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Thirty-six elderly patients with complicated peptic ulcer disease were treated with gastric irradiation, consisting of 2000 roentgens delivered to the fundus through anterior and posterior portals. 10 patients experienced significant improvement of their ulcer symptoms. A marked reduction of hydrochloric acid secretion was observed in 15 patients tested before and after therapy. Gastric irradiation offers a safe means of treatment for complicated peptic ulcer disease in patients who, because of advanced age or associated disease, are poor surgical risks.


The authors propose a model for the function of osteocytes in bone as related to calcium homeostasis. Briefly, the authors propose that the osteocyte serves to pump water through bone much as if water percolates through the earth, thereby making available to the blood an enormous surface area of the inorganic mineral deposits, buffer material, and electrolytes contained within the skeletal salts.


One of the most effective ways to accurately diagnose peripheral lung cancer is through the microscopic study of cytology samples from the tumor itself. Sputum cytology accuracy has been rated quite low (9.3-34.3%) for cancers situated in the peripheral lung. Therefore, until fairly recently, the primary method used to obtain specimens of such a tumor was a thoracotomy or biopsy, since the tumor lies beyond the reach of a bronchoscope. Bronchial brushing is a relatively new technique for obtaining cells for pathologic examination from relatively remote lung areas. The examination has several advantages. A surgical incision is not necessary; no general anesthesia is needed and patients having the examination experience a minimum amount of discomfort. The procedure makes the segmental bronchus and the peripheral lung tumors, heretofore in areas difficult to reach, more easily accessible, thus increasing the potential for earlier diagnosis of pathology.


A review of all aspects of clinical radiology in both historic and contemporary perspectives is presented. The history is recounted of image intensification, the most significant contribution made by radiologic engineering to clinical radiology, and problems inherent in computer-
screening of intensified images—both roentgen and radionuclide are discussed. The historical and importance of radioactive nuclides and their place in both diagnosis and therapy are surveyed. Finally, in a general discussion, other topics touched upon were radiologic-surgical pathologic correlation, nuclear medicine, computers, electrokymography, thermography, and ultrasound.


A study was made of the effects of age (1 through 450 days) and sex on bile acid half-lives, pool sizes, and spectra in rats. No significant sex or age differences were found in cholic or chenodeoxycholic pool half-lives. Chenodeoxycholic acid half-lives were considerably shorter than corresponding cholic acid half-lives in all groups (cholic acid ≈ 3.5 days, chenodeoxycholic acid ≈ 2.0 days). With respect to pool sizes, from 1 through 15 days, pools of females and males were equal in size and contained only cholic acid. From through 450 days, the pools of females contained major concentrations of both cholic and chenodeoxycholic acid. In contrast, the male pools from 46 to 450 days contained only traces of chenodeoxycholic acid, along with cholic acid concentrations about equal to those of female rats. This lack of chenodeoxycholic acid in the male bile acid pool has implications with respect to the relative ability of mature male and female rats to handle body cholesterol. a- and β-muricholic and deoxycholic acids did not appear in the pools until day 46. From then through 450 days, the concentrations of these acids were similar for the two sexes, though there were individual variations.


Sera of 476 patients with bullous diseases, internal malignancies, and connective tissue diseases were tested for the bullous pemphigoid “band” and pemphigus epidermal intercellular fluorescence (ICF) by the indirect fluorescent antibody technique. Human skin cryosections were employed. The “band” was seen essentially only in bullous pemphigoid and its morphology was “tubular.” Intercellular fluorescence was seen mainly in pemphigus. Positive, direct ICF and bands were seen in lesions of some indirect-negative pemphigus and bullous pemphigoid patients. If the indirect test is negative, direct tests should be performed in patients strongly suspected of having pemphigus or bullous pemphigoid. Epidermal nuclear immunofluorescence, particularly the peripheral pattern, often closely resembled ICF and has to be differentiated from it. Awareness of any antinuclear antibody activity in the sera is essential for accurate interpretation of this test which was found to be extremely valuable for diagnosis.


It has been suggested that a new, highly active pressor polypeptide can be generated by the incubation of human amniotic fluid. The present report deals with the identification of this polypeptide through separation by gel filtration in Sephadex G-15 and by paper chromatographic techniques. Inhibition of its pressor effect when incubated with antibody against angiotensin I and II was also studied. Separation with Sephadex yielded three peaks of pressor material, while paper chromatography showed this pressor material to have an Rf different from that of angiotensin I and II. Nevertheless, it was concluded that this pressor material is angiotensin, one of its analogues, or a fragment of the polypeptide since its pressor effect was inhibited by antibody against angiotensin. Further, the pressor activity reappeared after destruction of antibody by boiling.

Plasma renin levels are elevated in accelerated or malignant hypertension. To see if this increase of renin is a concurrent phenomenon or a pathogenetic factor in the increase of blood pressure, severe hypertension was produced in rats by occluding the aorta between the origins of the renal arteries. Eight days later, these animals had developed severe hypertension (mean blood pressure = 201±3 mm Hg) and markedly elevated plasma renin levels (51±35 ng angiotensin II/ml hr; normal range = 11±0.6). When the kidney distal to the occlusion was excised at the time of the coarctation, the animals developed only a moderate decrease in blood pressure (mean = 120±1.3 mm Hg) and their plasma renin levels remained in the normal range. When the nonnephrectomized animals with severe hypertension were treated with antibodies against angiotensin II, blood pressure decreased, reaching its lowest point (126±12 mm Hg) 2 days later. This work demonstrates that the severe increase in blood pressure is not due to the mechanical increase in resistance caused by complete occlusion of the aorta; rather, it is due to a humoral factor produced by the kidney, and this factor is renin.


Twelve persons working in the manufacture or grinding of tungsten carbide developed a progressive diffuse interstitial pneumonia, characterized clinically by nonproductive cough and by dyspnea on exertion. Lung tissue examined by light microscopy in eight patients and by electron microscopy in one showed interstitial infiltrates of mononuclear and mast cells, squamated histiocytes in the alveoli, and various amounts of interstitial fibrosis. Eight patients have died. Five additional individuals with episodic cough related to dust exposure but without roentgen abnormalities have been observed. The available evidence indicates that this disease is a pneumoconiosis related to inhalation of finely powdered cobalt.


The clinical and pathologic features of an infrequently encountered primary heart tumor involving the region of the atrioventricular node have been studied in 5 cases and the literature reviewed of 14 previously reported cases. Evidence of heart block was the common denominator to all the cases but in a number of patients there were no associated signs or symptoms—the heart block being discovered during physical examination. A greater incidence has been noted in women and in most of the cases death occurred after the age of 30 years. The microscopic features of the 19 tumors were similar. Histologic and histochemical staining similarity between the atrioventricular node tumors and mesotheliomas of other areas and embryologic data support a mesothelial cell origin for these tumors rather than a lymphatic origin as previously proposed.


It is a rare disorder that leads to generalized and progressive skeletal pain and tenderness. Radiographs show a coarsened and mottled trabecular pattern, with a spotty increase in bone density. In the third case to be diagnosed during the life of the patient, the histologic picture and bone remodeling data obtained after a double bone-label with tetracycline demonstrated increased numbers of osteoid seams and an impaired mineralization of matrix compatible with a diagnosis of osteomalacia. There was a marked reduction in the birefringence normally seen in collagen fibers of bone under the polarizing microscope. A primary collagen defect leading to an abnormal polarization of individual collagen fibers may be the cause of the skeletal picture of osteomalacia in fibrogenesis imperfecta ossium.
Abstracts


A 51-year-old woman developed skeletal symptoms due to histologically proven osteomalacia. The etiology could not be determined until a history of factitial diarrhea to long term phenolphthalein (Ex-Lax) ingestion was finally elicited. Normal bowel habit returned after the use of phenolphthalein was discontinued and the osteomalacia showed signs of healing. Surreptitious ingestion of cathartics should be considered as a causal factor in patients with unexplained osteomalacia.


When lower limb spasticity exists in children, a variety of dynamic and structural deformities can arise. They include an entity named "the spastic crouch", in which the patient stands in an attitude of hip and knee flexion frequently in equinus at the ankle. The author has concluded that this attitude serves some necessary function to facilitate balancing in such patients because the surgical and bracing procedures widely performed to correct the characteristic attitudes of these joints, almost invariably do so at the expense of the patient's ability to balance. Accordingly, until some means of correcting the deformity becomes available which does not cause a deterioration in function, the author has adopted the policy of accepting the spastic crouch.


The authors review the clinical and histologic characteristics of testicular tumors. Attention is given to prognosis and treatment. This report includes 77 patients treated primarily at Henry Ford Hospital from 1948 to 1968.


A Negro patient with diabetic ketoacidosis was presented. Following usual therapy and an inchoate clinical response, the patient worsened, became comatose and died. Postmortem examination indicated diffuse intravascular sickling as a significant antemortem mechanism in this patient's death.


Unlike acne conglobata, cystic acne, or tropical acne the syndrome of acute febrile ulcerative acne is sudden in onset, and associated with severe ulcerations, fever and polyarthralgias. Comedo formation is not pronounced. Ulcers are filled with gelatinous granulation tissue. Response to curettage and corticosteroid hormone therapy is generally prompt, but malaise and arthralgias may persist for a long time.


The authors defined Schatzki's ring as a localized constriction at the esophagogastric junction, in association with a hiatus hernia, which may or may not produce dysphagia. The diagnosis was established by careful radiologic examination rather than by esophagoscopy. In their series of 573 operations for hiatus hernia, 19 symptomatic Schatzki's rings were observed and corrected at the time the hernias were repaired. All of the rings were palpated and visualized.
Abstracts

Visualized through a gastrotomy at the time of transthoracic repair of the hernias. It is convenient to make a gastrotomy in the thoracic portion of the stomach for visualization of the ring, and its elimination under direct vision. In 5 cases, the ring was completely excised, and in three, it was disrupted by pressure. Follow-up has indicated that there has been relief of the dysphagia in nearly all of the patients; postoperative dilatations were done in three. Invariably, histologic study of the rings showed squamous epithelium on the upper portion and gastric mucosa below. It is difficult to believe that the localized lesion is caused by inflammation from reflux, and the etiology remains unknown.


Thirty-two patients with extrahepatic obstructive jaundice and 28 patients with cirrhosis of the liver associated with alcoholism were studied. In extrahepatic obstructive jaundice, Ig-G and Ig-M were not elevated above normal levels (i.e. greater than two standard deviations from the mean, 2SD/mean) except in a few instances (22 per cent), where Ig-M elevation was due to inflammation associated with the obstruction. In cirrhosis, Ig-G and Ig-M were elevated above 2SD/mean in 82 per cent of the patients studied. Ig-A levels indicate chronicity and the values found are elevated above 2SD/mean in both conditions. In extrahepatic obstructive jaundice, however, 56 per cent were elevated between the upper limits of normal (135 mg per cent) and 100 per cent above normal levels (270 mg. per cent); whereas in cirrhosis 71 per cent of the patients have Ig-A levels above the 100 per cent values from normal (300 mg, to 1,700 mg. per cent). The latter values have not been seen in extrahepatic obstructive jaundice nor in virus hepatitis. Of the five serum proteins studied, only albumin and transferrin serum levels were significantly decreased below 2SD/mean in cirrhosis. The albumin values were below 2SD/mean in 90 per cent of the patients with cirrhosis and in 60 per cent of the patients with extrahepatic obstructive jaundice. Ceruloplasmin, complement and C-reactive protein offered little value in the differential diagnosis or assessment of the clinical situation.


The authors confined their discussion by considering internal femoral torsion to represent internal rotation of the axis in motion of the knee joint relative to the neutral position of the hip joint. In lower limb spasticity three muscle imbalance situations can be recognized as causative. The most common cause consists of overactive hip adductors associated with the spastic crouch, and the dynamic rotational deformity responds readily to adductor tenotomy and anterior branch obturator neurectomy. The second and least common group represents overactivity of the anatomical internal rotators of the hip, and responds to posterior transposition of their origins. The third represents a complex group in terms of the causative muscle forces for which they still lack corrective procedures possessing a high degree of reliability.


A small group of patients with lower limb spasticity possess internal femoral torsion arising specifically from overactive tensor fascia femoris and gluteus minimus muscles. The authors describe a simple posterior transposition of the origins of these muscles which do not require postoperative casting, and which permits ambulation on and after the first postoperative day. The procedure does not sacrifice the abduction component of the functions of the muscles.
Abstracts


An elderly woman with ureteral carcinoma had a persistently low serum sodium which was partially restored by oral and IV sodium chloride. For 19 years she had received annual DOC pellet implants for treatment of presumed Addison's disease. Plasma cortisol and urinary 17-OHCS levels were normal and rose normally after ACTH. Urinary aldosterone was very low, and did not increase with ACTH or salt restriction. Plasma renin was normal to high and increased with a low salt diet. Gas-liquid chromatographic analysis of C-21 steroid metabolites disclosed normal values for THE, THF, THB, THDOC pregnanediol and pregnanetriol. The patient was maintained with fludrocortisone but expired in four months. Adrenal histology was normal.


A case of extensive and invasive basal cell epithelioma with regional lymph node metastasis is reported. The cutaneous tumor involved the left preauricular and zygomatic region and extended into the outer thirds of both left eyelids. The clinically unrecognized metastasis was discovered during chemosurgical excision of the skin tumor. It is doubtful if the metastasis could have been found and eradicated with accuracy by a modality of treatment other than chemosurgery. This report also demonstrates the result that can be achieved by cooperation between the chemosurgeon and the plastic surgeon in the management of this type of neoplasm.


A review of the symptoms and signs of gallbladder disease, including the character of gallbladder pain, vomiting with associated common duct stones, and jaundice is given. A review of the prevalence and formation of gallstones with the management of cholecystitis acute and chronic is included also.


Tibial deviation of the forefoot accompanied by heel varus in patients with lower limb spasticity usually arises specifically from an overactive posterior tibial muscle. The deformity, initially a purely dynamic one, responds to a muscle lengthening procedure performed during childhood. This prevents the development of structural deformity and eliminates the requirement of wearing a brace or special shoes and shoe corrections for its treatment. Results in 34 such feet treated surgically, and followed an average period of time in excess of four years were uniformly satisfactory.


Petit mal is a seizure pattern that can occur alone or with focal or psychomotor component. Patients with psychomotor petit mal may have clinical attacks which are hard to distinguish from psychomotor seizures. Patients suffering from petit mal with focal components have deviation of head and eyes to one side or movement of one extremity. Petit mal when it occurs alone is characterized by the uniformity and lack of evolution of the attacks and by the high frequency and brief duration of such attacks. The etiology of petit mal seizures is not well understood. There is evidence to indicate that it is transmitted as a dominant gene.
Abstracts


This article reviews the histopathological features of this rare lesion usually affecting epiphyses in growing skeletons, and adds four new cases to the 60 cases so far reported in the literature.


The heterogeneous nature of human ocucutaneous albinism is discussed in this article and a classification provided on the basis of genetic, tissue culture and ultrastructural studies. Six individual mutant types are described and the population frequencies of the common forms presented. The value of incubation of hair bulbs in typosine solution is described in differentiation of these various distinctive phenotypes.
Advice to Authors

The Editorial Board of the Henry Ford Hospital Medical Journal welcomes papers for review and possible publication from any former or current staff member of the Henry Ford Hospital or the Edsel B. Ford Institute for Medical Research. The Journal provides a rapid means of publication of papers covering a broad spectrum of interests including case presentations, scientific experimental studies from either basic or clinical research science laboratories, preliminary communications, and papers philosophically oriented.

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Layout of the textual presentation and number of illustrations is left to the discretion of the author, within reasonable limits. Dorland's Medical Dictionary and Webster's New Collegiate Dictionary are the standards used. Generally, the style book of the American Medical Association is followed, with titles as abbreviated by Index Medicus.

A summary/abstract, which is a 150-200 word statement of purpose and conclusion should be furnished for use with the paper. All tabulated material should be submitted camera-ready. Where illustrations cannot be used same size, desired "cropping" should be shown or reduction considered.

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