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ABSTRACTS

How should gastric polyps be managed? M. A. Block, T. A. Fox and B. E. Brush. Bull. Soc. Int. Chir. 3:266-278, 1966.

Gastric polyps present difficulties in management because of the lack of precision afforded by current methods of study in identifying those that are malignant, and because polyps usually occur in the older age group of patients in whom the risk of operation is increased. Using a broad interpretation of the term polyp, many pathologic entities are included, although the majority of lesions are adenomatous polyps. Obvious polypoid malignancies should be excluded when considering polyps.

In a clinical review of patients for whom the diagnosis of gastric polyps was made, the size of the polyp proved to be the major factor in determining the likelihood of malignancy. Of 69 patients for whom operation was performed, the incidence of malignancy was 4 per cent for polyps less than 2 cm., 17 per cent for polyps 2 to 4 cm., and 100 per cent for polyps greater than 4 cm. in size. The presence of ulceration or bleeding suggests the presence of malignancy. For patients found definitely to have gastric polyps less than 2 cm. in size, the risk of malignancy should be balanced individually against the risk of operation. The majority can be followed. Partial gastrectomy is usually indicated for polyps larger than 2 cm. The prognosis for polypoid gastric carcinoma is better than that for other morphologic varieties of gastric carcinoma.

The prognosis in chronic bronchitis. G. L. Brinkman and D. L. Block. JAMA 197:17, July 4, 1966.

In 1958, 1,317 men working in the Detroit area were selected for study on the basis of two criteria: they were aged 40 to 65 years and working full-time. They were classified into four working groups: no industrial exposure, general industrial exposure, 20 years of silica-dust exposure, and 20 years of silica-dust exposure with roentgenogram evidence of silicosis. They were classified further as to whether they had chronic bronchitis, which was defined as a daily cough for six months, productive of at least a teaspoon of sputum a day. In 1964, the same group of men were reexamined using the same questionnaire as was used in 1958. A spiogram and chest roentgenogram were obtained as well. Altogether, 1,056 men were followed, which includes 123 men who died during this time. In this sample of the Detroit male population, the presence of chronic bronchitis did not have any significant adverse effect on health, working ability, or ventilation of these men over a six-year period.

Trichophyton rubrum. Perifolliculitis on amputation stump. J. L. Cooper and G. R. Mikhail. Arch. Derm. 94:56-59, July 1966.

A case of Trichophyton rubrum perifolliculitis on an amputation stump is reported. An occlusive plastic prosthesis predisposed to infection at this site. Histopathologic examination revealed numerous intrafollicular and perifollicular spores lying in masses and singly. Some of the individual spores exhibited radiate body formation. This is the first time this has been observed with Trichophyton rubrum.

ABSTRACTS

Cerebellar disease in infectious mononucleosis. M. D. Dowling, Jr. and E. J. Van Slyck. Arch. Neurol. 15:270-274, 1966.

A patient with infectious mononucleosis is described in whom signs and symptoms of cerebellar dysfunction predominated. Previous reviews of the neurologic manifestations of that disease have not stressed cerebellitis as a primary central nervous system involvement. Five patients previously reported by other authors are reviewed. In clinical states simulating brain tumors in the posterior fossa it is important to obtain blood and cerebrospinal fluid heterophile agglutination determinations and have a blood smear examined by a competent observer.

Experimental myocardial infarction. A histochemical study. G. Fine, A. Morales and J. R. Scerpella. Arch. Path. 82:4-8, July 1966.

Histochemical and enzymatic stains were employed on sections of fresh frozen myocardium of 26 rats in whom the left coronary artery was ligated for 5 minutes to 72 hours to detect myocardial ischemia prior to the recognition of muscle necrosis by conventional histochemical stains. The stains employed varied in their sensitivity; those involved in glycogen metabolism (PAS, phosphorylase, branching enzyme and uridine diphosphate glucose-glycogen transferase [UDPG]) detected the earliest changes, followed by betahydroxybutyrate and isocitrate dehydrogenases.

Experience with directed suction biopsy of the stomach. R. F. Gluckmann and B. M. Schuman. Gastroint. Endosc. 13:20-23, Nov. 1966.

Eighty-nine patients were examined employing the Eder-Palmer gastroscope with the Berry biopsy sheath attachment. One or more gastric biopsies were obtained in all but two patients, and three specimens were lost in processing, leaving a total of 84 specimens for microscopic examination (94.3%). The patients were grouped for analysis into four categories, according to radiological diagnosis: normal, heavy folds, gastric ulcer and gastritis, and cancer. Previous reports about the poor correlation between the endoscopic and the biopsy diagnosis of gastritis were confirmed. Unfortunately, although the yield of adequate biopsy specimens is high, the instrument has not proved satisfactory for the diagnosis of gastric malignancy, since in only one out of 24 cases could the diagnosis be established.

Ehlers-Danlos syndrome complicated by acute hemorrhagic sigmoid diverticulitis, with an unusual mitral valve abnormality. G. J. Green, B. M. Schuman and J. Barron. Amer. J. Med. 41: 622-625, 1966.

A patient with Ehlers-Danlos Syndrome was hospitalized for more than six months because of recurrent hemorrhage from acute sigmoid diverticulitis. A coagulation disorder proved to be due to a qualitative platelet deficiency, probably platelet factor III, as well as a morphologic alteration of platelet ultrastructure. The bleeding did not respond to corticosteroid therapy or ligation of the inferior mesenteric artery and required subtotal colectomy for control. The patient died 15 days postoperatively and a nonrheumatic nodular proliferation of the mitral valve leaflets was found at autopsy. A review of the literature substantiates the fact that Ehlers-Danlos Syndrome, a disorder of collagen tissue, includes abnormalities of internal organs and tissues and is not merely a disease of the integument and joints.

Adverse hepatic reactions to halothane: risks and safeguards. W. S. Haubrich. Chicago Med. Sch. Quart. 26:95-97, 1966.

Halothane is a potent, noninflammable, usually safe, anesthetic agent which has found wide acceptance and has become almost indispensable to the versatile anesthesiologist. Adverse hepatic reactions to halothane are fortunately rare, probably occurring not oftener than once in 100,000 administrations. The clinical picture of injury by halothane is that of an acute, fulminant hepatitis; the pathologic lesion is massive hepatic necrosis. Among 140 recorded cases, the fatality rate has been 42 per cent. Conditions of age, sex, type of surgical procedure, dose or duration of anesthesia have seemed not to distinguish affected cases. One factor of hazard, however, is multiple exposures to halothane within a period of 3 months (49 cases or 33 per cent). Caution should be exercised to avoid combining the use of halothane with any other substances or conditions known to be potentially deleterious to the liver. Halothane should not be employed if the need for multiple anesthetic administrations can be anticipated.

ABSTRACTS

Comparative study between immunoglobulin status and interferon response in health and disease. H. Hayashi, N. S. Sharpless, and G. A. LoGrippe. *J. Reticuloendothel. Soc.* 3:1-17, May 1966.

Variations in the immune-humoral status and the immune-cytological status found in eighty-four patients with a variety of chronic diseases are presented. An attempt was made to correlate various clinical entities with the quantity of the major immunoglobulin classes (IgG, IgA and IgM), the neutralizing antibody response as a measure of IgG quality and interferon production as a function of peripheral blood leucocytes in response to virus infection. The clinical entities studied fell indiscriminately into the four immunoglobulin groups described. It appears that immunological responses, among these diseases at least should be considered on an individual basis rather than as group entities. In addition, no correlation was found between the four immunoglobulin groups and the neutralizing antibody responses to the common enteric viruses. The humoral-immune status is no index to the individual's immune-cytological status, as measured by the interferon response of the peripheral blood leucocytes. Here, again, no correlation could be seen among the various clinical entities, the immunoglobulin groups and the interferon response. From these results, one can only conclude that deficiencies in the immunological status, both humoral and cytological, should be studied on an individual basis. More emphasis should be placed on the role of the host and his immune response to micropathogens, rather than searching for a specific micro-pathogen as the etiological agent of an accepted clinical entity for the chronic diseases.

Responsibility of psychiatry in alcoholism. T. J. Heldt. *Dis. of Nerv. Syst.* 26:446-451, July 1965.

The psychiatrist and the psychoanalyst should become a little more liberal-minded toward other techniques concerning alcoholism. The general practitioner, through his knowledge of the patient and his family, can stimulate self-inventory and reeducation. Understanding of the altered physiology (which may be partly dependent on a malfunctioning of the body enzymes) is necessary to treatment. Group therapy and conjoint family therapy has its place. The guiding ideas behind Alcoholics Anonymous are strikingly similar to some which are involved in psychoanalytic therapy; and their Twelve Steps program has rehabilitated some 40 to 60 percent of willing participants. The success of these various approaches confirms that any narrow approach, specifically any theory that would see the problem only as the expression of an unconscious conflict, is inadequate.

Skin-window responses in uveitis. P. C. Hessburg and J. W. Rebeck. *Am. J. Ophth.* 62:648-659, Oct. 1966.

The etiology of uveitis is for the most part unknown. Though a great deal is known about the disease process and its tragic sequelae, the cause of this intraocular infection often baffles ophthalmologists. In order to elucidate the basic inflammatory response of patients with this disease, skin windows were done on a group of patients with various types of uveitis. These studies suggest that the inflammatory response of patients with uveitis, as evaluated by skin windows, may vary from normal in at least one of three ways — — by a paucity of responding leukocytes which themselves are poorly phagocytic, or, in marked contrast, by an increase in pus cells, which are just as poorly phagocytic; and by an unusual increase in responding eosinophils or basophils.

Transbrachial retrograde left heart catheterization evaluation of 600 consecutive cases in adults. F. J. Hildner, E. H. Drake, H. H. Gale and R. S. Ormond. *Am. J. Cardiol.* 18:52-56, July 1966.

Catheterization of the left side of the heart was accomplished by passage of a National Institute of Health standard type catheter through a brachial arteriotomy at the antecubital fossa. Of 600 attempts at transaortic passage of the catheter tip into the left ventricle, 576 (96%) were successful. Included were 215 cases of significant aortic stenosis in which the success rate was 97.7%. The high rate of success of this technique is attributed to the use of an arteriotomy, the transbrachial route, constant monitoring of pressure throughout the procedure and use of a relatively firm injection catheter. Failures were chiefly due to aberrant, tortuous or dilated great vessels rather than distorted aortic valvular anatomy.

No deaths occurred in the series. Four (0.6%) serious complications occurred directly related to the procedure. All of these resolved spontaneously or were successfully treated. This study suggests that transbrachial retrograde left heart catheterization is a highly successful, relatively easy, and very safe method for evaluation of the function of the left side of the heart.

ABSTRACTS

Isolation stoma colostomy and radiation-induced rectovaginal fistula. C. P. Hodgkinson and R. H. Baker. *Am. J. Obst. and Gynec.* 96:73-79, Sept. 1966.

This report deals with favorable results obtained when isolation stoma colostomy was used as initial treatment in 14 patients with extensive rectovaginal fistulas, all but one of which were radiation induced. In 6 patients with malignant rectovaginal fistula, palliation was obtained which ranged from moderate to excellent. Of 7 nonmalignant fistulas, 3 healed spontaneously with operation and 4 healed primarily without infection after operative resection.

Early human myocardial infarction. A histochemical study. A. R. Morales and G. Fine. *Arch. Path.* 82:9-14, July 1966.

The usefulness of histochemical methods to detect cell injury in human myocardium before it is demonstrable by conventional histologic stains was investigated in the hearts of 11 patients with a clinical diagnosis of early myocardial infarction. Each patient showed severe narrowing of a coronary artery or occlusion of a coronary artery without microscopic confirmation of infarction. Decreased enzyme activity was found to be a better and more easily recognized indicator of early human myocardial damage than conventional histologic methods. The rate of disappearance of enzymatic activity varied with the enzyme system; glutaminase I and B-hydroxybutyrate dehydrogenase were the most valuable as indicators of early human myocardial infarction.

Behavior of clear penetrating corneal homografts in rabbits, after sensitizing to donor skin. G. M. O'Gawa, J. B. Guyton, W. R. Sanders, F. A. B. Inch, and R. C. Ellis. *Am. J. Ophth.* 61:267-273, Feb. 1966.

Two hundred six adult white rabbits were paired for exchange of 4.5 mm. penetrating corneal transplants. At two weeks, the grafts were clear in 74. These were divided into six groups, to receive 2 by 2-cm. skin implants from the original donors into their abdominal walls at six different time intervals between corneal graft and skin implant. The experimental results confirm that skin implantation can effect graft clouding. The statistical dependence of clouding on the time interval is highly significant. When grafts clouded, the median time lag from skin implant to appearance of haze was 2.5 weeks.

There were 19 donor-recipient pairs with both grafts clear at two weeks who were subsequently subjected to exchange of skin implants. Both grafts behaved the same after skin (both remained clear or both became cloudy) in 18 of these 19 pairs. It suggests that the quantitative difference in antigenic (or genetic) pattern of a given pair works both ways, playing an appreciable role in determining the outcomes of both grafts following skin.

Pathologic examination of specimens containing nonpalpable breast cancers discovered by radiography. R. B. Patton, A. K. Poznanski and C. J. Zylak. *Amer. J. Clin. Path.* 46:330-334, Sept. 1966.

Breast radiography has proven to be a reliable means of identifying and locating nonpalpable carcinomas of the breast. These clinically nonpalpable cancers may also be inapparent in the resected specimen of breast tissue when the pathologist examines it. This paper describes a method of examining specimens of this sort so that the surgeon and patient may be assured that the radiographically suspect area is examined histologically. Most of these clinically nonpalpable cancers contain tiny flecks of calcium. Radiographs of the surgically excised specimen will reveal this fine calcification, and thus assure the surgeon that the suspect lesion has been removed. If the lesion is nonpalpable upon thorough pathologic examination, then further radiographs can be prepared to assure the pathologist that he is submitting tissue from the suspect area for sections. The specimen is not adequately examined until calcification, equivalent to that seen in the radiograph, is seen in histologic sections.

Surgical management of large bilateral indirect sliding inguinal hernias. J. L. Ponka. *Amer. J. Surg.* 122:52-57, July 1966.

The occurrence of such defects is relatively uncommon, but of considerable surgical interest since it requires a knowledge of how to dispose of the sliding ileocecal segment on the right side, and the sigmoid colon on the left side. The method of management employed in a patient who exhibited these relatively large hernias is discussed in detail and illustrated.

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Trichloroethylene intoxication. A case of acute hepatic necrosis possibly due to this agent. R. J. Priest, and R. C. Horn, Jr. Arch. Environ. Health. 11:361-365, Sept. 1965.

A case report regarding a 37-year old Negro male, who was hospitalized with severe bilateral flank pain, vomiting for six hours and hematemesis. In the hospital, the patient rapidly developed deep jaundice, ecchymoses and fever to 105 degrees Fahrenheit. The patient expired 5 days after hospitalization without regaining consciousness from hepatic coma. At necropsy, the most important finding was that of hepatic necrosis. In the kidneys there were bile-stained casts in many distal convoluted tubules and associated necrosis of tubular lining cells. The possible relationship of this death to an industrial exposure to trichloroethylene is discussed.

The chronically ischemic lower limb. I. J. Schatz. JAMA 197:915-916, Sept. 12, 1966.

The management requires an understanding of the natural history of peripheral atherosclerosis and knowledge of the risks and advantages of available therapeutic maneuvers. After the physician determines the location of the occlusive process and the severity of the ischemia produced, the most appropriate therapy for the particular patient is chosen. In general, if intermittent claudication does not threaten livelihood, the non-surgical, conservative management is advised. This includes abstinence from smoking, meticulous care of the feet, appropriate reassurance with regard to the relatively good prognosis of intermittent claudication and proper control of diabetes mellitus, obesity and hyperlipidemia. If present. Pharmacologic agents and lumbar sympathectomy are of little or no value in the treatment of intermittent claudication. In the presence of ischemic rest pain, neuropathy, or ulceration, treatment in hospital is essential and must include complete bed rest together with promotion of maximum vasodilatation.

Arterial reconstructive surgery, preceded by arteriography, is indicated in patients with ischemic rest pain or ulceration, and in those with severe claudication. Operations on the aortoiliac system result in hospital mortality of 5-6% and a success rate of 90%. Surgical therapy of femoropopliteal disease, treated by autogenous venous grafts, has minimal hospital mortality and carries a success rate approaching 90%; unfortunately amputations due to irreversible hypoxia at the time of surgery occurs in about 12% of those with severe femoropopliteal disease. Lumbar sympathectomy is of value when arterial reconstructive surgery is not possible in patients with rest pain or ulceration.

Dynamic measurement of viscoelastic properties of bone. R. W. Smith, Jr. and D. A. Keiper. Amer. J. Med. Electronics. 41-156:60, Oct.-Dec. 1965.

In this report the authors present evidence that nondestructive testing of bone for its viscous and elastic properties can be achieved with a relatively simple electromechanical transducer. Concisely described are the apparatus, electromechanical principles of measurement, circuitry, governing equations, and the preparation and nature of the bone specimens to be tested. Experience to date includes measurements of diverse bone samples obtained at autopsy from several anatomic sites in the skeletons of man and dog. The precisely machined bone cylinders of carefully measured weights and dimensions permit an accurate determination of sample density. Reported in this initial publication are observations on the effects of age, sex, fluoride ingestion, disease state, osteonal orientation, sample preservation (alcohol, Ringer's solution) and repetitive testing on visco-elastic moduli and stiffness ratios (elastic to viscous). Although investigations have shown the applicability of the instrument to isolated samples, it has capabilities for in-vivo testing when used with a probe in the iliac crest.

Contribution of abdominal aortic aneurysmectomy to prolongation of life. D. E. Szilagyi, R. F. Smith, F. J. DeRusso, J. P. Elliott and F. W. Sherrin. Ann. Surg. 164: 678-99, Oct. 1966.

The survival experience of a group of 223 nonsurgically treated and a group of 480 surgically treated cases of abdominal aortic aneurysms observed during the past 22 and 13 years, respectively, were investigated. Survival curves were constructed, and the operative and nonoperative mortality rates were analyzed for the two groups and for subgroups standardized for statistical similarity.

In the surgical treated group the most important factor influencing survival expectancy was operative mortality, which fell from 14.7 per cent for the entire period of observation to 6.3 per cent calculated for the last two years. The second leading contributor to post-operative loss of life was coronary atherosclerosis which (beside being responsible for 47.5 per cent of the operative mortality) caused 38.3 per cent of the postoperative deaths. The operative mortality was not seriously affected by the presence of associated diseases common in patients with aneurysms unless they were of advanced degree or occurred in clusters.

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The leading cause of death among patients with nonsurgical aneurysms was rupture (34.6%). The next most important cause of death was coronary atherosclerosis (17%). During the period of observation of the nonsurgical cases, the survival experience was found better and the proportionate incidence of rupture as cause of death lower than previously reported. When untreated, aneurysms 6 cm. or less in diameter were found to have a longer survival expectancy and a lower overall mortality rate than large aneurysms. However, larger aneurysms had a rupture rate of over 19 per cent and a survival expectancy that was about half that of treated small aneurysms. The authors concluded that the operative indications for the treatment of asymptomatic abdominal aortic aneurysms must be broad. Removal of an abdominal aortic aneurysm was found approximately to double the patient's survival expectancy.

Age and sex related changes in the amount of cortex of normal human ribs. H. Takahashi, and H. M. Frost. *Acta. Orthop. Scandinav.* 37:122-130, 1966.

A standard sampling site of the sixth rib was studied in 326 metabolically normal people to define the manner in which the total size and its marrow cavities enlarge throughout life. It was found that both values did enlarge but more slowly after age 25 than before it. This was interpreted to mean that bone growth does not stop at the time of skeletal maturity and that osteoporosis is probably more complicated than a simple disproportion between resorption and formation of bone.

On the role of hydralazine in renal hemodynamics and secretion of renin. I. J. Vodoukis. *Amer. Heart J.* 72:140-141, July 1966.

In view of previous observations a postulate regarding the role of hydralazine in renal hemodynamics is made. Normally, an increase in total renal blood flow by hydralazine is associated with a decrease in medullary sodium concentration whereas the sodium content of the cortex remains unchanged. This indirectly implies the possibility that the increase in blood flow is more prominent in the medulla than in the cortex. Perhaps because of the autoregulation which operates in the cortex, the cortex copes with the situation and thus cortical blood flow remains more stable as compared to medullary blood flow. In the presence of renal artery stenosis or coarctation of the thoracic aorta, however, the autoregulating mechanism of the cortex may be defective because of the presumably existing reduction in perfusion pressure and the renal vasodepressor effect of hydralazine. Hence, a relative increase in medullary blood flow after hydralazine could mean a redistribution of blood from cortex to medulla and a relative cortical ischemia, which in turn might result in underdistentions of the stretch receptors of the afferent arterioles; this would account for more granularity of the cells and increased secretion of renin.

Diabetes mellitus in patients with gout. F. W. Whitehouse and W. J. Cleary, Jr. *JAMA* 197:73-76, July 11, 1966.

About 10% of patients with gout will have diabetes mellitus. Of our 89 patients with both diseases, 74 (83%) have insulin-independent diabetes and in two of three gout developed first. Obesity is a frequent concomitant (65 patients, 73%), and perhaps represents the common etiologic basis for both metabolic abnormalities in this type of patient. The excessive use of food and drink probably heightens the chances of one or both disorders developing. Physicians should be aware of this concomitance and attempt the early detection of diabetes in appropriate cases of gout. Insulin-dependent diabetes was uncommon in our patients (15 patients, 17%). One need not expect the frequent development of gout in patients with diabetes. Only one in 100 of our patients with diabetes has gout.

Chronotropic action of glucagon on the sinus node. F. W. Whitehouse and T. N. James. *Proc. Soc. Exp. Biol. Med.* 122:823-826, 1966.

Into the cannulated sinus node artery of mongrel dogs serial dilutions of glucagon were injected. When glucagon was given at 1 or 10 $\mu\text{g}/\text{ml}$., a positive chronotropic effect occurred. With the use of 10 $\mu\text{g}/\text{ml}$. the mean increment in heart rate was 30 ± 12 (S.D.) beats per minute above control, lasting 17 ± 10 minutes. Concentrations of 100 $\mu\text{g}/\text{ml}$. of glucagon produced variable effects including sinus arrest with an escape AV nodal rhythm. The chronotropic effect was unrelated to changes in the blood sugar. In six dogs, naphthylisoproterenol, a betaadrenergic blocker, could partially reverse the sinus tachycardia or diminish the subsequent effect of glucagon. When dogs were pre-treated with reserpine, the positive chronotropic effect was diminished in intensity and duration, but not abolished. It is suggested that the tachycardia following glucagon relates to local release of nodal norepinephrine and to a direct action by glucagon on the sinus node.

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