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ABSTRACTS OF RECENT PUBLICATIONS OF THE PROFESSIONAL STAFF OF THE HENRY FORD HOSPITAL AND THE EDSEL B. FORD INSTITUTE FOR MEDICAL RESEARCH


The Noble plication operation for controlling peritoneal adhesions in chronic recurring intestinal obstruction has definite value. The operation should be carried out as a planned procedure after careful preparation of the patient, with special emphasis on the nutritional deficiency. The best results are obtained when the entire jejunum and ileum are plicated. Failures result from limited application of the technique. The dependent completely plicated jejunum and ileum may produce duodenal ileus. The prevention and treatment of this complication is discussed.


Gastric ulceration in the geriatric patient should be considered as an individual problem in differential diagnosis between cancer and a benign ulcer. Diagnostic procedures for complete evaluation of a patient with gastric ulceration are reviewed. Precise indications for prompt operative measures are outlined. A trial of medical therapy in the hospital is recommended for those patients in whom the initial evaluation is reassuring. When progress studies fail to demonstrate complete healing in from four to six weeks, prompt surgical intervention is recommended. The physician must assume responsibility for the recall of the patient for these studies. It is mandatory at regular intervals to reevaluate the patients in whom ulcers have healed completely under medical management.


In this review of nineteen cases of perforation of the intestine from non-penetrating trauma jejunal and ileal perforations comprise the bulk of the lesions with the jejunal perforations having twice the mortality of the ileal perforations. No instances of gastric or colon perforations were encountered. Most of the cases resulted from industrial accidents. Prompt surgical therapy with closure of the opening in the bowel remains the single most important factor in restoring the patient to health. Exploration on suspicion is warranted to avoid death or prolonged morbidity. In addition to blood and fluid replacement, long tube suction and antibiotics are important adjuvants in the preoperative and postoperative treatment. These innovations have improved the
prognosis for patients with this type of injury. The mechanism of rupture of the intestine with an intact abdominal wall is thought to be bursting of the intestine due to increased intraluminal pressure rather than direct crushing of the bowel.


Effective management of acute pancreatitis begins with prompt recognition of the disease. This implies detection of elevation in serum pancreatic enzymes by the alert physician. Although the nature of the initial insult to the acinar cells of the pancreas remains in controversy, the pathologic physiology dictates a rational plan of treatment which includes: a) correction of shock b) control of pain and c) "pancreatic rest". Practical measures implementing this triple approach are described. In convalescence the case can be satisfactorily completed only by pursuing appropriate studies to uncover an underlying cause and to detect early complication requiring further definitive treatment.


Seventy-four cases of gastric carcinoma studied at autopsy in the Hospital of the University of Pennsylvania since 1942 have been reviewed. Although 17.6% (10 cases) of the 57 tumors for which gastric resection was not done were localized to the stomach and its immediate vicinity and could have been considered "theoretically curable," only two should really be so classified after careful restudy. These were incidental findings in patients dying of unrelated disease. In 14 cases without symptoms suggesting gastric disease, the diagnosis was not made until autopsy. Only two of these tumors—the same two noted above—were localized and in a theoretically treatable state. There is thus no valid evidence that a significant number of gastric cancers are coming to autopsy in a state presenting a good opportunity for surgical cure. There is abundant evidence that gastric cancer may be silent, so far as local symptoms are concerned, even when it has metastasized widely. Among 17 autopsies on patients who underwent gastric resection, there were 9 patients who survived resection for 5 weeks to 27 months. All had widespread metastases at autopsy, six without local disease. Among the 8 patients who died in the postoperative period, 4 had residual tumor, all with distant spread. The likelihood that dissemination usually occurs early in the disease and not from local recurrences is strengthened by the observation that in 266 cases of gastric cancer explored surgically, distant metastasis, with or without local spread outside the stomach, was found in 89 (33.5%) at the time of exploration. More extensive surgical procedures than conventional subtotal gastric resection may well be applicable in selected cases but it does not seem reasonable to expect them to effect a significant reduction in the mortality from gastric cancer.

In order to accomplish certain cardiac operations, a method must be devised to stop the heart for a period of time and then restart it at will. For example, grafting procedures on the coronary arteries, and direct vision surgery of the aortic valve are probably impossible to perform on the beating heart. If the heart continues to beat while the coronary flow is interrupted, the discrepancy between myocardial blood supply and muscular activity impedes recovery of the heart. A method was developed of suddenly stopping the normally beating heart which was consistent and reversible. A 5 per cent solution of potassium chloride is injected into the left ventricular cavity while the ascending aorta is compressed. The solution enters the coronary arteries causing cardiac arrest in about 30 seconds. The still heart may be manipulated or incised. Following completion of the surgical procedure the heart beat is restored by simple massage. A phase of coarse ventricular fibrillation usually ensues. Countershock converts this to regular rhythm. Cardiac arrest for 30 minutes was induced in 20 dogs which had right atrial cardiotomies during hypothermia of 22° C. Seventeen of these animals survived the operative procedure and 15 of them survived without cardiac or neurological abnormalities for a week or more. These results were not materially different from those in a control series of 30 animals in which ventricular fibrillation was induced or the heart beat was not deliberately altered during 30 minutes of circulatory occlusion at 22° C.


A successful clinical investigative study must be planned so that the design of the experiment will make certain that the maximum information is obtained with a minimum of effort. The beginner as well as the experienced clinical investigator should not embark on any project without preparing an outline of the factors which may produce a result and the possible answers which experimental approach will yield. One of the many pitfalls to avoid in planning a clinical investigative project is an attempt to evaluate several variables in the same experiment. Some of the factors which must be considered in planning a controlled clinical study when we wish to evaluate an orally or parenterally administered therapeutic agent include the sex, age, economic status, occupation, severity of the disease, and the presence or absence of complications. For example, one fundamental consideration in conducting a valid controlled therapeutic study of two samples of patients with herpes zoster is the age factor. Clinical investigation has had an important role in the development of our specialty. Clinical dermatologists as a group have the spirit of inquiry. They have used the laboratory when it is applicable to the problem at hand—recall the
work which has been done by some of our colleagues in the field of fungus infections. Some of the future advances in our specialty will continue to be made by clinical researchers. This Society should have a part in this, and it could be done by encouraging the presentation of a representative number of papers dealing with clinical investigation at these meetings.


Two patients with classical clinical and hematological findings of pernicious anemia were treated by single applications of crystalline vitamin B₁₂ on the nasal mucous membranes in amounts of 150 and 200 meg, respectively. Completely clinical and hematological remissions followed which lasted two to four months. Both patients demonstrated maximum reticulocytosis. In one patient nasal washings obtained after application of vitamin B₁₂ to a normal subject were introduced into the stomach via a tube. In a ten-day period of observation there was no increase in reticulocyte count. It is concluded that crystalline vitamin B₁₂ is absorbed directly from the nasal mucous membranes without binding or combining with “intrinsic factor”. This form of therapy has the advantage of the economy of time and cost to the patient. Chronic disease of the nose did not contraindicate this form of therapy. Local irritation of the mucous membranes by crystalline B₁₂ or the vehicles employed has not been observed.


Three hundred patients representing a variety of inflammatory dermatoses were treated by local application of hydrocortisone acetate or hydrocortisone free alcohol. Concentrations of 1 per cent and 2½ per cent were used in a vanishing cream base. Results generally were good. Dermatosis in thin-skinned areas was especially responsive. Relief was almost instantaneous for patients having pruritus of the anus, vulva or scrotum. Hydrocortisone ointment is not a panacea. However, it may make the patient comfortable while other specific measures are brought into use.


The optimum amount of thyroid parenchyma to be left in situ when thyroidectomy is performed for nonmalignant disease would, by definition, be the amount that will assure postoperative euthyroidism and reduce to a minimum the likelihood of recurrence. In practice, this is the smallest quantity compatible with a euthyroid state. A knowledge of this amount is of obvious importance, and hitherto it has been
estimated largely by empirical guessing. Hence, during a period of two years, we have attempted to measure it quantitatively by studying the postoperative functional state of thyroid remnants in a series of 25 cases of subtotal thyroidectomy performed in comparable groups of diffuse hyperplastic, toxic nodular and nontoxic nodular goiter. The extent of the operation was controlled by careful measurement of the tissue remnant by a matched-weight method. Postoperatively, all replacement medication was withheld and at intervals of three to six months tracer doses of radioiodine (I¹³¹) were administered. The uptake of the isotope in the thyroid area and, in some cases, its excretion in the urine were determined as primary indices of the functional capacity of the remaining thyroid parenchyma. The relationship between the functional capacity of the thyroid remnant and other laboratory indices of thyroid activity such as the basal metabolic rate and the level of serum protein-bound iodine and cholesterol was also studied. The tissue remnant showed functional growth in most instances, the only exceptions being tissue rests of exceedingly small size (less than 150 mg.) or of hypoplastic histologic structure. The minimal amount of thyroid tissue to be spared for the maintenance of euthyroidism was found to be much less than hitherto assumed, namely about 0.8 Gm. in diffuse hyperplastic goiter, and about 1.0 Gm. in toxic nodular goiter. Observations over several more years are necessary in order to determine whether operations designed to spare only these small amounts of thyroid parenchyma will be followed by a significantly lower incidence of recurrent goiter. The very small size of the optimal thyroid remnant places new emphasis on the need for an anatomic thyroidectomy. Such small pieces of parenchyma cannot be safely dissected out without complete topographic definition of the thyroid gland and careful identification of the recurrent laryngeal nerve and parathyroid bodies.


Thorium dioxide (Thorotrast) by virtue of its radioactivity has the potentiality of producing neoplastic change in man. Although such cases are rare, most patients receiving the material have not provided a sufficient time of exposure, since the latent period is longer than 10 years. A case is presented in which hermangioendotheliomatous lesions were encountered in the liver of a patient given thorium dioxide 14 years previously. Thorium dioxide-induced neoplasms in the literature include two similar cases.