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Experience with 18 patients with medullary carcinoma of the thyroid was reviewed and revealed that the thyroid lesion has distinctive histologic, biologic and clinical features. Adequate surgical treatment requires an awareness of its tendency to simulate certain behavioral characteristics of both papillary and poorly differentiated carcinoma, to involve both lobes of the thyroid, to metastasize to cervical lymph nodes, to metastasize to distant sites, to resist therapeutic measures other than surgery, to be associated with certain other endocrine lesions, and to occur as an autosomal dominant characteristic in some families. Two patients had received previously external radiation therapy to the neck. This variety of thyroid carcinoma can be recognized in some patients in frozen section of tissue removed at the time of operation. An early aggressive surgical approach is indicated, to include total or near-total thyroidectomy and cervical lymph node dissection, modified in accordance with gross extent of the disease.


Recently available diagnostic techniques and a better understanding of liver abscesses have permitted significant reduction of mortality from this condition. Liver abscesses related to cholangitis are multiple and small and require drainage of and elimination of obstruction to the extrahepatic biliary tract. The diagnosis of large solitary abscesses, due to pyogenic or amebic infection, is more difficult, but is now facilitated by use of the liver photoscan. The addition of indirect hemagglutination and precipitation tests permit recognition of amebic abscesses of the liver.

Pyogenic and chronic or secondarily infected amebic abscesses require surgical drainage. This is best approached by aspiration, directed by localization provided by the hepatic photoscan, with immediate examination of the material for motile ameba and by a gram-stained smear. Since at least half of pyogenic liver abscesses are due to anaerobic bacteria, especially the Bacteroidaceae which are difficult to culture, the immediate smear helps identify the pyogenic nature of the abscess even though bacteriologic culture studies, including anaerobic techniques, do not show early growth. Adequate prolonged surgical drainage via the most direct route is required for permanent eradication of the large solitary liver abscesses.
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A case of rheumatoid arthritis is described in which a chronic chyliform pleural effusion was present. Extensive study failed to reveal a cause for the effusion other than the rheumatoid disease. The effusion was an exudate, grossly resembled chyle, had a high lipid content, and contained cholesterol but no cholesterol crystals. The predominating cells were lymphocytes. An ingested lipophilic dye did not stain the fluid. The occurrence of a chronic lipid pleural effusion in rheumatoid arthritis is a rare event. The various lipid-containing pleural effusions include chyle, chyliform fluid, and so-called cholesterol effusions. The pathogenesis of the latter two types is poorly understood.


Three hundred consecutive patients were studied with the gastrocamera and the findings were analysed. Forty-six ulcers and eight cancers of the stomach were photographed. Only one third of roentgenographically diagnosed antral ulcers were photographed, but 11 gastric ulcers not noted by the radiologist were found. Lesions at the cardia or in the fundus, suspected on x-ray study, were more clearly defined by a complementary gastrocamera examination. Pictures of an ulcer were often decisive in instances where the question of malignancy was raised. Gastritis was the most frequent abnormality of the group with normal findings from x-ray examination of the upper part of the gastrointestinal tract. The technique is well tolerated, very safe, and can be performed in a few minutes. The photographs are of excellent quality and provide a permanent record for consultation with colleagues and for a teaching file of gastric pathology.


The history and temporal bone findings of a 76-year-old woman on salicylate therapy for rheumatoid arthritis are presented and discussed. Half of the patient’s bilateral 50 decibel sensorineural hearing loss was reversible and felt to be due to inner ear biochemical effects of salicylate, as no evidence of damage to the organ of Corti or hair cells could be determined by light microscopy. The remaining hearing loss was felt most likely due to coincidental degenerative stria vascularis atrophy and spiral ganglion cell loss.


The sensitivity and specificity of two immunologic pregnancy tests, Ortho-Gravindex and Wampole-UCG (urine chorionic gonadotropin), were compared with the frog test in a total of 1751 pregnancy tests among 845 patients representing 554 pregnancies. Accuracy was greatest with the more sensitive UCG test and was chiefly affected by the state and duration of the pregnancy. Differences in accuracy among the tests employed in normal pregnancy were less than those in abnormal and early pregnancy; effectiveness in the latter two groups was significantly reduced and was dependent upon the sensitivity of the test. Factors adversely affecting test results other than test sensitivity were related to the production and excretion of chorionic gonadotropin. Unique to the immunologic methods was the false positive UCG test resulting from disrupion or coating (or both) of the latex antigen-carrier complex and false negative UCG tests that might result from sheep RBC agglutination by a Forssman type antibody in the urine. Drugs did not appear to influence the immunologic tests but human albumin or plasma added in excess of 3% to urine produced positive immunologic tests while immuno-gamma-globulin added in excess of 0.5% produced false positive Gravindex tests and either false positive UCG tests or agglutination of the sheep RBC depending upon the lot of immuno-gamma-globulin used. Bacteria, WBC, RBC, and urine pH did not affect the immunologic tests in the range in which they are generally encountered in the urine.
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In contrast to the frequent occurrence of subjective muscle weakness and fatigue, objective muscle weakness and atrophy simulating polymyopathy have infrequently been reported in hyperparathyroidism but may be one of the early and dominant features of this endocrine abnormality. In three such cases reported, two patients had electromyograms suggestive of a myopathy, and one had increased creatinuria that was normal after corrective parathyroid surgery. In one of the patients a muscle biopsy in the preoperative period demonstrated evidence of myositis. Surgical correction of uncomplicated hyperparathyroidism produced prompt improvement in the muscle syndrome due to hyperparathyroidism.


Amyloidosis with extensive cardiovascular involvement was seen in five patients. Each exhibited the following clinical pictures: intractable congestive heart failure, ischemic heart disease, pericarditis with effusion, valvular heart disease, and orthostatic hypotension. The electrocardiographic findings of low voltage, left axis deviation, and absent or poor progression of the R waves in the extremity or precordial leads, although not specific, should alert the clinician to the possibility of cardiac amyloidosis. The typical low voltage may be concealed by the development of aberrant ventricular conduction or bundle-branch block.


This article describes 30 patients with acute or chronic post-traumatic anterior ankle instability, a condition which is not uncommon when patients are examined systematically for it. The abnormality consists of an anterior subluxation of the talus in the ankle mortise, due to relaxation of the anterior deltoid, and anterior calcaneal fibular ligaments. Its long range prognosis without treatment is good. Surgical repair was performed in six cases with good anatomical results in all, and good functional results in five.


The problem of surgically improving the denture supporting capabilities of the atrophic maxillary or mandibular alveolar ridge is too often inadequately solved. The problem is essentially one of re-adapting the soft tissues to effectively expose the remaining underlying bone for better denture support. A series of procedures are available which emphasize removal of redundant connective tissue from the sulcus and direct application of overlying surface tissue to the periosteum to prevent reincursion of connective tissue and consequent obliteration of the sulcus. Two procedures entailing manipulation of the oral soft tissues and two others requiring application of split-thickness skin grafts to the periosteum are used in the maxilla. The same four techniques are applicable in the mandible, though application of a split-thickness graft to the lateral aspect of the atrophic ridge has proved most effective for maintenance of ridge height in the lower arch. Elevation of the soft tissues distal to the tuberosity and compression of the zygomaticoalveolar crest are important corollary procedures in the maxilla. Surgical lowering of the entire mouth floor is a companion procedure to the bucco-labial skin grafting vestibuloplasty in the mandible. These techniques employed successfully in over 1,000 cases of imperfect denture retention are detailed.


Seventeen patients with constrictive pericarditis have been subjected to cardiac decorticatation at the Henry Ford Hospital. The pre-operative clinical picture may resemble that of cirrhosis of the liver or heart failure due to arteriosclerosis, the myocardiopathies or valvular heart disease. All 17 patients were studied preoperatively by cardiac catheterization and characteristic findings were present in each. An analysis of the right atrial pressure tracings showed typical "M" and "W" waves and a characteristic relationship of
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the ventricular end-diastolic to systolic pressure in the right ventricle tracings. A clinician is usually able to distinguish a doubtful case of constrictive pericarditis from other forms of right heart failure by these measurements. There was one postoperative death in the 17 operative procedures and this occurred in a patient with previously unrecognized active tuberculosis. With the exception of one patient who had co-existing pulmonary fibrosis, the surviving patients have been restored to normal activity. Three patients have undergone postoperative catheterization and each demonstrated return of each altered hemodynamics to normal. The indications for the surgical treatment of constrictive pericarditis may be simply stated—symptomatic cardiac constriction.


Hemorrhage has been noted to recur with disproportionate frequency regardless of how the disease is treated. In a few series reporting a follow-up of five years or longer, hemorrhage occurred in 15 to 64 per cent. In one series 1/3 of the patients who were treated medically as well as those who underwent subtotal gastrectomy re-bleed when followed for five years or more. This study was undertaken to determine if addition of vagotomy to hemigastrectomy provides comparably better protection against recurrence of gastrointestinal hemorrhage in patients with bleeding peptic ulcers. The courses of 102 patients treated in this manner from January 1955 through December 1960 were followed. The duration of follow-up was 6 to 12 years. Nearly 80 per cent were followed for eight years or more. The operation was considered advisable because of at least one of the following indications: persistent hemorrhage despite supportive measures (20); recurrence of bleeding, once stopped, despite medical therapy in the hospital (9); two or more episodes of frank bleeding preceding the admitting hemorrhage (85); or, evidence of other complications of ulcer disease preceding or coexisting with the admitting hemorrhage (18). The operative mortality was 5 per cent. Of these 102 patients, 90 had duodenal ulcers, 8 had gastric ulcers and 4 had both duodenal and peptic ulcers. During the follow-up period after operation, gastrointestinal hemorrhage recurred in 7 patients. None of the 7 patients who re-bleed required a second operation. These results were notably more favorable than those previously reported. The relatively low mortality and the high rate of effectiveness of hemigastrectomy with vagotomy in the present series suggests the superiority of this procedure as the surgical treatment of choice in the control of bleeding peptic ulcers.


Gangrenous cholecystitis is not common, but whenever there is a delay for any reason in the surgical treatment of acute cholecystitis, the possibility of this catastrophic inflammatory disease of the gallbladder must be entertained. From 1918 to 1965, 2,236 patients were treated for acute cholecystitis. During this same period 45 patients were found to have gangrenous cholecystitis. Important warning signs include an acutely ill patient with pain most frequently localized in the right upper quadrant, elevation of the white count, tachycardia, and fever. Cholecystostomy was utilized in 21 of 45 patients, but cholecystectomy was possible in 17 additional patients. In poor-risk patients drainage and cholecystostomy under local anesthesia can be life-saving. Subsequent cholecystectomy can be performed with the patient in good condition. Deaths following gangrenous cholecystitis are generally the result of the infectious process. The mortality rate for 43 operated patients was 9%.


Piposulfan (Ancyte), a methanesulfonate, alkylating derivative of piperazine, was administered to 594 patients with various types of cancer. The objectives of the study were determination of optimal dosage and evaluation of therapeutic efficacy of the drug. After preliminary trials with doses ranging from 1 to 3 mg/kg/day, it was decided to use 1 mg/kg/day as an initial dose in the majority of patients. Various degrees of therapeutic remissions were seen in patients with malignant lymphomas, acute and chronic leukemia, polycythemia, multiple myeloma, adenocarcinomas, epidermoid carcinomas, and different types of sarcomas. However, the magnitude of the therapeutic response appeared to be quantitatively inferior to that obtained with current antitumor drugs in wide usage. Bone marrow depression or gastrointestinal disturbances occurred in 118 patients, but the patients responded to dosage adjustments.
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Because available double bore aspirating needles were not entirely satisfactory, another style of double bore aspirating needle was developed which combined a number 23 gauge needle (for inflow channel) with either a number 16, 18 or 20 gauge needle (for aspirating channel.) This style of needle is illustrated. Routine use for more than a year has provided evidence of the instrument's satisfactory performance.


Seventy-four patients who had had a liver biopsy performed within a two-week period of a radioiodinated Rose Bengal liver scan were studied to determine a correlation of the pathological diagnosis with the liver scan diagnosis. It appeared that hepatic photoscanning is less reliable in the diagnosis of diffuse liver disease than it is in discrete lesions of the liver. The patchy photoscan, although consistent with the diagnosis of cirrhosis, hepatitis, or fatty metamorphosis, may occur as a result of nonspecific functional or structural hepatic alteration as well as metastatic seeding of the liver. The hepatic photoscan does not preclude the need for biochemical studies of liver function or liver biopsy.


The article reviews the progressive developmental use of the relaxing incision in hernia repair. The relaxing incision is a vertical incision made in the anterior sheath of the rectus as near as possible to the midline. The purpose of the relaxing incision is to permit the mobilization of the inferior and lateral margin of the rectus sheath, together with the accompanying fused portions of the internal oblique and transverse abdominal muscles. Specific application of this principle in the repair of direct, large indirect, recurrent, and certain femoral hernias has been successful.


Breast radiography and physical examination of the breast are complementary in their effectiveness in detecting breast pathology. The presence of radiographic signs suggesting cancer is an indication for biopsy even though no mass may be palpable. Similarly, a negative breast radiograph should not alter the decision to biopsy when a palpable mass is present. When an occult breast lesion is found radiographically, a cooperative effort by the radiologist, pathologist and surgeon is necessary to ensure removal and microscopic examination of the questioned lesion. Contrast injection mammography is a useful procedure for localization of lesions responsible for a bloody nipple discharge. Thermography is a new diagnostic tool for detecting nonpalpable breast cancer. Localization of the lesion, however, still must depend on physical examination and breast radiography.


Film density control is of major concern when two or more automatic processors are used in a radiologic department. This problem is more acute if the units are operated at different speeds or are of different designs. Freshly produced sensitometric strips exposed and processed daily through the machines are most accurate and readily available guides for density control. The response to developer variations is similar to the response in actual radiographs. The fresh sensitometric strips are much more sensitive than are pre-exposed strips. If purchase of a sensitometer is not warranted, as in smaller radiologic installations, freshly produced screen x-ray exposures of aluminum step wedges can be useful. Although they are not so reproducible as fresh sensitometric strips, they are significantly more sensitive to changes in processing than are aged strips. By plotting the densities obtained for the various units, malfunctions of the processors (such as failure of recirculating pumps or dilution of developer) can be detected before they produce clinically significant disturbances in film quality.
Abstracts


Bacteroidaceae are among the most numerous organisms in the normal intestinal flora, but difficulties in isolating these anaerobes from clinical materials have hampered assessment of their significance in infections. Efforts to isolate Bacteroidaceae over a two-year period resulted in finding their growth in pure culture from infections of 29 patients and as part of a mixed infection in 83 patients. Pre- and postoperative complications of lesions of the gastrointestinal tract, especially the colon and appendix, appeared to be the source of infection in 60 patients. The clinical spectrum varied from minor superficial infections to deep abscesses, including liver abscesses, with overwhelming bacteremia and shock. It is possible that some of the infections in the past, from which cultures exhibited no growth under an aerobic environment, may have been due to Bacteroidaceae. Immediate examination of gram-stained smears from specimens is helpful in determining if Bacteroidaceae may be detected in cultures. Infections due to these organisms should be suspected in situations in which the smears reveal gram-negative bacilli but aerobic cultures are negative and anaerobic cultures initially show no growth. When Bacteroidaceae are then later identified in culture, true infection is more likely than spurious contamination. Abscesses due to these organisms require surgical intervention along with proper antimicrobial therapy for cure. Tetracycline and chloramphenicol exhibited the greatest in vivo antibacterial activity against members of the Bacteroidaceae encountered in this study.


From observations made over the past seven years and summarized in this paper, the author concludes for a general population of adult women that the “normal” loss with age of axial and appendicular bone is unrelated to the amount of ingested calcium. Some subjects have lost bone despite diets rich in calcium, whereas contemporaries of similar heights and weights have lost no more bone through years of grossly inadequate consumption of calcium. Factors other than diet appear causal to this seemingly inherent bone loss which is estimated to average 5 to 10% per decade. The greater part of the paper is a tabular and graphic presentation of the extensive data the author has accumulated in respect to gonadal, adrenal and pituitary function in pre- and postmenopausal women for whom ratings had been given of residual bone mass. Although some of the findings failed to support the hormonal concept of osteoporosis, subtle departures in pituitary and gonadal function and in adrenal steroidogenesis suggest that deficiency of anabolic hormones, particularly androgen and possibly growth hormone, may be operative.


Salivary glands of 19 patients were scanned using 99m technetium given intravenously. Six of these patients were having brain scans and thus served as normal controls. Three millicuries was found to be an optimum dose. The technetium pertechnetate is thought to localize in duct cells in the normal gland and in the well differentiated duct cells in the Warthin's tumor. A Picker Magnascanner V equipped with a 3-inch fine focus collimator was used. Most abnormalities of the salivary glands show displacement of the gland or show an area of diminished uptake within the gland. Such cases include examples of mixed tumor of the parotid, chronic inflammation with abscess formation and cyst. Increased uptake of pertechnetate was found in a case of Warthin's tumor.