

or astringent solution by means of Anel's syringe. The saturated solution of boric acid is commonly used for this purpose. During the past year I have employed a 5 per cent. solution of argonin as an injection, and am led to believe it to be more efficacious than the boric or other solutions formerly used.

The home treatment of these cases forms a valuable adjunct to their successful management. The patient, or preferably an intimate associate, should be instructed in the method suggested by Gould, of alternate pressure and relaxation of the lachrymal sac, the patient reclining, the eye immersed in some antiseptic solution. This manipulation should be performed several times a day, with the end in view of emptying the sac of its effete contents and forcing the solution into the passages.

Refractive errors should be carefully corrected and constitutional disturbances remedied. Exercise in the open air and cold baths are indicated in the majority of cases. In cases unable to undergo a protracted course of treatment, the lachrymal canula or style may be employed. My experience in this connection, though somewhat limited, has been disappointing, and I seldom make use of them.

The instruction of the patient, or some member of his family, in the passing of probes, has been suggested by some surgeons for those unable to continue office treatment. This procedure I cannot approve of, for the reason that the maneuver, as already stated, is an exceedingly delicate one and should not be entrusted to the inexperienced. If the sufferer be unable to carry on the combined office and home treatment for a reasonable length of time—say three or four months—the canula may be made use of until satisfactory arrangements may be made to attend regularly.

The ancient practice of sac extirpation in obstinate cases has recently been revived. It seems to me to be justifiable as a last resort in intractable cases, although one must not overlook the fact that complete obliteration precludes the possibility of natural drainage, which sometimes comes about in seemingly incurable cases when the inflammatory trouble has subsided. Preliminary to operations on the globe in lachrymal cases, obliteration is, of course, justifiable and obligatory.

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A FEW POINTS ON APPENDICITIS.

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Probably no other disease has brought forth such an array of literature as has been published within the past ten years on appendicitis. All classes of practitioners took a hand, and the result is an indescribable melange, which we are slowly untangling, but we are beginning to get order out of chaos. The medical man is slowly recognizing that appendicitis is a surgical disease, and no longer delays calling in the surgeon until the patient is beyond hope. Surgeons who a few years ago advocated waiting so many days in most cases are now advising operation as soon as the diagnosis is made.

The question of diagnosis is the key to the peculiar statistics which we sometimes see published by men who claim to cure all their cases without operation. All belly-aches are appendicitis; and when a patient dies from a neglected case of the true disease it is laid to the door of inflammation of the bowels, obstruction of the bowels, or idiopathic peritonitis. While we are all liable to err in our diagnoses, it is better to err on the

safe side, and remove an appendix which is not diseased than to leave one in which is going to cause the death of its owner.

As our experience increases we are able to eliminate practically all the conditions which simulate appendicitis, but that is as far as we can go. It is absolutely impossible to differentiate the varieties of this disease by the symptoms present; we can occasionally, under favorable conditions, palpate the appendix with sufficient thoroughness to say positively whether it is distended or contains a calculus; but as a rule either the tenderness is too great or the abdominal wall too thick to determine with any degree of accuracy the condition of the appendix.

What then have we to rely on to make our diagnosis, and how shall we do it? The first and one of the most important diagnostic features, is the suddenness of the attack; the pain coming on with little warning and increasing rapidly, in a person otherwise apparently healthy. The locality of the pain is not diagnostic; it may be, and usually is, near the umbilicus, or it may be in the epigastrium. The next point is the nausea or vomiting; we find either one or the other present in about 90 per cent. of all cases. Constipation is the rule. Localized tenderness is found within the first few hours in practically all cases, and in 90 per cent. it is at or near McBurney's point. The diagnostic tripod consists therefore of sudden pain in the abdomen, nausea or vomiting, and localized tenderness.

The majority of mistakes are made by failing to obtain an exact history of the first few hours of the attack. If the physician is not called in until twenty-four or more hours have elapsed after the onset of the disease, and relies for a diagnosis on the symptoms which are found at that time, he will often be led astray, because it often happens that the pain and tenderness have either subsided or disappeared, and the condition does not look serious. This is very deceptive, as we often find in these cases that either perforation or gangrene has taken place, and nothing but an immediate operation will save life.

We meet with a number of cases in people otherwise healthy, in which deep pressure over the appendix causes pain, indicating either a slight catarrhal condition or the existence of adhesions. The patients will have occasional attacks of increased pain and tenderness, especially if they become constipated. Operation is indicated if the pain and tenderness are sufficient to prevent the individual from working, or prevent him from enjoying life comfortably. We can differentiate these cases from most of the other varieties by the fact that we do not find the exacerbations coming on suddenly, but rather a progressive increase of pain beginning indefinitely.

One very important consideration is the fact that the temperature and pulse at the beginning of an attack must not be taken into consideration in determining the question of operation. I mention this because several have stated that they depended to a certain extent on the temperature and pulse in guiding them. The fallacy of this is shown by the following cases:

CASE 1.—W. B.; history of probable attack six months previously. He was awakened one morning at 3 a. m. with severe pain in abdomen, and vomited. I saw the patient an hour later and found extreme tenderness over McBurney's point, temperature and pulse normal. Operation ten hours later; appendix four inches long, with distal three inches filled with pus and becoming gangrenous; a complete obstruction prevented the pus from getting into the cecum.

CASE 2.—H. B., had attack eight and a half years previously with formation of subphrenic abscess. Sudden pain at 4 p. m. with slight nausea, no increase in pulse or temperature. Pain and tenderness increasing; patient was operated on at 8 p. m. Appendix distended and contained five appendoliths; the tip was imbedded for three-fourth of an inch in tough cicatricial tissue, the result of the previous attack.

CASE 3.—Patient came to office forty-eight hours after the first pain; had had nausea and vomiting and felt very sick. When I saw him the pulse and temperature were normal and the tenderness was not very great; but I was able to find some thickening at the site of the appendix, and advised operation. Next day the patient stated that he was entirely free from pain and tenderness and felt all right, but I still advised operation on account of the initial symptoms and the fact that I could feel something hard at the site of the appendix. Operated seventy-two hours after the beginning of the attack, and found the appendix extremely large and containing a very large appendolith. The mucosa and submucosa were sloughed at the point of the junction of the appendix and cecum, leaving nothing but the peritoneum to hold the appendix in place.

These cases show clearly that we can not in any case determine the pathology by the physical signs, or the subjective symptoms; for we find the most desperate pathologic conditions with the mildest symptoms, and vice versa; the classical symptoms well marked with but slight pathology. This can be easily understood, when we consider the cause of the various manifestations. Pain is produced by pressure on the sensory nerves, and therefore a congestion will produce more pain than a complete gangrene, and the bursting of an appendix will relieve the pain that was caused by its distension. The moment the pressure ceases, or the nerves are destroyed the pain and tenderness disappear.

The nausea is reflex and may be marked in the mildest and almost absent in the worst case. The rise of temperature and increased pulse-rate depend on the absorption of ptomaines by the system, and it is possible to have a complete gangrene of the appendix without having sufficient poison absorbed to cause a rise of temperature; again we may have a slight erosion of the mucosa allowing a free absorption of the products of decomposition of the bowel, running the temperature up as high as 104 F. The pulse varies with the nervous system of the individual and therefore can not be taken as a guide in determining the question of operation.

We are left, therefore, without any reliable means of determining the condition of the appendix in any given case without opening the abdomen, and we consider that the mortality after operations which have been performed within the first forty-eight hours is practically nil. We are certainly justified in advising immediate operation in all cases in which the classical signs were manifested within the first few hours.

Much depends on the method of operating. Except when pus is undoubtedly present, our primary incision should be small, just sufficient to admit one or two fingers, and the conditions ascertained by careful exploration. If recent adhesions are found, the incision had better be enlarged sufficiently to be able to see every step of the operation, as these cases are the ones in which the operation may prove dangerous in inexperienced hands. From a comparatively trivial operation, which is necessary in perfectly clean cases, we come to an operation which taxes the skill of the most expert abdominal surgeon, and which may require the resection of a portion of the bowel.

My conclusions are as follows:

1. That over 90 per cent. of cases of true appendicitis which are not operated on have recurrences.

2. That we should operate on all cases of chronic recurrent appendicitis, if possible between attacks.

3. That in practically all cases which die after operation we find at least forty-eight hours between the onset of the attack and the time of operation, therefore it is reasonable to assume that if these cases had been operated upon inside of the forty-eight hours the patients would have been cured.

4. That as soon as a diagnosis of acute appendicitis is made, operate immediately.

5. Pulse and temperature are not to be taken into consideration in making a diagnosis of appendicitis.

6. In acute cases the diagnosis must be based on the symptoms which were manifested during the first three or four hours.

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Tearing Down Untimely Board of Health Placard.—

In the case of the City of Memphis vs. Smythe, which was commenced by the issuance of a warrant for the arrest of the defendant for a violation of a health ordinance, the Supreme Court of Tennessee holds, to begin with, that a warrant for a fine or penalty imposed for a violation of a town ordinance is civil in character, being in the nature of an action of debt, and that consequently an appeal, after a finding of not guilty, will not be dismissed on the ground that the defendant has been once in jeopardy. The defendant in this case was a physician. The ordinance which he was charged with violating provided, under penalty by fine, that every physician should immediately report any person he might attend within the city limits sick with, or who he had reason to suspect had, diphtheria; that thereupon it should be the duty of the health officer to placard the house, with a card designating the character of the disease, and that such card should not be removed by any other than a health officer or sanitary policeman. The record in the case disclosed that, one Tuesday night, at the defendant's residence, his child was taken ill with what the defendant feared was diphtheria. The next morning he called in another physician, who, upon examination was unable to discover any symptoms of this disease, and so told the family. But notwithstanding this assurance, the defendant, still suspicious or apprehensive, after the departure of that other physician, made a telephone report to the city board of health that the child was sick with what he feared was diphtheria, adding that the other physician, who was attending the patient, did not so regard it. That (Wednesday) afternoon, that other physician called again, and repeated what he said before. Thursday afternoon, he made his last visit, when, finding the child well, or practically so, he dismissed the case. The board took no action until Friday morning, when one of its employees telephoned to the defendant that a report of the case of diphtheria at his house was required. To this the defendant replied that there was not, nor had there been, a case of that disease at his home; that his infant child had been sick, but was then entirely well. Thereafter, by order of the board, the house was placarded for diphtheria, upon discovering which the defendant tore down the placard. Then followed this action. The ordinance itself, the supreme court characterizes as a salutary one, the strict enforcement of which was essential to prevent the spread of contagious diseases. But, on the facts stated, it holds that the action of the defendant was warranted, and that he had not violated the ordinance. It says that if, on the receipt of his report on Wednesday morning, the sanitary authorities had acted by placarding the house, the ordinance would have applied. But, waiting as they did until it had been ascertained that it was not such a disease as the defendant had suspected, and the child was entirely recovered, their action, it holds, came too late. And this being so, there was no reason, the court declares, why the defendant should permit the placard to remain posted on his house, as its natural, if not necessary, effect would be to warn friends and patients alike against entry lest they be exposed to the contagion.