NOTES ON A CASE OF ENTERIC FEVER, WITH SYMPTOMS CLOSELY RESEMBLING THOSE OF PERFORATION—RECOVERY WITHOUT OPERATION.

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R. D., aged fifty-six, a compositor by occupation, was admitted to the Hardwicke Fever Hospital on March 7th, 1903. He complained of having been ill for two weeks, during the latter of which he was confined to bed. He had not seen a doctor before admission, but had treated himself by consuming large quantities of whisky, in the remedial value of which he had a confirmed belief. On examination he proved to be an unequivocal case of enteric fever of considerable severity. I shall refrain from detailing his symptoms, as they were the ordinary ones of enteric fever in the third week, except to say that the blood gave an unusually pronounced Widal reaction. Dr. Earl, who examined the blood, stated that in performing this test with a dilution of 1 in 50, the typhoid bacilli were markedly agglutinated by the time he had focused the preparation under the microscope. Despite the patient's occupation, no signs of lead poisoning were present, nor had he ever suffered any of its symptoms.

Till the sixth day after admission to hospital, or approximately the end of the third week of his fever, R. D. remained in much the same condition. On that day, at 9 30 a.m., he complained of pain in the right iliac fossa and hypogastrium, after which the bowels moved, and vomiting occurred. On seeing the patient less than an hour later I found that his temperature had risen from 102° (its average on previous mornings) to 104°; the pulse was 84; the respirations 28. The abdomen had become rigid, was not distended, and not tender unless sufficient force was used to overcome the rigidity of its wall in the right iliac fossa. Liver dulness was present; elsewhere the abdominal resonance was not uniform.

The general aspect of the patient was somewhat altered for the worse. He still complained of the pain. Having ascertained these points, the diagnosis of perforation was carefully considered. In the light, however, of a pulse-rate little if any above its average morning frequency, and in the absence of any indications of collapse, *despite* the onset of pain, rigidity and tenderness in the right iliac region, I was unable to form a sufficiently positive opinion to warrant the recommendation of an operation, so determined to watch the case a little longer. All food was prohibited except sips of water, but no morphia was given. An hour later the abdomen presented the same signs exactly; the pain was not so severe. The pulse had increased by four beats (to 88), the temperature had fallen one degree (to 103°). Two hours later still, all pain had gone; the pulse was 82. At 6 30 p.m. (nine hours after the onset of pain), the patient expressed himself, and looked, much better. He had sweated profusely; the bowels had just moved, the motion being free from blood. The pulse had fallen to 78, and the temperature had been recorded 100.6° a short time previously. The abdomen was less rigid, otherwise the same as in the morning. Accordingly progress was deemed satisfactory, more particularly as no morphia had been given to mask the symptoms of spreading peritonitis, for which careful watch was being kept.

An hour later (7 30 p.m.) the scene changed. R. D. was suddenly seized with violent pain in the right iliac region. He vomited some bilious fluid. On reaching hospital I found the patient in great distress from pain. His aspect was one of suffering; indeed, it was evident from a glance that a marked change for the worse had set in—in fact, that he was in a condition of collapse. His temperature had fallen to 96°; his pulse had become decidedly fast, and reached its maximum of 140 in the course of two hours. He lay on his back with his knees drawn up. On examining the abdomen it was found not to be distended, but extremely rigid. Tenderness was more marked in the right iliac fossa than it had been in the morning, considerable pressure being required to overcome the rigid muscles. Liver dulness was present over a smaller area than had been observed in the morning, the probable result of the presence of distended intestines beneath the rigid abdominal wall. The breathing was rapid and almost entirely thoracic. The diagnosis of perforation was

now irresistible. I therefore recommended immediate operation to the patient, who, though quite clear in his mind, refused. It was urged upon him that it was the only chance of saving his life, to which he replied that he would rather die than undergo an operation. The lapse of half an hour and the continuance of his pain during the time did not shake his determination. Under these circumstances I ordered a quarter grain of morphia hypodermically, and the continued abstinence from all food except sips of water, feeling at the time that the case was hopeless. The night was passed in comparative freedom from pain and with a considerable amount of sleep.

At 4 a.m., temperature 104.8° , respirations 36, pulse 96.

At 5 30 a.m., temperature 103.8° , respirations 24, pulse 100.

At 8 a.m., temperature 101.8° , respirations 28, pulse 112.

These observations go to show the fluctuations of temperature and pulse-rate which may occur in such cases, and it was noticed that as the former tended to fall the latter tended to rise in frequency, and *vice versa*. On seeing the patient on my morning visit following, though the temperature was no longer at a point indicative of collapse and the pulse was slower, he seemed worse in other respects than on my visit the night before. His tongue and mouth were dry, voice extremely weak, muscles tremulous, prostration marked. His general appearance looked most unfavourable. The abdominal physical signs were as they had been twelve hours before; the pain, however, was less acute. No urine had been passed for at least twelve hours, yet the suprapubic region was resonant. This retention persisted for twelve hours longer without causing distress or signs of bladder distention, at the end of which time urine was passed naturally; unfortunately the quantity passed was not measured. During the next three or four days the patient lay in a truly critical state. Vomiting occurred several times daily, increasing his exhaustion. Pain became severe from time to time. The abdomen did not become distended or generally tender. The pulse, prone to fluctuation, on the average remained about 90, very weak and small. Pyrexia continued much as before the onset of the abdominal complication.

R. D. now began to improve steadily, though pyrexia continued for nearly a fortnight. As the rigidity and tenderness of the abdomen disappeared a persistent ill-defined swelling in the right

iliac fossa could readily be detected. This tumefaction (almost certainly the result of local peritoneal thickening and matting) was still evident, though less distinctly so, when the patient left the Hardwicke Hospital on April 29th. No peritoneal abscess had formed. A few weeks after his discharge the patient was in his usual health.

A few words concerning the treatment of the case. Morphia was of necessity given to relieve bad pain, opium stupes gave relief when pain was less intense. The choice of diet, of course, caused the greatest anxiety and difficulty. For twenty-six hours after the onset of pain nothing was given per mouth, except sips of water. Then dilute peptonised milk was given, two teaspoonfuls every hour at first, and gradually increased. Next a little raw meat juice and panopeptone were allowed. Even this meagre amount of food was not all retained by the stomach. Nutrient enemata were tried, but appeared to irritate the rectum and produce iliac pain; in fact, the patient developed such a terror of them that they were stopped after a few had been given. For three days after the urgent abdominal symptoms the bowels, previously regular, remained confined. A small enema of castor oil was given and produced a satisfactory fluid motion. From that time the bowels moved spontaneously every day, the movement being preceded and accompanied by abdominal pain as a rule. The origin of this pain was most probably some dragging upon adhesions.

Conclusions.—Though the existence of a perforation in this case cannot be asserted positively, it is my own opinion such did occur. The following solution of the clinical phenomena appeals most to me. In the first instance a mild and limited peritonitis developed from inflammatory extension through the wall of the bowel, hence the preliminary pain without much constitutional disturb-

ance. The subsequent onset suddenly of violent pain accompanied by well-marked collapse, as indicated by subnormal temperature, rapid pulse, cold sweating, &c., coincided with the occurrence of perforation. Further, peritonitis now developed, but did not become generalised owing to the existence of the following favourable conditions at the time of perforation :—

1. The bowels were comparatively empty, no food having been given for ten hours previously, and two motions having passed from them in that time.

2. Some adhesive peritonitis was already present which retarded the escape of intestinal contents, and limited the range of movement of the perforated portion of the intestine.

3. The subsequently continued abstinence from food and the administration of morphia also played their part in limiting the movement of the intestine.

Finally, I would say that if the above case was really one of perforation, it is interesting as exemplifying what is known to happen rarely—namely, spontaneous recovery after this complication. If it were not a case of perforation, it is none the less interesting as being illustrative of the impossibility of making certain of a correct diagnosis when all the classical early symptoms of perforation can be so closely imitated by some other condition.

The lesson which should *not* be learnt from the case is, that it is justifiable to postpone operation when one has sufficient grounds for thinking that a perforation is probably present.

I am indebted to my late resident pupil, Miss Ovenden, for many careful observations and notes upon this case.