knees slightly flexed and her hands under the back of her head, resting on the pillow. The pulse was 130, the temperature 98° F., and the respirations 32. The pain, which had been very severe, was easier; she had not vomited, but felt sick, and complained of a desire to micturate, which she had been unable to satisfy.

There was no visible sign of injury, such as a graze or bruise, but the whole abdomen was rigid to palpation. The point of maximum tenderness appeared to be to the left of the mid-line and in the left iliac fossa, but her condition was too grave to justify questioning. To percussion the whole of the left flank seemed duller than the right, but no definite shifting dullness could be found. The liver dullness was normal. The catamenia were regular and no period had been missed. I ordered her immediate removal to hospital.

At 7 p.m. she was anaesthetized with open ether. Examination then revealed definite dullness in the left side of the abdomen, which did not shift. A catheter was passed and about 8 oz. of pale and normal-looking urine withdrawn. The only possible diagnosis was severe internal haemorrhage, and the spleen appeared the most probable source in view of the fact that the urine was normal. It was impossible to exclude injury to the gastro-intestinal tract in addition.

Operation.

A median incision was made below the umbilicus and free blood could be seen through the peritoneum before this membrane had been incised. The incision was then extended upwards. The peritoneal cavity was full of blood and blood clot. On commencing to remove the latter, bright fresh blood welled up extremely profusely. Examination revealed to the touch a tear in the visceral surface of the spleen. The bleeding appeared to be controlled when the splenic artery and vein were compressed. This was effected with the left hand whilst the spleen was brought into view with the right. The tear was then seen to extend through the hilum involving the point of entry of the vessels.

As time was of the utmost importance, no effort was made to isolate the individual vessels. A pedicle needle was passed through the extreme tail of the pancreas and one ligature made to include the whole vascular pedicle of the spleen, which was then removed. The peritoneal cavity was cleared of blood and clots and then flushed with normal saline at a temperature of 112° F. The incision was closed in layers, and as much saline left in the cavity as could be retained. At the conclusion of the operation the colour was better, the pulse 120 but much fuller, and the respirations 36.

After-Treatment.

The patient was put in the low Trendelenburg position, and rectal saline injections were immediately started. To the first saline injection of 2 pints, brandy 1 oz. and aspirin gr. xv were added. The instructions were to repeat the saline injections every two hours as long as the patient could retain them, and that the bed was to be put flat at the expiration of four hours. The following morning the head of the bed was raised on high blocks.

The patient made an uneventful recovery. The temperature rose to 100° in the first twenty-four hours, but thenceforward remained normal or subnormal. No external bruising ever developed, nor was there any injury to ribs.

REMARKS.

The main interest in the case appears to lie in the fact that it is possible to sustain such a severe injury from a comparatively trivial accident. The patient is an averagely covered woman, weighing 8 st. 7 lb., and stands 5 ft. 2½ in. Macroscopically the spleen appeared healthy.

I am indebted to Dr. Penny for giving the anaesthetic and to Dr. W. B. Maurice for assisting me at the operation.

The accompanying sketches are intended to illustrate precisely how the injury occurred; and Dr. H. M. Turnbull, Director of the Pathological Institute, London Hospital, who kindly examined the spleen for me, reports that with the exception that it was very anaemic, it was otherwise normal in every way.

TRAUMATIC RUPTURE OF SPLEEN.

WITH A FEW NOTES ON THE BLOOD.

BY

CAPTAIN E. H. JONES, M.B., B.S., R.A.M.C.

The patient whose case is here related was admitted to the Preston Royal Infirmary, October 31st, 1912, under the late Dr. Garner.

T. W., a boy aged 10, had fallen a distance of 20 ft., coming in contact with a tree stump. He walked 100 yards and then fainted. He was admitted to hospital the same evening, with signs of intra-abdominal injury.

Operation.

On opening the abdomen by the high rectus incision I found that the peritoneal cavity contained much free blood, the source of which was found to be the spleen, which was almost completely severed. The organ was removed through a transverse incision, commencing at the apex of the exploratory opening, and the abdomen closed hurriedly.

After-History.

For seven days progress was uneventful. On November 7th, 1912, the temperature shot up to 104° and reached 105° on the next four days. The patient had definite bronchopneumonia, the temperature returning to normal by lysis by November 19th, 1912.

He was discharged on December 18th, 1912.

I saw the boy on November 14th, 1915 (three years after the operation), and he was quite healthy, doing half-time at the mill.

Blood Counts.

On November 3rd, 1912 (three days after the operation), the blood count was—

Red cells	...	...	...	3,500,000
White cells	...	...	...	15,600
Polymorphonuclears	...	...	...	36 per cent.
Mononuclears	...	...	...	64 per cent.

Following the bronchopneumonia the blood count was—

Red cells	...	...	...	3,500,000
White cells	...	...	...	21,200
Polymorphonuclears	...	...	...	58 per cent.
Mononuclears	...	...	...	42 per cent.

On December 4th, 1912, the blood count was—

Red cells	...	...	...	3,000,000
White cells	...	...	...	11,000
Polymorphonuclears	...	...	...	68 per cent.
Mononuclears	...	...	...	28 per cent.
Eosinophiles	...	...	...	4 per cent.

A year later Dr. Leigh kindly examined his blood for me, and found mononuclears rising in percentage and eosinophiles up to 6 per cent.

On December 14th, 1915, Dr. Tindall, the honorary pathologist to the Preston Royal Infirmary, made a final count, which was as follows:

Red cells	...	...	...	3,200,000
White cells	...	...	...	6,900
Polymorphonuclears	...	...	...	55 per cent.
Mononuclears	...	...	...	44 per cent.

A case Dr. Collinson operated on during the same period, a lad of 19, showed lymphocytosis, which persisted for at least a year, without the return of a higher polymorphonuclear count such as accompanied the bronchopneumonia in my case. Dr. Collinson's case showed an eosinophilia of 12 per cent. twelve months after the operation. This patient is now serving with the colours.

The cases are interesting as showing (1) the original leucocytosis, (2) a relative lymphocytosis of some duration, (3) the transient eosinophilia twelve months after removal of the organ, (4) the absence of any adverse effect following removal of the spleen.

A CASE OF PROBABLE SPONTANEOUS RUPTURE OF THE SPLEEN.

By W. B. OGILVIE, LIEUTENANT-COLONEL I.M.S.,
SUPERINTENDENT, DELHI GAOL.

It is recognized that this case is not a well proved one, but such cases are of so much deep interest to those working in tropical countries that it is thought worth while to record it, incomplete though it is.

Prisoner, male, aged 28, had been in gaol for three months, during which time he had never been in hospital, and his weight had remained steady. On a Sunday he did none of his ordinary work—paper making—but washed his clothes and