

TABLE VII  
End Results

Condition Cured	No. of Cases	Per Cent
Gastro-enterostomy	33	.....
Resection	4	.....
Pyloroplasty	1	.....
Excision	1	.....
Total	39	37
Benefited		
Gastro-enterostomy	10	.....
Pyloroplasty	2	.....
Dissociation	1	.....
Total	13	12
Unimproved		
No relief under one year	23	.....
Developed marginal ulcer	16	.....
Temporary relief with return of previous symptoms	13	.....
Died (ulcer complications)	3	.....
Total	55	51

These tables will readily show that our results from the conservative type of operation has been anything but encouraging. It is also worth while to draw your attention to the high frequency of gastrojejunal or marginal ulcer which we have encountered in the cases which we have followed. In another communication (5) for the first six years of our clinic we reported an incidence of 16.4 per cent of marginal ulcer following gastro-enterostomy. One may think we have used poor judgment in selecting our cases, but of the 746 cases we have observed in the clinic 577 cases were unoperated upon when registered for their first visit. Of this number only 61 or 10 per cent have been referred for operation which would indicate that we have used reasonable care and discretion in selecting our patients for operation. Of the 746 cases which we have had in the clinic they have made 13,996 visits which averages 18 visits per patient during this

period, which would give us reasonable opportunity to personally observe and direct the regime for each patient to follow.

Unquestionably the type of operation that is done must rest with the individual operator and the indications that he encounters at the time of laparotomy. From our cases the most common condition that is associated with a duodenal ulcer is a chronic pancreatitis, and if the chronic pancreatitis exists a gastro-enterostomy is a most unsatisfactory procedure for the relief of pain. Therefore, I feel a sub-total resection is warranted in such cases. Also bleeding duodenal ulcers are more commonly encountered in the posterior portion of the duodenum, than in the anterior and for that reason excision of the ulcer is essential to effect a cure. That can only be brought about by a sub-total resection if the ulcer is placed on the posterior portion of the duodenum and adherent to the pancreas. In patients suffering from pyloric obstruction with a large dilated stomach, a gastro-enterostomy is a quite adequate operation but even in this type of case a marginal ulcer does occur. If then one operates upon the patient with a duodenal ulcer that is having repeated hemorrhages or a duodenal ulcer associated with chronic pancreatitis, a sub-total resection is the operation of choice. The mortality in a resection is no higher in the hands of those that have a reasonable experience in gastric surgery than is the general mortality following gastro-enterostomy at the present time.

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## Electro-Cholecystocausis\*

### Preliminary Report

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THE acutely inflamed gall bladder presents a difficult problem to the surgeon. Immediate operation is dangerous on account of hemorrhage. Prolonged expectant treatment, unless the patient is improving, may lead to rupture of the gall bladder. Cholecystostomy, heretofore the procedure of choice in these cases, leaves a diseased gall bladder in place and necessitates, for the future welfare of the patient, a cholecystectomy. A method whereby the gall bladder

could be treated at the time of cholecystostomy in such a manner as to lead to its obliteration, would avoid the danger of a second operation. Such a method by the use of electrosurgery has been devised, and is now being tested on animals.

#### METHOD

In dogs, at a preliminary operation, the gall bladder is traumatized by crushing with clamp. Three to five days later the wound is reopened. The inflamed gall bladder is attached with sutures to the abdominal wall, an opening made in the fundus, the contents evacuated. With the aid of a focussing headlight and special re-

\*Electrosurgical cauterization of the gall bladder. For this term the writer is indebted to Paul J. McManus, S. J.  
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tractors the whole mucosa of the gall bladder is thoroughly treated by fulguration and light contact coagulation.

It is essential that the whole mucosa of the gall bladder be destroyed by this process, otherwise regeneration will lead to formation of a permanent sinus. But it is also necessary that perforation of the gall bladder as a result of deep contact-coagulation be avoided. Thus the application of electrosurgical current must be through fulguration and light surface coagulation only. The heat from fulguration is intense, but localized and superficial. It is deep enough, however, to destroy the mucosa. The blackening by the charring effect of fulguration is an indicator as to the thoroughness of treatment. Drains are placed within the gall bladder; the sinus is allowed to heal slowly, and close by sclerosis.

#### RESULTS

In experiments with dogs (eight in number) the sinus has closed at the end of three to four weeks; and post-mortem examination has shown that the gall bladder has been obliterated. No damage to other structures has been observed.

*Electro-cholecystectomy* has been described previously (1, 2, 3). It was a modification of Pribram's (4) operation of "mukoklase," in which the gall bladder was split to the cystic duct, the mucosa treated with an ordinary cautery, the leaves of the gall bladder whipped together with sutures, and the abdomen closed without drainage. In electro-cholecystectomy the redundant portions of the gall bladder are trimmed away

and the part remaining attached to the liver treated by fulguration and light contact coagulation. Contrary to Pribram, however, drainage is employed.

Thorek (5, 6, 7) has devised a procedure termed "cholecystelectrocoagulectomy," using deep contact coagulation instead of fulguration of the part of the gall bladder left attached to the liver; and peritonization of the tied stump of the cystic duct and the coagulated tissue on the gall bladder bed. He also does not drain.

*Electro-cholecystocausis*, as described, appears to be an original procedure, though chemicals like phenol have been used for cauterization of the gall bladder (8). Experiments indicate that the method carries very little risk, is not too difficult of application, obliterates the gall bladder by a procedure carried out with little more shock than cholecystostomy, and avoids the danger of a second operation.

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## SECTION VII—*Surgery of the Lower Colon and Rectum*

### The Technique of the Local Injection of Saline Solution for the Relief of Pruritus Ani\*

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**T**HIS communication presents the technique of the local injection of physiological saline for the relief of pruritus ani. This treatment has been devised by the senior author and has been mentioned in another communication although the technique has never been described in detail (Schatz, 1). The present paper aims to bring this simple procedure to the attention of the medical profession and, especially, to the general practitioner.

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Pruritus ani is a most distressing ailment and there is perhaps no affliction more difficult to relieve. Numerous methods of treatment have been suggested for the alleviation of this common complaint. These vary from the more simple measures which include local application of solutions or perirectal injections of phenol solutions (Goldbacher, 2), to the more formidable surgical procedures of severing the sensory nerves supplying the area.

The etiology of pruritus ani is diverse and includes important factors which are as yet undetermined.