
The goal of gastric irradiation is temporary suppression of hydrochloric acid secretion to improve medical treatment of complicated peptic ulcer disease. Twelve patients, who were poor surgical risks and had complicated and recurrent peptic ulcer disease, were treated this way. In eight patients significant reduction in hydrochloric acid output was observed. Three patients developed mild erythema of the gastric mucosa and one hemorrhagic gastritis all being clinically asymptomatic. It is concluded that gastric irradiation is a safe and valuable adjunct in the treatment of peptic ulcer disease.


This paper deals with the prognostic value of more than 120,000 cervico-vaginal Papanicolaou ("Pap") cytologic smears reported in the six-year period from January 1960 through December 1965. In this group, 929 (1.3%) were reported "suspicious" or "positive" for malignancy. One hundred and thirty (7.2%) of the 929 patients with abnormal smear reports were under the age of 30 and 10 were less than 20 years of age. Six hundred and thirty-six patients were subjected to definitive diagnostic biopsy studies at Henry Ford Hospital and 425 (67%) were proven to have gynecologic malignancy. Six women under the age of 20 years had carcinoma in situ of the cervix. In patients who had initial abnormal smear reports, and who had repeat smears reported as "negative," the malignancy incidence was 27%. This study warranted the following conclusions: (1) Invasive cervical malignancy could almost be eliminated if annual pelvic and cervico-vaginal cytologic examinations were done on all sexually mature and sexually active women irrespective of age, (2) A down-graded or negative pathologic report on a repeat smear, when the initial smear was reported as abnormal, should not be reason to postpone or withhold definitive biopsy procedures.


A study was made of the effects of diets supplemented with psyllium hydrocolloid (Metamucil) on bile acid half-lives and pool sizes in normal and hypophysectomized rats. Metamucil decreased bile acid half-lives by about 40% in both normal and hypophysectomized rats. The muciloid also effected small but significant increases in the size of the bile acid pools. It was demonstrated that Metamucil increases bile acid excretion in rats by increasing
the turnover rate and size of the bile acid pool. Pituitary and target gland hormones have little or no effect on the drug's ability to effect these changes.

**Acute myelofibrosis. An accelerated variant of agnogenic myeloid metaplasia.**


Attention is drawn to a variant of agnogenic myeloid metaplasia, which, although rare in comparison to the incidence of other myeloproliferative entities, is worthy of recognition. This accelerated form of myelofibrosis has clinical and hematologic findings superficially resembling acute leukemia, and was originally designated as “malignant myelosclerosis” by the British hematologists, Lewis and Szur. The case of a 50-year-old white man with the typical features of this entity is reported. These include: 1) diffuse marrow fibrosis with entrapped megakaryocytes, 2) peripheral myeloblastosis, 3) normal erythrocyte morphology, 4) lack of massive splenomegaly, and 5) a rapidly fatal course. The authors favor the designation “acute myelofibrosis” rather than “malignant myelosclerosis.”

**Significance of the flat oral glucose tolerance test.**


Prevailing concepts suggest that patients with a flat oral glucose tolerance test are likely to have a malabsorption state or hypothyroidism. Since personal experience over several years suggested the contrary, we undertook this study to assess the validity of our impression. About 20% of 302 consecutive patients undergoing an oral glucose tolerance test demonstrated a flat response. The incidence of malabsorption or hypothyroidism in this group was insignificant. However, when a sample of blood is collected 30 minutes after the ingestion of glucose, the test is not flat as defined; instead, it is a variant of the normal response. Preliminary studies of plasma immunoreactive insulin in similar patients show basically normal insulin response curves, but early hyperinsulinemia may conceivably account for the modified appearance of these oral glucose tolerance tests.

**Ovarian carcinoma.**


At the beginning of the 1970 decade, the outlook for patients who develop carcinoma of the ovary is almost as bleak as it has been in the past. Delayed diagnosis, a primary inherent tendency for ovarian cancer cells to exfoliate, and an inadequate response to surgical and radiation therapy have combined to relegate carcinoma of the ovary to the position of the killer of more adult women than any other type of female genital malignancy. The faint promise of improvement from chemotherapy has led to fragmentation of the administrative authority over treatment for the ovarian cancer patient with a shift to the medical oncologist. Currently the patient with ovarian cancer is best served by a cooperative treatment plan which involves pathology, radiology, gynecology, and medical oncology. These objectives can best be accomplished by the recognition of an intraspecialty grouping identified as “gynecologic oncology.”

**Diagnostic value of electron microscopy in soft tissue tumors.**


A number of different mesenchymal and epithelial tumors of known histogenesis were studied with the electron microscope to determine which ultrastructural characteristics would be useful in elucidating the histogenesis of tumors of questionable histogenesis by light microscopy. Difficulty in determining a tumor's histogenesis was encountered because of the heterogeneous ultrastructural cell population of most sarcomas due to the various degrees of differentiation of the primitive mesenchymal cells and similar features shared by histogenetic different sarcomas, ie, intracytoplasmic fibril formation in leiomyosarcoma, rhabdomyosarcoma, cardiac myxoma, hemangiosarcoma, etc. and cytoplasmic fat droplets in mesenchymal tumors other than liposarcoma. Organelles such as melanosomes, Langerhans' granules, myofibrils
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with cross striations or with pinocytotic vesicles were useful in identifying the tumor cells respectively as melanocytes, histiocytes, rhabdomyoblasts and leiomyoblasts.


A study is presented of 75 patients with obliterative otosclerosis in which the usual form of stapedectomy operation is technically not feasible. These patients were managed with a limited drill-out procedure and insertion of a stainless steel piston prosthesis. The salient features of the operative technique are reviewed and the long-term hearing results presented. More than 80% of the patients achieved very good initial results to be maintained over the period of follow-up.


In this editorial, recent evidence suggesting a relationship between anticonvulsant therapy and the development of hypocalcemia and osteomalacia is reviewed. Clinical reports from Europe document the development of hypocalcemia and osteomalacia in a significant number of patients receiving a variety of anticonvulsant drugs. There is increasing evidence that enzyme induction occurring in the liver may be responsible for altered metabolism of vitamin D in these patients. Substantial evidence indicates that vitamin D (cholecalciferol) is converted in the liver to its metabolically active form, 24-hydroxycholecalciferol. It is possible that anticonvulsant agents cause enzyme induction which further metabolize this activated form of vitamin D to an inactive compound. This could theoretically lead to a deficiency of vitamin D, which might result in hypocalcemia and osteomalacia, especially if dietary intake of vitamin D already was borderline. Patients being treated with long-term anticonvulsant therapy should be watched for signs of hyocalcemia and osteomalacia. Treatment with vitamin D in such patients is suggested to correct this complication.


Approximately 60 cases of massive osteolysis and ninety of tumoral calcinosis have been reported in the literature, but to the authors' knowledge they have not been previously reported to occur together in the same patient. Summarized is a patient who demonstrated progressive osteolysis of various bones, associated with extensive tumoral calcinosis over various pressure points of the body. The calcium salts released from the areas of osteolysis could conceivably have acted as a systemic sensitizing agent, as a variant of calciphylaxis. However, at no time was the serum calcium level found to be elevated, although mild and intermittent elevations of both serum calcium and mucopolysaccharide levels as a result of bone resorption could have occurred.


There is mounting evidence that the thyroid, in addition to the parathyroids, plays an important role in calcium homeostasis. Since the thyroid, parathyroids, and calcitonin-producing cells are derived from the pharyngeal entoderm, a close origin of tissues bearing on calcium homeostasis has a firm embryologic basis. With mammalian development, this hypocalcemic mechanism appears to have assumed less importance. Nevertheless, a vestigial potential still exists in man and is accentuated in certain pathologic conditions involving those cells which produce calcitonin. A review is undertaken, supporting interrelationship between the parathyroids and the calcitonin system. During the ensuing years, currently disputed areas should be clarified with the simultaneous application of sensitive assay methods.
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for both parathyroid hormone and thyrocalcitonin, which are now becoming more readily available. These problems include the evolution of clinical hyperparathyroidism, a better definition of various forms of parathyroid hormonal resistance at the skeletal level and a better understanding of metabolic bone disease in relation to parathyroid-thyrocalcitonin interaction.


A cooperative study by the University of Ottawa, McMaster University, and Henry Ford Hospital revealed 16 patients in whom the tissue level bone formation rates were uniformly depressed. Additional findings included a great increase in the number of osteoid seams, a total volume of osteoid and bone remodeling. While, in other diseases, such studies have shown significant differences in activity on Haversian surface as compared to cortical/endosteal surface, in this material the changes were similar on each.


Diabetic hemorrhagic glaucoma was seen in 40 inpatients of the Joslin Clinic in the 10-year period ending 1964. Twenty patients were juvenile-onset and 20 were maturity-onset diabetics. The average duration of diabetes was 20.8 years for both groups. Pain and blindness were the most common presenting symptoms. Rubeosis iridis and extensive proliferative diabetic retinopathy were seen in every glaucomatous eye. Other evidence of angiopathy (nephropathy, neuropathy, and peripheral vascular impairment) coexisted in many of the patients. A study of these patients indicates that (a) diabetic hemorrhagic glaucoma is most often seen in association with proliferative diabetic retinopathy, and (b) its development portends a serious loss of useful vision. Pertinent microscopic, histochemical, and experimental observations are cited to support the view that impaired ocular blood flow with resulting retinal hypoxia is a common feature of this disorder, disposing the diabetic iris to the development of rubeosis and subsequent anterior chamber hemorrhage leading to glaucoma.


Patients with acute hepatitis and chronic alcoholic liver disease had decreased net serum cholesterol esterifying activity (CEA) which correlated positively with the percentages and concentrations of cholesteryl esters in their serum. These cholesterol parameters also correlated negatively with serum bilirubin concentrations, but bilirubin added to sera in vitro failed to influence CEA. The decreased net CEA in the patients was not due to its inhibition by serum bile salts. The sera from five patients catalyzed a net hydrolysis of cholesteryl esters rather than a net esterification of free cholesterol. Since serum cholesteryl ester hydrolase activity may also have been present in the patients with decreased CEA, net CEA cannot be equated with the activity of lecithin-cholesterol acyl transferase (LCAT) in patients with liver disease.


In a study conducted in the Philippines, the investigators found that a single oral dose of 3.5 gm ampicillin, when combined with probenecid, cured 194 of 202 men (96%) with acute gonococcal urethritis. The same dose of ampicillin alone was curative in only 29 of 41
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patients treated (71.3%). Probenecid retards the renal excretion of ampicillin; this results in significantly higher serum levels of the antibiotic, thus accounting for the much higher cure rates observed. On the other hand, phenoxyethyl penicillin in single oral doses as high as 7.5 gm (combined with probenecid) is associated with high failure rates and should not be used to treat gonorrhea. The single dose ampicillin-probenecid program is associated with a fairly high incidence of postgonoccal urethritis (PGU), which in most patients is asymptomatic and requires no additional treatment. Continuation of oral ampicillin 0.5 gm QID for seven days did not significantly lower the incidence of PGU.


Since its introduction in 1958, the incidences of untoward reactions to griseofulvin have been remarkably infrequent. This paper reports a 73-year-old man who developed an allergic vasculitis of the skin after three doses of micropulverized griseofulvin were administered for a tinea pedis. This is the first case of an allergic vasculitis reported in the literature. A review of the other cutaneous reactions to griseofulvin is included.


Fatalities associated with varicella are rare and almost always attributed to pneumonitis or meningoencephalitis. This report describes a fatal case of disseminated varicella in a 10-month old child. Death resulted from myocarditis with extensive inflammatory involvement of the bundle of His and bundle branches. It is suggested that viral tropism for the specialized tissue of the heart may result in cardiac conduction disturbances severe enough to cause death.


The records are reviewed of 15 patients proved to have had carcinoma of the ampulla of Vater. Progressive or fluctuating jaundice, weight loss, absent or minimal pain, and nausea and vomiting were the important symptoms. Icterus, evidence of weight loss, palpable liver, and a palpable gallbladder were the significant physical findings. Laboratory data reveal the serum bilirubin levels to be high, the alkaline phosphatase elevated, the serum proteins depressed, the prothrombin time prolonged, the urinary urobilinogen absent, and the stool to be guaiac positive. Duodenal drainage frequently reveals the presence of occult blood. Palliative operations have been unsatisfactory, resulting in an average survival time of five months in three patients. The most impressive results are obtained when a one-stage Whipple procedure is possible. The average survival time in eight patients was 59 months. Their preferred method of reconstruction after resection is presented.


In 53 cases of aorto-iliac and nine cases of femoropopliteal operations with use of arterial allografts and followed systematically for 15 years, the authors correlated the findings of the clinical course, the angiographic observations, and the results of the histologic study of recovered grafts. During the sixth to the 15th postoperative years, all but one of the nine femoral grafts open at five years postoperatively became occluded and the only remaining patent graft showed degenerative changes. During the same period of observation, among the 53 aorto-iliac grafts open at five years postoperatively, 44 remained open for various lengths of time and at the 15th postoperative year 18 were still patent. Fourteen of the aortic grafts developed aneurysms, nine of which were replaced; three patients lost their lives due to complications of secondary aneurysms in the grafts. The findings of the study of the late behavior of aortic and femoral arterial allografts confirm their unsuitability to serve
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as vascular substitutes. Even angiographically normal-appearing aortic grafts must be observed with caution.

**Soft tissue sarcomas involving the extremities and the limb girdles: A review.**

This article reviews some 66 soft tissue sarcomas involving the extremities in patients receiving their primary care at Henry Ford Hospital between 1958 and 1968. The experience has been fairly typical of that reported by others in terms of case mix, and survival statistics. The authors conclude by noting the need for improved means of predicting the capacity to metastasize and tumor aggressiveness.

**Bone formation in human osteogenesis imperfecta, measured by tetracycline bone labeling.**

Measurements of bone formation rates in a variety of bones taken from 11 patients with osteogenesis imperfecta by the tetracycline tissue time marking technique reveal bone formation proceeds roughly three times faster than normal in patients with this disease. This demonstrates that one cannot account for the skeletal features of osteogenesis imperfecta as any consequence of an inability to produce new bone matrix or collagen. While the findings (which corroborate an earlier study and which other laboratories have found in other cases) suggests that overactive resorption might represent a satisfactory alternative explanation, the authors suggest a biomechanical relation may be involved, a relation discussed elsewhere.

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**ERRATA**


   Page 27, second column, line 8, “... immunoglobulin-M ...” should read: “... immunoglobulin-M ...”


   Page 43, first column, line 6, “HA-I titres ranging from 1:8 to 2.56 ...” should read: “HA-I titres ranging from 1:8 to 1:256 ...”