discomfort in their wounds. Old traditions die hard, but it would appear that strain or damage would evidence itself by pain and discomfort.

During my last tour at Colchester, over 150 removals of the appendix were performed. At first one kept every patient in bed for three weeks. The men became very discontented after the first week, and their general health certainly was not improved by such confinement. I then gradually shortened the period, and seeing no ill-results, eventually let them all get up all day on the eighth day after the operation.

Shortly before I left, I operated on a lady for appendicitis. She was up on the sixth day, and walked two miles on the fourteenth.

Lately I operated on a healthy girl of fifteen years for chronic appendicitis. She sat up in bed on the third day, and got out to have her bed made. On the sixth day she sat in a deck chair for twelve consecutive hours. She walked about after the seventh day, and rode her bicycle at the end of the third week.

Under such a plan of treatment, the muscles, especially those of the back and legs, do not waste, as they certainly will do if not used for three weeks, and no time is lost in convalescence.

As regards hernia, I see no reason against a similar line of action. If one can depend on the strength and lasting properties of the suture material one uses, and the patient refrains from trying to lift weights for at least three months after the operation, there can be no risk in allowing him up even before the sixth day.

There is another fallacy which also requires exploding. I refer to the custom of not allowing ordinary patients to turn themselves in bed for several days after an abdominal operation. It hurts a patient far less to allow him to turn himself over in bed, than if he is seized by the hips and shoulders and turned by a nurse. In the former case, he instinctively keeps the damaged section of his abdomen quite rigid, and the absence of pain during the movement is, I think, a proof that no injury is being sustained.

APPENDICITIS—WITH THE RESULTS OF FORTY-FIVE CONSECUTIVE OPERATION CASES.

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In order to adopt some sort of order, I will begin with the series of cases of appendicitis operated upon during what is familiarly termed the intermediate stage or quiescent period. That this is the stage par excellence at which to operate I think everyone will agree. The importance, however, of endeavouring to tide patients over the acute stage is what I would wish to emphasise. Of course I am fully aware that there are times when operations during the acute stage must be undertaken—
often in order to save the patient's life; still I cannot help being more and
more convinced that these cases are fewer than most of us think, particularly
amongst hospital patients, where an operation can be undertaken at
almost any minute, and where in the meantime continuous observation
can be maintained and carefully organised treatment carried out.
Formerly the operation question was not sufficiently considered; now
I think this point is perhaps too much in evidence, to the detriment possibly
of the—so to speak—medical treatment of the case. It is by no
means sufficient just to wait and watch for operative indications; quite
a lot can be done which will not only lessen the possibility of having to
operate during the acute stage, but, if an operation during that stage has
to be undertaken, will allow it to be done under much more favourable
circumstances.

The above remarks are based upon what might be spoken of as cause
and effect. In the first place, What is the etiology of appendicitis? A
certain number of cases undoubtedly are due to foreign substances finding
their way into the appendix, but these are distinctly exceptional. By far
the majority of cases are, I believe, due to a condition in the intestines
—the caecum in particular—of food decomposition, with a resulting
increased activity and virulence of micro-organisms, principally of the
colon, streptococcus, and staphylococcus groups; a condition probably
arising from errors in dietary, possibly an excessive intake of animal food-
stuffs. So much for the cause; as to the effect of treatment borne out
upon such an hypothesis, I can only say that the results, in my experi-
ence, have justly warranted such a view. In brief, the line of treatment
I adopt is to remove the infected contents of the intestines—a procedure
which is distinctly opposed to the older methods, where opium and other
similar drugs were administered; withhold for a time food, except albumin,
water and such-like fluids, which are absorbed probably long before they
reach the infected area; encourage leucocytosis by administering salines,
and applying, locally, fomentations; and finally discourage the tendency
to upward spread of the inflammation by posture.

Of interval operations there were seventeen, sixteen of which require
no comment; beyond that they all healed by first intention, and were
uncomplicated as far as after results were concerned. Some of the opera-
tions were easy; others very difficult and tedious, owing to extensive
adhesions. The one case which did not do well was fortunately amongst
the first of the series—I say fortunately because I think I solved the
problem, and thus early was able to take steps to prevent its possible
recurrence—namely, an infection of the peritoneal cavity at the time of
cutting off the appendix, which I did then with scissors, and now do with
the cautery paquiline, completely removing this danger. As to the other
steps of the operations, I invariably used the gridiron incision, extending
into the sheath of the rectus muscle when more room was required; .I then
clamped the base of the appendix, ligaturing it and its mesentery, afterwards removing the appendix and invaginating the stump with a purse-string stitch. With regard to the time of operating—fourteen days for the milder cases and three weeks for the severe ones, after the complete subsidence of all symptoms—was the principle on which I worked.

The next series of cases—four in all—were those that were operated upon within a few hours of the onset of the attack. They all did as well as the sixteen interval ones, and provided that one can be sure that the case is in an early stage, I do not think there is any more risk. The operations themselves were conducted on similar lines.

The next were those in which operations were undertaken at different stages during the height of the disease, either because the cases appeared to be those of the fulminating variety, or because severe complications had, or were, commencing to take place—such as spreading peritoneal inflammation. The appendix in nearly all these cases was either gangrenous or perforated. They were without exception first attacks, as far as one could ascertain, which is what one would expect, and would account for their not remaining localised. After one or two attacks the disease is much more likely to remain centralised, owing to previously formed adhesions; consequently an operation, if undertaken, is either done in the late stage or during an interval. The symptoms in these cases which lead to operative interference may be classified as follows:

Firstly, those which set in from the beginning with great violence—severe general abdominal pains, marked tenderness, rigidity and diminished movement of the abdominal muscles, sometimes vomiting, and a fairly high temperature and rapid pulse; all these symptoms tending to get worse instead of better. With regard to the diagnosis, there was always some little additional localising tenderness or rigidity, sufficient to make one more than suspicious as to the nature of the disease. These are the cases I have mentioned as being fulminating, and in all of them there was necrosis and sloughing of the appendix. In one case the necrosis had actually extended to the cecum. There were altogether seven of this variety, in all of which I removed the appendix and put in drainage. The patients eventually made good recoveries.

A further series of fourteen cases differed from those I have just mentioned in that they—during the early stages of the disease—did not exhibit that extreme acuteness of symptoms; it was necessary to operate, either because of the apparently spreading inflammation, indicated by the extension of the tender area, an increase of the rigidity, and further limitation of abdominal movement, together with an increased rapidity of the pulse-rate, or on account of a sudden onset of excessive pain over the region of the appendix, often accompanied by some collapse, pointing to a probable perforation. In all the later cases of this series the appendix was removed, and the peritoneal cavity drained. In some of the early
ones, drainage alone was resorted to, and though all ultimately did well, I am now of opinion that more of them might have stood the extra time necessary to find and remove their appendices—a proceeding which would not only have shortened their stay in hospital, but would have prevented the necessity of a second or even of a third operation, which ultimately had to be performed on some of these cases.

At this stage I would like to say a word or two about the after-treatment of cases operated upon in the acute stage, which is almost more important than the operations themselves. Most of them suffer from collapse and shock, owing, I think, to the fact that their systems have already been weakened by toxæmia; on this account I therefore—in addition to applying warmth, hot blankets and bottles, and sometimes bandaging the extremities—administer normal saline solution, either directly into a vein, when the necessity is urgent, occasionally commencing before the operation is completed, or into the tissues, or into the rectum, sometimes combining the two latter. As improvement takes place, I have them slowly propped up, until they ultimately assume nearly the sitting posture. If there is restlessness they have a small dose of morphia, which usually brings about a restful sleep, after which I commence giving one-grain doses of calomel; and until the bowels have acted satisfactorily they are allowed only warm water and albumin water by the mouth. The saline injections are often continued for several days.

There now only remain three cases which must be classified by themselves, and might be spoken of as chronic appendicitis, as they never assumed acute symptoms, nor would they clear up under medical treatment. The first turned out to be tubercular in nature. The whole appendix, and to a lesser extent the cæcum, was thickly studded with tubercle in the form of miliary nodules, and there was a small amount of localised, clear fluid. After removing the appendix everything appeared to clear up. The second case had a somewhat thickened appendix bound down by adhesions. This patient also got quite well after excising his appendix. With the last of my so-called chronic cases I was less fortunate. In this, after waiting until well into the third week, in the hope that the symptoms would clear up, I decided to operate, removing an appendix which was very adherent and connected with a small abscess. In spite of this, however, the temperature disturbance continued, and instead of the pain remaining in the appendix region, it extended upwards to the liver, which became very tender. The patient now got gradually worse. On several occasions I explored the liver, but without hitting on anything. Ultimately he died, and at the post-mortem examination a number of small abscesses were found in the liver.