ABDOMINAL INJURIES IN CIVIL PRACTICE.

By F. J. HENRY.

In the course of a brief surgical career it has fallen to my lot to be called upon to deal with seven cases of abdominal contusion resulting in visceral injury, and the present communication represents some rather haphazard notes which I have made in looking over my records of these patients. Unlike some of my surgical colleagues, I am too junior to have had any practical experience of the Great War, and gunshot injuries of the abdomen, with the multiple lesions which they produced and the various surgical problems arising therefrom, which were at that time so commonplace a matter, are an entirely closed book to me, and I hope will long remain so.

Nearly all the cases with which I have met were "closed" injuries, and in none was there any evidence whatever of gross trauma to the anterior abdominal wall. In two cases there were small penetrating wounds, but the lesions to which these gave rise proved on investigation to be comparatively simple. Every surgeon is familiar with the difficulty of diagnosing or excluding visceral injury when confronted with a case of contusion of the anterior abdominal wall; it is often very hard to decide if laparotomy should be performed in these circumstances, especially as one remembers that the prognosis of a visceral injury very largely depends upon an early operation. I can recall several cases in which violence of moderate degree applied to the upper abdomen produced shock, vomiting and slight rigidity, and in which these symptoms gradually passed off after some hours of anxious waiting, to be replaced, in a few instances, by signs of traumatic pneumonia. It is usually stated that the abdomen should be opened if, three hours after the injury, severe abdominal pain persists, and is accompanied by either vomiting, a gradually increasing pulse rate, or local rigidity, especially if this latter is tending to extend.

The series here recorded is comprised of four cases of rupture of the intestine, two of the bladder and one of the spleen. In the four cases of intestinal rupture the indications for immediate operative intervention were clear. The first I saw in England some ten years ago.

Case I. It was the case of a coalminer whose abdomen had been crushed between the automatic doors of the pit cage. When seen about an hour later, he presented widespread tenderness and rigidity, but no shock, and no signs of external trauma. Immediate operation revealed that the lower foot or so of the ileum was completely avulsed from its mesentery, and that the caecum and ascending colon were extensively bruised and lacerated; an ileo-caecal resection was carried out, from which the patient made a good immediate recovery, only to die ten days later from septic pneumonia.

Case II. Two years ago a boy was brought into Baggot Street Hospital, after having been knocked down by a motor-car which, he said, had struck him in the left upper abdomen. He looked exactly like a case of perforated duodenal ulcer, being in extreme, continuous abdominal pain, with an immobile, retracted and rigid abdominal wall. Again, there were no signs of external trauma. He proved to have an extensive rupture in a coil of the upper jejunum, extending into the mesentery in the form of a
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Jagged tear. Several inches of gut on either side of the rupture were resected, an end-to-end anastomosis performed, and the pelvis drained. Complete recovery ensued.

Rupture of the intestine is said to occur most commonly near the duodeno-jejunal junction, owing to the fixity of this part. I recollect a man admitted to Sir Patrick Dun’s Hospital, under the care of Sir Arthur Ball, when I was a student. He had been crushed between buffers in Westland Row Station, and rapidly succumbed. Postmortem examination showed that the jejunum was completely torn away from its junction with the duodenum.

CASE II. A somewhat similar case was that of a young man who had received a kick in the upper abdomen while playing football. He was seen some two hours later, during which interval he had vomited several times. He complained of localised pain the right iliac fossa, where there was tenderness and slight rigidity. His temperature was 101°F, pulse 110, and I thought I was dealing with a case of acute appendicitis, the kick being merely a coincidence, as he had continued playing for fifteen minutes or so after he had been struck. However, on opening the abdomen, I found an extensive hemorrhagic retroperitoneal extravasation, occupying the whole right side and extending into the root of the transverse mesocolon. I was unable to determine from what source it was coming, and closed the abdomen without doing anything. Death occurred the following day, and autopsy revealed a rent in the posterior aspect of the third stage of the duodenum.

Miller states that in 37 reported operations for duodenal injuries the lesion was missed 13 times, and that there is only one successful operation for rupture of the third stage on record. This was reported by Wrede, who resected the ruptured segment, closed both ends, and performed a retrocolic anastomosis between the third part of the duodenum and the jejunum.

CASE IV. My last case of intestinal injury was that of an elderly female lunatic who, having made several unsuccessful attempts to commit suicide, first by hanging and then by setting herself on fire, broke a window and wounded herself in the abdomen with a piece of glass. She happened to have a moderate sized ventral hernia with very thin overlying skin, and made a small wound, about two inches long, into the hernial sac. She then drew out a coil of small intestine, which she completely severed, and was continuing operations upon the adjacent mesentery when she was interrupted by her friends. When seen a couple of hours later her condition was remarkably good, and shock was very slight. The wound was drawn out further, a small wound being found in an adjacent coil. The mesentery of the protruded coil, which was about two feet long, being very much injured, this coil was resected and an end-to-end anastomosis performed, the small wound in the adjacent gut being sutured; the abdomen was not drained. Recovery ensued, and the patient was in due course discharged to the care of the lunacy authorities.

The two cases of ruptured bladder both gave rise to difficulty in diagnosis; one, indeed, was not recognised for two days.

CASE V. It was that of a van-man, who fell off his vehicle while returning from a fête at which he had consumed a large quantity of stout. (It is well known that intraperitoneal rupture of the bladder is one of the penalties of drink.) When seen that evening he had only slight abdominal pain and tenderness, no shock, and although he was unable to pass water, yet a catheter withdrew a large quantity of clear, bloodless urine. It was not until more than twenty-four hours had elapsed that his continued inability to micturate, and the appearance of slight abdominal distension caused me to open his abdomen, when I found the peritoneal cavity full of urine and a small tear on the superior aspect of the bladder. He was very lucky to recover following suture of the tear, drainage of the peritoneal