Correspondence

Appendicitis

SIR,—I read the article by Sir Cecil Wakeley and Mr. Peter Childs (December 16, p. 1347) with much interest, but with all respect I feel I must comment on one or two points, first out of fairness to my late chief, James Sherren, and secondly as a result of my own experience.

It is correctly stated that the number of deaths from acute appendicitis rapidly fell from 3,027 in 1938 to 1,970 in 1941. This was followed by a stationary period for three years. In 1945 a further fall began which is continuing, and the latest available figure (1947) shows 1,491 deaths. They also state that the two periods of improvement were due to the introduction of sulphonamides and penicillin respectively. If so, why the three-year mid-war period when there was no lack of supplies of antibiotics? A more likely explanation is that evacuated children were scattered over the country, commonly away from parental supervision, under the care of overworked and often elderly practitioners, and with only cottage hospital facilities in many cases. Sulphonamides and penicillin have doubtless helped, but other factors are of importance in this welcome reduction in mortality, as I have already suggested in a recent article (*Clin. J.*, 1950, **79**, 182).

"Parents, practitioners, and surgeons all played a part in achieving this welcome improvement—parents because they now but rarely pour castor oil into unwilling stomachs, practitioners on account of earlier diagnosis and a greater sense of urgency, and surgeons because the danger of the rule-of-thumb method of immediate operation on all cases is increasingly appreciated, and expectant treatment is rightly considered in cases who are 'too late for the early operation, and too early for the late one.' Sulphonamides and penicillin also deserve credit in helping to control infection."

It is stated, "If the diagnosis is appendicitis, and if it is clearly not chronic, operation is urgent. There is no place for expectant treatment." Also we are reminded that, since I advocated expectant treatment in an article in 1937, "the following have been added to the surgeon's armamentarium: sulphonamides, penicillin, intravenous drip therapy, and gastric suction." It is obvious that these new additions are just as valuable in cases treated expectantly as for those operated on at any time. The three cases, referred to in the article, in which the expectant treatment of "appendix mass" failed were certainly unfortunate, but over a large series of cases at least 90% were found to subside with the recent additions to the surgeon's armamentarium.

As admitted in the article, appendicectomy is now always possible if an immediate operation is performed. It is stated, "Where an abscess was found surrounding the appendix the appendix was removed whenever possible"; also, in the case of an appendix abscess "the appendix was not removed unless it was readily accessible." These patients, having survived the exploratory operation, presumably submitted to a second operation for appendicectomy.

There are many other points one would like to raise, but space forbids, so I conclude with and endorse the statement of James Sherren, who after twenty years' experience at the London Hospital wrote in one of his last papers (*British Medical Journal*, 1925, **1**, 727), "The only change I have made has been to greater conservation and more patience in dealing with cases of appendix abscess."—I am, etc.,

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Admittedly the most important adverse factor in morbidity and mortality in acute appendicitis is late diagnosis. The next most important adverse factor is the indiscriminate employment of the muscle-split incision. This incision has been taught in our medical schools and practised all over the country since operation first became recognized as the correct treatment for acute appendicitis. Yet it is a bad incision, with little to recommend it.

The commonest cause of death in acute appendicitis is intestinal obstruction. This is due to peritonitis, either localized or generalized, and now happily amenable to considerable control by chemotherapy, gastric suction, and intravenous drip therapy. But the tendency to intestinal obstruction is aggravated by trauma to the oedematous tissues in the ileo-caecal angle at the time of operation, especially to the last inch of the ileum. In the presence of acutely swollen and oedematous tissues it is often very difficult to deliver the appendix from the retro-caecal or pelvic positions (the commonest) through the limited exposure of the muscle-split incision, and even if the incision is enlarged by the Rutherford Morison muscle-cutting method the decision to do so is made only after considerable trauma has occurred. The more skilful the surgeon the less is the trauma, but no surgeon of experience can look back over his career and not recollect many difficult struggles to deliver an appendix through a muscle-split incision. Moreover, the operation for acute appendicitis is *par excellence* the training operation for house-surgeons and registrars all over the country, and so long as they are taught to make this incision they too will struggle and learn by bitter experience, and the mortality rate from acute appendicitis will not improve.

It is not sufficient to make a diagnosis of acute appendicitis. The surgeon should assess in his mind as far as possible the position of the appendix and the probable extent of oedema and induration of surrounding tissues, the length of history being the most important factor to bear in mind. The incision should be planned accordingly. In 90% of cases it will be found that the right paramedian incision, extending from the level of the umbilicus to one inch above the pubis, will give an easy and adequate exposure through which the caecum and terminal ileum can be gently elevated and drawn towards the midline with a minimum of trauma, and the appendix removed no matter in what position it may be. Gentleness in the handling of acutely inflamed tissues is the key to the further reduction in mortality in acute appendicitis. It is also the key to the reduction of wound infection, which is more common in muscle-split incisions, which require retraction, sometimes forceful, than in paramedian incisions, which require none. If a localized appendix abscess in the right iliac fossa requires drainage, a muscle-split incision over it is the best approach. Similarly, in a late case in which the appendix is judged to lie in the high retrocaecal or paracolic positions, a Rutherford Morison incision *ab initio* is the best approach. In all other instances the paramedian incision is the best, particularly so for the pelvic appendix, in which correct diagnosis is so often delayed.

The muscle-split incision as a routine must go. It is a relic of the past, of the bad old days of indifferent anaesthesia.

The recommendation of the muscle-split incision for acute appendicitis is debatable. Its recommendation for chronic appendicitis is bad surgical teaching. The authors admit in Table IV that in 12 out of 39 cases so treated the appendices were normal on pathological examination. Why, then, the muscle-split incision, and what was wrong with these 12 patients? In *all* cases of co-called chronic appendicitis the paramedian incision should be made, so that the pelvic organs and terminal ileum and mesentery can be examined and the gall-bladder and kidney palpated. Many patients who have subsequent operations for pain in the right side of the abdomen already bear the tell-tale small scar in the right iliac fossa of which they and their surgeons were once so proud but with which they are now so disappointed.
—I am, etc.,

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SIR,—Sir Cecil Wakeley and Mr. P. Childs are to be congratulated on their 217 cases of appendicitis without a death (December 16, p. 1347). A benign gremlin must be looking after their cases, for in combining a recommendation of the muscle-split incision with a condemnation of expectant treatment in late cases they are surely doing a disservice to surgery.

SIR,—Sir Cecil Wakeley and Mr. Peter Childs (December 16, p. 1347) have again focused attention on this important subject. I do not think it is sufficiently realized how ignorant the general public is of the symptoms of appendicitis, and how prevalent is the pernicious custom of taking a purgative, particularly castor oil, when abdominal pain comes on. Four recent cases have shown me how even