

A REVIEW OF GASTROENTEROLOGY FOR 1945

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The literature on gastroenterology during 1945 was extensive. The various papers are particularly noteworthy because of the advances that have been made in diagnosis and treatment of many gastroenterological problems which arise in everyday practice. It is not my intention to include background on the subjects in this review because of the detail involved. The alimentary canal is usually discussed under separate headings, therefore it is deemed proper to group a summarical review in like manner.

ESOPHAGUS AND STOMACH

Esophageal varices have been shown to be much more common than was formerly suspected and are frequently the source of fatal hemorrhages. Patterson and Rouse (39) report a series of cases in which the varices were injected with a sclerosing solution even in the presence of hemorrhage. They maintain that only time will justify the conclusions drawn. It is their opinion that the results so far observed justify the procedure.

Clark (10) brings up the question of differential diagnosis between gastrointestinal conditions and cardiovascular disease. He points out that diaphragmatic hernia will frequently present a clinical picture resembling heart disease, particularly angina. He emphasizes that the symptoms of hiatus hernia are more apt to be associated with eating than with effort, and the pain is less promptly relieved with nitrates. He reminds us that gallbladder disease very frequently is found in association with coronary heart disease and in some instances the gallbladder will initiate attacks of angina. It is his belief that in selected cases the cholecystectomy may lessen or even clear up the attacks of angina. Feros (15) has presented an interesting study on the electro-cardiogastrographic test and its possibilities in differentiating various gastric changes. He points out the possibilities it offers in differentiating benign and malignant lesions in the stomach. It has been stated that the intra-gastric electrical conductivity can be influenced by changes in pH, changes in the gastric tissue and by general modifications of the total organism. Generally speaking Feros agrees with Bockus that a clinical evaluation of this procedure must await further study on a much larger group of cases. Others (26, 36, 46) in discussing the various diagnostic procedures in gastro-duodenal disease believe that the present methods of diagnosis are quite accurate with emphasis being placed on the history, x-ray, gastroscopy, gastric analysis and stool examination. Thorek (51) writes that in severe gastric disease involving the esophagus in which stability is a factor, gastrostomy should not be deferred until the patient's condition becomes critical. Too often the operation is considered only after the patient's condition is deteriorated by malnutrition and disease and at that time gastrostomy is attended by great operative risks and offers little benefit. Thorek believes that early operation tends to maintain nutrition and strength and frequently improves the condition of the esophagus by removing the irritation due to alimentation. In addition to this it may furnish information regarding the location and the nature of tumors in this region. One of the most important contributions that has been receiving considerable emphasis has been that of bilateral vagotomy for hypermotility and hypersecretion in gastric disease, particularly intractable ulcer. The supradiaphragmatic section of the vagus nerves, as described by Dragstedt and his associates (13, 52) conclusively shows that hypersecretion can be reduced and the motility likewise inhibited with marked clinical relief of the patient's symptoms. Roth and Ivy (19, 43) have

demonstrated experimentally that the stomach will still respond to caffeine after bilateral section of the vagus nerves and they draw the conclusion that caffeine presumably exerts its action peripherally on the gastric mucosa and not on a neurogenic basis. Gianelli and Bellaflora (17) have reported that an antiulcer factor called vitamin U has been shown to be effective in experimental peptic ulcer and they adopt the principle of giving their patients a liberal convalescent diet. This is of interest because of the recent advocacy of the use of amino acids (32) and a high protein diet in the rapid therapy approach to ulcers. In addition to this, the use of tobacco was permitted. One of the newer drugs which has been described for use in hypermotility of the stomach is Dibutoline, which Peterson and Peterson (41) have shown is very similar to atropine and equally effective, but that the duration of action was shorter than for atropine. The advantage in using this new drug is that it has no cardiac effects and no mydriatic effect. They maintain that the margin of safety for this drug is very great and they have observed no idiosyncrasies. Ivy, Sandweiss and others (26, 45) present the interesting subject of the hormonal control of hypermotility and hypersecretion. Both of these groups have conclusively shown that there is an anti-ulcer factor contained in extracts from the intestinal mucosa, extracts of the urine of pregnant women and also certain pituitary factors. The active principle has been isolated and purified and they define the unit of the hormone to be that amount which will reduce by fifty percent the secretory response to one milligram of histamine in a twenty-pound dog with a pouch of the entire stomach. This has been found to be twenty milligrams of the active principle. It must be given intravenously because when other routes are used, for example, subcutaneously, the amount required is trebled.

LIVER AND GALL BLADDER

Two new tests for the determination of the presence of gallbladder disease have been described by Morrison and Swalm (34) which are predicated upon the determination of the specific gravity of the bile obtained from the liver and the gallbladder which in turn reflects their bile salt content. They observed that normally the specific gravity of gallbladder bile is greater than that of liver bile and in disease processes this ratio is disturbed. A new drug which offers some promise and has been marketed under the trade name Profenil has been described by Weiss (55) to be well tolerated and of low toxicity. It has been shown to abolish smooth muscle spasm irrespective of its origin, neurogenic or myogenic, and he predicts that in time it will replace papaverine and belladonna. The new drug may be given in tablet or hypodermic form.

Most of the gastroenterological literature for 1945 has been centered around the liver (5, 18, 23, 24, 25, 31, 40, 42, 48, 49, 56, 57) which deal with such conditions as amebic hepatitis and the necessity for early recognition particularly in those cases which develop pus and the rather prompt response which is obtained with emetine; infectious hepatitis and its relationship to homologous serum jaundice and post-vaccinal hepatitis. It has been shown, in regard to the latter three conditions, that one and the same factor are presumably concerned and the only difference is in the mode of transmission. One outstanding fact in regard to virus hepatitis is the necessity for prolonged bed rest and the question of recurrence following too early ambulation. Biopsy studies in many cases have shown the consistent finding of necrosis and in a very small percentage of cases have led eventually to cirrhosis. From a diagnostic standpoint the tendency has been to develop a series of rapid tests that can be done expeditiously and inexpensively (14, 18, 21, 33, 37, 38) the most notable of which have been the modification of the Harrison's test for bilirubin in the urine and the quantitative determination of the serum bilirubin according to the methods developed by Ducci and Watson (14). This latter test has its greatest value in the differential diagnosis between obstruc-

tive and toxic jaundice. The crux of the newer methods of technique and interpretation is based on the fact that the quantitative prompt bilirubin is low in toxic (hepatic) jaundice, and high in obstructive jaundice. Two new papers have appeared (1, 44) on the determination of vitamin A in liver disease and the utilization of a vitamin A test meal to show the hepatic response in health and disease. Aldersberg (1) and his associates maintain that the normal fasting level of vitamin A varies from 40 to 100 micrograms percent. In severe liver disease this falls to levels of 20 or 30 and following a test meal, normally peaks of up to 276 micrograms are reached, whereas in hepatic disease there is no response. An additional note in regard to Atabrine and its effects on the liver, Butt (8) states that the toxic effects from this drug are few and far between and that its use in malaria is relatively safe because of this fact. Bauer (3) points out that cholinesterase can be demonstrated in serum. He has found that in liver disease the values for this substance are markedly lowered and that it is a relatively sensitive test. Hines and Kessler (22) report that penicillin produced extensive hemorrhages in two of their patients who had received the drug for bacterial endocarditis and the cause is presumably that penicillin increases the sensitivity to heparin. Havens and Paul (20) demonstrated that the intramuscular injection of gamma globulin was effective in preventing the spread of infectious hepatitis. From a therapeutic standpoint Darmady (12) supports other authors (Wade, Jolliffe, Alpert and Barker, 2, 29, 53) in the rather generally accepted observation that large amounts of protein are of primary importance in the treatment of hepatitis as a result of infection and also cirrhosis due to any cause. In addition to the use of a high protein dietary supplement, Beams (4) has reported that choline and cystine are of great value in treating cirrhosis in the hypertrophic phase. Cartwright and Wintrobe (9) support Watson and Castle (54) that choline in the treatment of cirrhosis of the liver has no deleterious effect on the blood picture. In a study of a series of patients with pernicious anemia, Boyden and Layne (7) found that the incidence of gallbladder disease was higher in this type of case. Bennett (8) in discussing the possible etiological factors in the development of disturbed protein metabolism predicates the hypothesis that the responsible factor is an absence of the methyl group and its relation to the sulfur-containing amino acids. She summarizes the complex chemistry by saying that an adequate supply of preformed labile methyl groups is necessary for normal growth and that this methylation factor presumably is based upon bacterial flora in the bowel and the ability of the liver to make use of these various chemical compounds resulting therefrom.

INTESTINAL TRACT

Isaacs (27) states that until 1944 only 127 adenomas of the pancreas had been reported, and the fact that these patients must be differentiated from those having malignant tumors of the pancreas. He points out that the biggest difficulty is in locating the tumor and surgically removing it with a resultant excellent chance for complete recovery from the hyperinsulinism.

Darby, Jones and Johnson (11) report on the use of L. Casei factor in sprue and they propose that the group of substances related to L. Casei factor and folic acid be termed the vitamin M group. Kiefer and Ross (30) state that their experience with 102 cases of chronic ulcerative enteritis has been that conservative management is advisable in the acute forms of the disease, and also in the mild cases of chronic uncomplicated terminal ileitis. However as a general rule these authors state that in the chronic stage the best method of therapy is surgical resection. An interesting commentary by Most (35) to the civilian physician is his emphasis of the use of zinc sulfate flotation of stool specimens as a practical and efficient method of detecting the majority of the various intestinal parasites, particularly those found in persons who have been in the armed services and are returning to this country from military duty. Smith (47) in discussing Shiga dysentery points

out that a diagnosis by proctoscopy is possible within twenty-four hours after the onset of symptoms. In his series of cases 47 percent had negative stool cultures and the diagnosis might have been missed if direct visualization of the colon had not been done. He emphasizes that the golden opportunity for effective treatment occurs in the first twenty-four hours and that at this time the diagnosis can only be made in many instances by proctoscopy. Sokoloff (50) reports that chronic amebic infection responds very satisfactorily to anhydrous lactic acid and in some instances better results are obtained when combined with iodine.

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