there is an inflamed appendix with no adhesions at all; a second, in which the adhesions are being formed, but are soft and easily torn; and a third, in which they have become a firm protecting wall.

Once appendicitis, always appendicitis, for the disease, so long as the appendix is there, is very prone to recur again and again.

So much for the pathology of the condition. When we come to the patient, however, we are met with the difficulty that the symptoms do not altogether correspond to these stages, and it is in practice often very difficult to say what is happening inside at the site of the disease.

At the onset, the patient will be found to have pain in the right side of the abdomen, with some tenderness on pressure over the appendix, and there will also be some rigidity of the muscle of the abdominal wall in the same situation; later on, if the inflammatory mass is fairly large, it may be felt by gentle handling or by examination by the rectum, though it is not usually possible to tell whether pus is present or not by local palpation. Owing to the formation and absorption of poisonous products, there will be headache, shivering, and a rise of temperature; sometimes, though not always, the presence of pus may be suggested by the occurrence of rigors, with rapidly fluctuating temperature. Usually there is vomiting and constipation, though in some cases diarrhœa occurs.

What we want to know in any given case is what sort of resistance the patient is making to the disease, and here the best guide is the condition of the pulse, for as long as this is fairly slow and strong we may usually conclude that the resistance is adequate; sometimes help may also be obtained by counting the number of white blood corpuscles in a drop of blood obtained from a finger prick. If these are more numerous than normal it signifies that the resistance is fairly good, and if they are in great excess, that pus is being formed, which is probably fairly well shut off, though it does not do to dogmatise too much from this sign. When general peritonitis occurs, there will usually be prostration, general abdominal pain and vomiting, with a quick, small pulse and general abdominal distension.

Coming now to the treatment of the disease, it is obvious that surgical methods must be in our minds from the first, but it is most important to remember that they must be applied with discrimination. If we see a case at the onset, or, let us say, within the first fortyeight hours in the average case, most authorities are now agreed that the abdomen should be opened and the appendix removed. This is

advisable for two reasons—firstly, because in any given case we do not know that the appendix is not going to perforate, or that the pus is not going to burst later on into some undesirable place; also, even if a first attack subsides, it will almost certainly be followed by another, and this may take place where surgical treatment is not at once available.

Similarly, later on, when pus has been formed and the signs point to the existence of a fairly tough barrier of adhesions round it, it is also agreed that operation should be performed for the opening of the abscess, though not necessarily at that time for the removal of the appendix; on this latter point opinions differ, some surgeons preferring to remove the offending member when the patient is up and about and in good health.

But in the intermediate stage, when the adhesions are soft and the peritoneum angry and inflamed, it is undoubtedly best to wait and watch; if signs of perforation occur, operation must be performed as an alternative to the certain death of the patient; but if pus forms and becomes shut off, the outlook for the patient is very much better if the abscess be then opened than with a laparotomy when the adhesions are so soft that infection of the general peritoneal cavity is almost certain to result from the inevitable handling to which the parts are subjected. If the attack subsides without suppuration, the appendix can subsequently be removed in a quiet interval with a very slight risk indeed.

Consequently we treat a patient in the intermediate stage by complete rest, fluid diet, and ice bags, or possibly warm fomentations to the abdomen, and we deal with the constipation by gentle enemata. If the pain is very severe, we relieve it preferably by phenacetin or some allied drug, for it must be remembered that opium may so mask the symptoms that we may fail to detect the occurrence of a subsequent perforation; it has also the disadvantage of increasing abdominal distension when it exists. The nursing of these "intermediate " cases must be conducted with a cat-like watchfulness for any change in the aspect of the patient, or rise in the pulse rate or diminishing mobility of the abdominal wall, any one of which signs demand the presence of a surgeon forthwith. Fortunately the reproach that cases of appendicitis are divided by the physicians into those that are not bad enough for surgery and those that are too bad is fast dying away, and nowadays most cases are rightly considered to be surgical from the first and, indeed, until the offending appendix and the patient have parted company altogether.



