Clinical and Pathological Reports

RADIATION—DIAGNOSIS AND THERAPY


After a brief review of the meagre literature, the author reports two cases of primary tumor of the diaphragm, confirmed in one instance by operation. Accurate localization of such tumors by radiological means requires fluoroscopic observation of the respiratory movements of the mass, and usually pneumoperitoneum and pneumothorax in order to rule out disease primary in the abdominal viscera or lungs.—C.E.D.


Seven cases of atypical giant cell tumor of bone are presented with illustrative roentgenograms. The tumors may be classed as atypical on the basis of clinical or pathological criteria or because of unusual location. The most important duty of the roentgenologist is to distinguish between benign and malignant lesions.—C.E.D.


Every effort should be made to improve the general condition of a patient before subjecting him to massive radiation therapy. Prior to and during treatment the patient’s mental as well as his physical state deserves attention. Radiation sickness may be combated with liver extract, vitamin B12, and abundant glucose; menopausal symptoms may be controlled with estrogens. Unpleasant local affections, particularly dryness of the mouth, cystitis, and proctitis, should receive palliative treatment.—C.E.D.


A peculiar shadow in the cardia of the stomach, suggesting a filling defect, was seen in 47 of 1,500 roentgenologic examinations of the stomach. In several cases tumor was suspected. The shadow consists of an opaque stellate center surrounded by a halo of radiolucence 1 to 2 cm. or more in diameter. It is located exactly at the esophageal-gastric juncture. This sign is produced by barium in the stellate ostium of the esophagus and a slight protrusion of the esophageal mucosa into the stomach. It can be distinguished from carcinoma by the free passage of barium through the apparent filling defect.—C.E.D.


Patients with lymphosarcoma were given small tracer doses of radioactive phosphorus (P32). Subsequent biopsies of lymph nodes at intervals of 1 to 31 days showed selective concentration of radioactivity in the nodes. Eighteen patients were therefore given therapeutic doses of P32 ranging from 145 to 390 μc. per kg. of body weight. Seventeen patients are still living, the longest period since the beginning of treatment being 8 months. Five patients have had complete regression of the enlarged lymph nodes. Nine case histories are presented. Some bone marrow damage is to be expected and frequent blood counts are advised. If the white count falls below 3,500, the platelets below 150,000, or the red count drops more than 15%, therapy should be discontinued. In spite of the clinical improvement in many of these patients, 6 lymph node biopsies made during treatment showed no histological changes attributable to radiation.—C.E.D.


Ulcerating carcinomas of the stomach which do not penetrate the gastric wall are often difficult to diagnose roentgenologically. Manipulation of the barium-filled stomach will often result in filling the crater of such a tumor with barium while the elevated tumor border displaces barium, giving a fluoroscopic picture of a halo of radiolucence around an opaque center. When the tumor is on the lesser curvature the picture is modified by being viewed on edge. With the aid of excellent illustrations, Kirklin discusses the uses and abuses of this sign.—C.E.D.


The diagnostic importance of calcification in lesions of the ovary has received little attention except in the case of dermoid cysts. Calcified psammoma bodies in an ovarian tumor can usually be detected roentgenologically by the hazy shadow of increased density cast by the innumerable minute bodies uniformly distributed through the tumor. Occasionally a much denser shadow is cast. Psammoma calcification in the ovary is practically limited to papillary cystadenomas and papillary cystadenocarcinomas.
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nomas. Five instances of psammoma calcification are presented, together with 6 roentgenograms. In 4 patients the findings justified a roentgenologic diagnosis of papillary cystadenocarcinoma of the ovary.—C. E. D.


Since 1930, postoperative roentgen irradiation has been routine in cases of cancer of the breast seen at the Wisconsin General Hospital. Recurrences, metastases, and advanced inoperable lesions are treated roentgenologically with good palliative results. The various techniques in use are described. Since large doses are given, complications are frequent. Local skin reactions are treated with olive oil. Bed rest, small frequent meals, and a suppository of 600 grains of nembutal one hour before treatment are used in an attempt to forestall radiation sickness. Radial fibrosis of the lungs was rarely encountered, but asymptomatic radiation osteitis of the ribs was common. The 5 year and 3 year survival of all patients was 38.1% and 48.8% respectively. Satisfactory palliation was obtained in 60% to 70% of patients with metastatic lesions.—C. E. D.


In addition to carcinoma of the head of the pancreas, many other space-occupying lesions in this region are capable of producing identical roentgenographic signs. Among these are: enlargement of retroperitoneal lymph nodes, pancreatitis, retroperitoneal tumor, cyst of the head of the pancreas, aneurysm of the anterior wall of the abdominal aorta, amyloidosis of the pancreas, and upward traction of the duodenum as in diaphragmatic hernia of the stomach. Seventeen roentgenograms are presented illustrating a number of these conditions.—C. E. D.


The problem of treatment of cancer of the tongue is considered in detail, including the classification of cases according to the size of the primary lesion, secondary involvement, location of the lesion, and histological type. Of the author's 167 patients 80% were males. Eighty-six per cent of the tumors were situated on the lateral margin or base of the tongue, and only 6% were less than 1.5 cm. in diameter when first seen. The histological diagnosis in 91% was epidermoid carcinoma and 90% of the patients had palpable lymph nodes. Twenty per cent of the patients had positive Wassermann reactions.

A technic of treatment is described by which large doses of extracol radiation generated at 200 kv. are supplemented by treatment at 200 kv. through an intraoral cone. A tumor dose in excess of 5,500 r generally controls lingual cancer except for lesions on the dorsum of the tongue.

Of a total of 119 patients treated since 1929, 37% were living and free from disease after 3 years and 27% after 5 years or more. The new method of radiation treatment was introduced in 1935 and has given 50% three year survivals to date.—C. E. D.


The various forms of benign and malignant bone tumor are discussed and the roentgenologic characteristics which aid in differential diagnosis are presented.—C. E. D.


A discussion of the accepted methods.—M. J. E.

GASTROINTESTINAL TRACT


The author gives the results of operative intervention in carcinoma of the rectum. Despite radical resection the percentage of cured patients is small. Of 91 patients observed, 57 had tumors considered suitable for a radical intervention, and 12 died postoperatively. Of those surviving, 15 lived less than 1 year, 9 lived more than 1 year, 7 more than 2 years, 4 more than 3 years, 5 more than 4 years, and 5 for 5 years or longer.—M. J. E.


The clinical course of the disease and the autopsy findings in 3 cases of carcinoma of the duodenum are reported. Two roentgenograms are reproduced, and diagnosis and treatment are discussed.—C. E. D.


A valuable analysis is presented of the relative merits of roentgenologic and gastroscopic diagnosis in benign and malignant lesions of the stomach. From a total of 1,072 cases examined by both methods, 189 examples of ulcerating polyoid and infiltrating lesions together with some instances of gastritis were selected for study. The nature of the lesion was confirmed histologically in 74 cases. In the majority of instances the gastroscopist and roentgenologist reached the same diagnosis at the initial examination. Some lesions, by virtue of location or morphology, were visible by only one method. Occasionally lesions were correctly located by both methods but different diagnoses reached. In these lesions the gastroscopist was no more and no less likely to be correct than the roentgenologist. The authors conclude that a combination of gastroscopic and roentgenologic examination will result in a higher percentage of correct diagnoses than either method used alone.—C. E. D.
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