Use of Ödman-Ledin catheter and Seldinger wire with Crosby capsule

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Cox (1963) suggested radio-opaque polyvinylchloride tubing for easier localization of the Crosby capsule. We have found that the Ödman-Ledin red (no. 1) arterial catheter with a Seldinger guide wire is preferable for biopsies of the proximal jejunum.

One end of a 130 cm. long catheter is rubbed down for several centimetres with fine emery paper until the capsule can be threaded on to it. A flange, large enough to fill the groove in the base of the capsule, is made at the end of the catheter by heating in a flame. Just before the capsule is swallowed the catheter is filled with normal saline and a 130 cm. guide wire inserted up to the base of the capsule. The proximal end of the catheter with the protruding guide wire is clamped with a haemostat. The capsule is passed in the usual way (Crosby and Kugler, 1957) with fluoroscopic control to the proximal jejunum.


FIG. 1. Radiograph of the abdomen showing Crosby capsule with Ödman-Ledin catheter and Seldinger guide wire introduced into the proximal jejunum.

Gastroenterological Society of Australia

The annual meeting of the Gastroenterological Society of Australia was held at the Royal Prince Alfred Hospital, Sydney, on 3 May 1964. The President, Dr. S. J. M. Goulston, was in the chair.

After the business meeting a scientific session was held, at which the following papers were presented.

EFFECT OF COLCHICINE ON SMALL INTESTINAL MUCOSA OF THE RAT

KERRY GOULSTON and ALAN SKYRING Colchicine arrests cells undergoing mitosis at the metaphase. It has been claimed that the histopathology of the small intestine mucosa produced by repeated injections of sublethal doses of colchicine resembles that seen in idiopathic steatorrhoea. In this study it was found that the histopathology of the small intestinal mucosa did not resemble that of ‘subtotal villous atrophy’, in that there was atrophy and distortion of crypts as well as villi, with decreased mitoses. This was discussed in relation to the hypotheses of the pathogenesis of idiopathic steatorrhoea.

THREE UNUSUAL EXAMPLES OF INTESTINAL MALABSORPTION

W. B. HENNESSY and J. C. BIGGS In this paper three unusual examples of intestinal malabsorption were

Use of Ödman-Ledin catheter and Seldinger wire with Crosby capsule—continued

and the guide wire is then removed by gentle traction with the patient sitting. The patient then lies on the left side until the biopsy has been obtained, when the capsule is removed with the patient sitting with the cervical spine maximally extended.

The advantages of this method are 1: The catheter and guide wire may be readily directed into the pharyngeal orifice and to a certain extent passive introduction of the capsule may help it to be swallowed; 2 if the catheter is bitten it will still function, and the working life is much greater than that of a polyethylene tube; 3 radio-opacity is greater than with any other tube or instilled liquid (Fig. 1); 4 in most cases the upper jejunum is reached in 45 minutes.

Although the movement of bubbles cannot be seen along the catheter, the resistance experienced when injecting fluid or air into the catheter indicates that the knife has been released.

REFERENCES


presented. The first patient was an unusual example of gluten-induced enteropathy. The second patient presented with severe diarrhoea, aphthous stomatitis, and loss of weight, following a brief visit to New Guinea. The final diagnosis was tropical sprue. The third patient was a woman aged 53 who presented with pseudo-obstruction of the small intestine for which two laparotomies were performed. The final diagnosis was progressive systemic sclerosis.

PROTEIN-LOSING ENTEROPATHY WITH GENERALIZED LYMPHATIC ABNORMALITIES

S. P. MISTILIS and A. P. SKYRING  A case study of intestinal lymphangiectasia was presented where severe malabsorption of fat together with marked enteric loss of albumin, severe hypocalcaemia, and tetany were the dominant features. This study indicated that the steatorrhoea in intestinal lymphangiectasia is probably due to enteric loss of fat on the basis of a functional and anatomical block in the intestinal lymphatic system.

A CASE OF UNEXPLAINED INTESTINAL PROTEIN LOSS

J. H. STEWART and R. D. H. STEWART (introduced)  Protein loss from the gastrointestinal tract occurs in severe congestive heart failure and in many diseases of the alimentary tract. They reported a case in which there was a 32-year history of intermittent hypalbuminaemic oedema and diarrhoea without clinical or laboratory evidence of cardiac or renal disease. When investigated with $^{113m}$-labelled albumin during an exacerbation of his disease, the patient had reduced intra- and extra-vascular albumin, and an exceedingly rapid albumin degradation rate attributable to gastrointestinal protein loss. In addition he had hypocalcaemic tetany, mild steatorrhoea, and malabsorption of cyanocobalamin, whereas absorption of monosaccharides and folic acid was normal. Barium studies showed some thickening of the duodenal mucosa as well as hurry, flocculation, and dilatation in the rest of the small bowel. Despite treatment with glucocorticoids and albumin, the patient had increasingly severe diarrhoea which caused his death. Necropsy showed an entirely normal gastrointestinal tract, except for some minor abnormalities of the duodenal mucosa, the significance of which was discussed. There was extensive sarcoidosis of the liver, but no granulomata elsewhere, nor any evidence of portal hypertension. No reported instance of exudative gastroenteropathy could be found in which full investigation has failed to show some lesion to account for the protein loss.

ANTACID DOSAGE IN PEPTIC ULCER

D. W. PIPER  In this investigation, an attempt was made to determine mathematically the neutralizing capacity antacids should possess and the neutralizing capacity of currently available antacids. In the calculation of the required neutralizing capacity of antacids, use was made of the observations of previous workers regarding the emptying rate of the stomach and gastric secretion. It was found that antacid dosage required adequately to neutralize the secretion of 90% of male duodenal ulcer patients should have a neutralizing capacity of 50 mEq. if given hourly and that a dose of neutralizing capacity of approximately 25 mEq. is necessary to treat 90% of male gastric ulcer patients and female duodenal ulcer patients, assuming hourly dosage; the basal secretory rate multiplied by 8 indicates the neutralizing capacity of the hourly dose required in 90% of cases.

INTESTINAL MOTILITY IN MAN: BEHAVIOUR OF THE SMALL INTESTINE FOLLOWING PARTIAL GASTRECTOMY WITH SPECIAL REFERENCE TO THE DUMPING SYNDROME

D. J. DELLER and A. G. WANGEL  The motility of the small intestine was studied by intraluminal pressure recording and cineradiography in 19 patients after partial gastrectomy. The patients with the dumping syndrome had a significantly higher resting level of activity than the control subjects; the early response to food was one of reduced motility in those patients in whom attacks of dumping were provoked; as the symptoms of dumping abated, the motility increased to levels above those of the resting phase. By contrast the early response to food was increased motor activity of the small intestine in patients in whom the standard meal did not induce disagreeable symptoms.

Both groups of patients after gastrectomy had a more marked late response to food than did the control subjects and the difference between the patients without the dumping and the control group was statistically significant.

It was considered that the hypomotility of the small intestine observed during induced attacks of dumping was not the cause of the symptoms but rather an accompanying phenomenon.

EFFECT OF LOCAL TRAUMA ON ACID SECRETION DURING MAXIMAL STIMULATION

G. W. MILTON  In dogs it was found that severe injury causing destruction of the mucosa resulted in complete cessation of secretion at the site of the injury. Less severe injury caused the pH at the surface to become strongly alkaline at the injured site (9-10). This change of secretion was localized and appears to be a protective mechanism inhibiting acid and possibly pepsin locally at a site of moderate trauma.

COMMENTS ON THE AUSTRALIAN GASTRIC ULCER CHANGE

B. P. BILLINGTON  Previous studies have shown that the Australian gastric ulcer change consisted of a rise in the incidence of gastric ulcer in women of childbearing and pre-menopausal age, commencing around 1943 and affecting only New South Wales and Queensland. More recent studies in New South Wales indicate that the position has again changed, so that there has been a rise in number of gastric ulcers diagnosed not only in older women, but in those born before the group originally affected. Women with gastric ulcer now exceed men in...
numbers at all ages, changing the male to female sex ratio of the disease as seen in hospitals from 2.5 to 1 in 1930-1939 to 0.8 to 1 in 1959-1961. The changing prevalence of the disease according to age in women, paralleled by the mortality data in New South Wales, suggests that an environmental alteration occurring during the years of the second world war has revealed a new population of women susceptible to the development of gastric ulceration. The first group affected were those of child-bearing and premenopausal age and, consistent with the usual pattern of gastric ulcer, more women of this group have developed gastric ulceration as the group has grown older. As, in addition, women born before this group have now also been involved in the gastric ulcer change, it seems likely that the responsible environmental alteration is in some way related to social factors dependent on the behaviour of women. Analysis of cases diagnosed in New South Wales in 1963 shows that both city and country areas have been affected, including Broken Hill, an isolated town which is linked socially and commercially with South Australia, a state in which the gastric ulcer change has not occurred. This suggests that administrative rather than commercial or social factors have determined the curious inter-state variations of the gastric ulcer change in Australia.

CIRRHOSIS OF THE LIVER IN NEWCASTLE, N.S.W.

J. M. DUGGAN and B. CHAPMAN The pattern of cirrhosis as seen in an Australian industrial community was examined.

TREATMENT OF LUPOID HEPATITIS WITH 6-MERCAPTOPURINE AND AZATHIOPRINE

GIDEON GOLDSTEIN The antimitobolites 6-mercaptopurine (6-MP) and its derivative azathioprine were used to treat eight cases of lupoid hepatitis and active chronic hepatitis. The rationale was based on the experimental efficacy of 6-MP in inhibiting antibody formation, delayed hypersensitivity, and experimental autoimmune disease, and the belief that active chronic hepatitis is perpetuated by an immunological autolastic vicious cycle.

At the time of this assessment, after treatment periods, ranging from three and a half weeks to one and a half years six patients were in sustained remission, one was still improving after five weeks of treatment, and one had defaulted. Elevated levels of serum transaminase and γ globulin dropped appreciatively; there was little change in the serum albumin levels; bromsulphalein retentions improved; patients receiving corticosteroids required progressively smaller maintenance dosage. Neutrophil counts fell slightly but final analyses showed no significant depressions of the haemoglobin level or the leucocyte count. Gastrointestinal side-effects occurred early but subsided after reduction of dosage or temporary cessation of antimitobolite treatment.

Thus 6-MP and azathioprine appear to be of value in the management of active chronic hepatitis, particularly when unpleasant side-effects are limiting adequate treatment with corticosteroids.

GANGLIONEUROMA AS A CAUSE OF DIARRHOEA AND FAILURE TO THRIVE IN CHILDHOOD

CHARLOTTE M. ANDERSON The clinical details and biochemical findings of a patient with an adrenal ganglioneuroma were presented. The patient, a boy aged 5 years, presented with chronic diarrhoea of two years' duration and failure to thrive. He passed two to five voluminous, watery stools each day. Growth was retarded and the abdomen distended. The stools had a moderately increased fat content but all investigations relevant to the more usual cause of steatorrhoea and failure to thrive were negative, including jejunal biopsy. Urinary catecholamine excretion, particularly 3-methoxy-4-hydroxy mandelic acid (M.H.M.A. or V.M.A.), was considerably elevated (18.5 mg./24 hours). An opacity in the right adrenal area was suggested by an aortogram and some deformation of the right renal pelvis by an intravenous pyelogram. At laparotomy a rounded, well-capsulated tumour arising from the right adrenal gland was removed and a pathological diagnosis of ganglioneuroma made. The diarrhoea ceased immediately and the child thrived.

Eighteen such cases have been reported so far in the literature. They have all shown chronic diarrhoea, abdominal distension, and wasting but some had, in addition, episodes of facial flushing, sweating, and hypertension. Only a small proportion of ganglioneuroma present with this coeliac-like clinical picture and it is suggested that some tumours are associated with the secretion of an as yet unknown substance, which either stimulates peristalsis or alters absorption or excretion of fluid and electrolytes in the gut.

LOSS OF PROTEINS IN HUMAN AND CANINE HEPATIC BILE

JAMES G. RANKIN Protein output was estimated in hepatic bile from eight patients with hepatobiliary disease and four normal dogs.

It was found that the selective transfer of serum proteins from plasma into bile resembled the transfer of molecules of dextran from plasma into hepatic lymph and proposed that normally very small volumes of hepatobiliary lymph are lost into bile through occasional discontinuities in the biliary epithelium.

With one exception, the leakage of hepatic lymph accounted for no more than 1% of the bile volume and insignificant serum protein loss. However, in one patient, who had had a carcinoma of the gall bladder resected, the loss of serum proteins in bile was of a similar magnitude to the alimentary losses found in the 'protein-losing gastroenteropathies'.

The data support the concept that the biliary mucosa offers a barrier to the movement of water and freely diffusible substances and that any passage of fluid across this barrier is due to the escape of lymph.

There was also qualitative and quantitative evidence for 'bile tract protein', immunologically distinguishable from serum proteins.
USE OF DIAGNOSTIC CYTOLOGY FOR THE EARLY DIAGNOSIS OF CARCINOMA OF THE STOMACH

B. GOODMAN and N. PERROTT In this series 116 patients were examined by means of gastric saline lavage. Twenty of these individuals subsequently were proven at laparotomy to have cancer of the stomach. Of these malignant cases, 17 were diagnosed by cytology and one was considered to be suspicious. Two cases of carcinoma were not diagnosed by cytology.

In 17 of the 20 cases of carcinoma gastroscopy was performed and showed a carcinoma in seven and suspicious appearances in five. Five cases of carcinoma were undiagnosed by gastroscopy.

In 16 of the 20 malignant cases the barium meal report was available and of these four were given a radiological report of carcinoma, six were equivocal, and six cases were undiagnosed radiologically.

EXPERIENCES WITH HEMIGASTRECTOMY, VAGOTOMY, AND GASTRODUODENOSTOMY FOR DUODENAL ULCER

H. A. F. DUDLEY The combined operation of hemigastrectomy, vagotomy, and gastroduodenostomy for duodenal ulcer is a theoretically attractive technique for permanently abolishing hypersecretion and at the same time preserving normal continuity.

A series of 134 patients with duodenal ulcer were submitted to laparotomy by one surgical team with a view to carrying out this operation. The feasibility rate was 45%.

The early analysis of these patients some two years after operation suggests that they are all free from recurrence but that their nutritional state is only marginally superior to that after standard gastrectomy.

PSEUDOMEMBRANOUS COLITIS

V. MCOVERN and S. J. M. GOULSTON Emphasis has been placed on this condition occurring post-operatively and in association with antibiotic therapy. Staphylococcus endotoxin has been put forward as the aetiological agent. The fact that pseudomembranous colitis can occur without operation or antibiotics having been given has not been sufficiently emphasized. In this study 14 cases of pseudomembranous disease were found in the course of the study of the causes of acute colitis other than ulcerative colitis or granulomatous colitis causing or contributing to death in the decade 1950 to 1960 in Royal Prince Alfred Hospital. All cases except two were confined to the colon.

Fourteen cases were readily divided into two groups, one with a primary disease in the colon, and the other in which there was a primary medical disease, usually chronic renal or cardiac insufficiency. In the colonic disease obstruction was present in three due to carcinoma of the sigmoid colon, one to radio-necrosis in the sigmoid following irradiation to the cervix, and one associated with a huge pseudo-tumour of the iliac crest obstructing the rectum in a haemophiliac.

The main clinical features were diarrhoea in all grades of severity, haemorrhage occasionally, and pain rarely.

The condition starts in various small foci by a process of fibrinoid necrosis of the surface of the mucosa. Fibrinous material erupts and subjacent glands secrete excessive mucus. The exudate consists of fibrin, mucus, and leucocytes. The process extends downwards and the mucosa gradually becomes necrotic and may slough.

Important aetiological factors appear to be chronic long-standing colonic obstruction on the one hand, and cardio-renal disease plus infection or haemorrhage on the other. In no case was there evidence clinically or pathologically of hypotension and the authors consider the condition due to a surface toxic agent, probably an endotoxin.

On 2 May 1964 the Gastroenterological Society held a symposium with the Haematology Society of Australia on the subject 'Intestinal absorption and malabsorption'. Eleven papers were presented.