode narrated above, and the post-mortem findings of contracted kidneys, nephrosis, and atheromatous degeneration of the aorta and renal arteries.

Summary

A case of spontaneous renal apoplexy due to malignant hypertensive cardio-renal disease has been presented.

The patient's heart stopped during operation.

Cardiac resuscitation was accomplished by cardiac massage, intracardiac injection of stimulants, and intraventricular infusion of blood and saline.

Life was restored for a period of 18 hours after the operation.

Death ensued from secondary or recurrent right renal haemorrhage.

Perusal of the literature does not disclose any previous reported case of intracardiac or intraventricular infusion.

Relapsing fever is one of the infections that follow in the path of war. For example, it is estimated that in the year after the 1914-18 war over a million and a half persons in European Russia were affected with this disease. In the big epidemics the louse has been the vector of the infecting spirochaete, first observed by Obermeier in the blood of a patient in 1873. Various species of ornithodoros ticks are known to transmit the disease in many parts of the world. Among normal reservoirs of the infection are several species of rodents, foxes, dogs, and monkeys. Relapsing fever can be satisfactorily treated with arsenic, but F. R. Heilman and W. E. Herrell (*Proc. Mayo Clin.*, 1943, 18, 457) have demonstrated experimentally in mice that the disease can be brought under control with penicillin.