

rhage was controlled by a pack, and after a stormy convalescence the patient recovered. In this case hypertension was thought to be the cause.

Rademaker submits the interesting suggestion that sudden death during eclampsia may sometimes be due to a ruptured liver. We doubt, however, whether this speculation can be sustained, for, although scattered areas of necrosis and *small* subcapsular haemorrhages are not infrequently found in eclampsia, severe haemorrhages of the liver are not a feature of this disease.

Links (1946) describes a case of rupture of the liver during the fourth month of pregnancy. The patient developed acute abdominal pain with signs of blood in the peritoneal cavity. At operation the blood was found to be coming from the foramen of Winslow. On exploring the lesser sac a laceration of the caudate lobe of the liver was seen; the liver tissue itself appeared to be normal. Haemostasis was effected by covering the site of bleeding with muscle tissue. The patient made a good recovery. The cause of the liver damage was obscure, but Links suggests that it may have been due to a transient hypertension.

### Conclusion

We have been able to trace three cases of ruptured liver associated with pregnancy, two of which survived as the result of operative intervention. To these three cases we have added a fourth, in which also the patient recovered after surgical treatment.

We believe that in our case the injury was the result of trauma produced by violent contraction of the diaphragm and abdominal muscles during labour. But it is interesting to note that there was also an element of toxæmia, evidenced by the raised blood pressure (found after the initial shock had been overcome) and by the presence of albuminuria. It is probable that this toxæmia produced changes in the liver, making it particularly liable to injury. (The complaint of epigastric pain for one month before parturition and the report on the liver biopsy obtained at the time of operation strengthened this suggestion.) There was, in our case, no evidence of syphilis or other constitutional disease.

Regarding operative treatment, we believe that the application of "oxycel" gauze, fibrin foam, or muscle tissue is preferable to suture. It is also obvious that blood transfusion is an indispensable part of the treatment. Our patient's satisfactory recovery bears out the statement of Rademaker that in cases of liver rupture operation affords a good chance, and probably the only chance, of survival.

### Summary

A case is reported of rupture of the liver, with haemoperitoneum, occurring in association with parturition. Only one comparable case has been found in the literature.

The immediate cause of the rupture was probably the muscular compression that occurs with the expulsive efforts of labour. A predisposing factor may have been the presence of liver damage brought about by pregnancy toxæmia.

The use of the term "spontaneous" rupture is deplored. Liver ruptures may be divided into two main groups: traumatic rupture and hepatic apoplexy—the first usually affecting a healthy liver and the second occurring because of haemorrhage in a pathological liver. A subgroup may be added in which minimal trauma causes rupture of a pathological organ. The case reported may be regarded as an example of this subgroup. This classification of liver rupture might usefully be applied to ruptures of the spleen.

### REFERENCES

- Abercrombie, J. (1843-4). *Lond. med. Gaz.*, 2, 792.  
Devic, E., and Bériel, L. (1906). *Ann. Derm. Syph.*, Paris, 7, 642.  
Links, H. (1946). *British Medical Journal*, 1, 275.  
Rademaker, L. (1943). *Ann. Surg.*, 118, 396.

## Medical Memorandum

### Treatment of a Chronic Typhoid Carrier with Chloromycetin

Good clinical reports upon the use of chloromycetin in the treatment of typhoid fever have naturally aroused interest in the possibility of dealing with the chronic typhoid carrier by similar means. Unfortunately there is no literature available on the efficacy of this form of treatment; nevertheless as a suitable case had recently come under our care it was decided to try the effect of the substance in doses which had been successful in dealing with the acute disease.

#### CASE REPORT

A child aged 9 years, son of a flight sergeant in the Royal Air Force, contracted typhoid fever in Egypt in June, 1948, from which he made a good clinical recovery, though he was left a chronic faecal carrier. He came under our care in the spring of this year. He was a well-nourished healthy-looking boy. His stools consistently yielded a heavy growth of *Salmonella typhi*, though over 40 specimens of urine were sterile. *In vitro* sensitivity tests with the isolated organism showed it to be very susceptible to traces of chloromycetin: dilutions in excess of 2.5 µg. per ml. inhibited bacterial growth. It was decided to follow a therapeutic course which had been successful in treatment of the acute disease in the adult, using 19.1 g. of chloromycetin in 8.1 days. As the child weighed 4 st. 7 lb. (28.5 kg.) it seemed appropriate to give half the adult dose, which was administered orally in 0.25-g. capsules four-hourly day and night for seven days—a total of 10.5 g. Stools were cultured on alternate days while undergoing treatment, and we were disappointed to find the organism present in all of them: failure was evident before treatment was completed. In view of this finding, a second course, using three times the dose, was instituted—viz., 0.75 g. for seven days (total, 32.25 g.). Stools became negative almost immediately after starting treatment and remained negative until two days after withdrawing treatment, after which he continued to excrete the organism daily in his stools.

While undergoing the course of treatment his blood serum inhibited growth of the isolated organism in dilutions rising from 1 in 2 on the first day to 1 in 32 by the third day. This inhibition of growth disappeared 16 hours after the last dose of chloromycetin was given.

#### COMMENT

Chloromycetin in doses of 30 mg. per kg. of body weight for seven days has failed to eliminate the organism in a chronic faecal typhoid carrier. This dose is about three times that which has been successful in treatment of the acute disease. The cause of the failure is not clear, especially in view of the marked sensitivity of the organism to chloromycetin *in vitro*. It is possible that much heavier doses for longer periods are advisable. Further clinical trials are necessary before any conclusions can be drawn regarding the efficacy of the substance in treating the chronic faecal carrier.

C. A. RUMBALL, O.B.E., M.R.C.P., D.T.M.&H., K.H.P.,  
Group Captain, R.A.F.

L. G. MOORE, M.B., B.Ch., B.A.O.,  
Squadron Leader, R.A.F.

R.A.F. Hospital, Halton, Bucks.

In a referendum the Swiss electorate has rejected by a proportionate majority of three to one a controversial law to make x-ray examinations and tuberculosis treatment compulsory. The draft law (according to a *B.U.P.* report) provided for the periodic examination of the population for tuberculous infection, for the compulsory insurance of the poorer classes against the economic effects of tuberculosis, and for removal to an isolation hospital of sufferers who might endanger others. The law would have been costly: besides its insurance provisions, of which part of the cost would have been borne by the Government and employers, the law required the cantons to contribute to the support of poor families when the wage-earner was suffering from tuberculosis and to pay the costs of x rays when the family concerned had too low an income to afford them. There would also have been the difficulty that many Swiss peasants have never been, and do not want to be, treated by a doctor. A number of Swiss doctors also criticized the draft law, pointing out that people can hardly be compelled to undergo examination and treatment when there is no acknowledged method of either.