Clinical and Pathological Reports

Clinical investigations are sometimes included under Reports of Research

RADIATION


The results obtained with contact radiation therapy in certain benign and malignant lesions have been very good. Papillomas, keratoses, certain types of keloids, hemangiomas, carcinomas of the bladder, epitheliomas of the lip, intraoral cancer, and epitheliomas of the skin have responded to this type of treatment. Large doses can be given safely because of the high surface dose and low depth dose. The method has proved unsuccessful in vaginal carcinoma.—R. E. S.


Depth dose tables for low and intermediate voltage therapy are given for various technics. The author feels that half-value layers of 1.0, 2.0, 4.0, and 8.0 mm. Al and target-skin distances of 15 and 30 cm. should suffice for treatment in most instances.—R. E. S.


Isodose curves for various angulations of the million-volt x-ray beam are given.—R. E. S.


Nomograms are provided from which dosage can be calculated for radium sources distributed on square or circular areas and for point radium sources, and use of these simple charts is explained.—R. E. S.


Dosage tables for linear sources of radium expressed in gamma roentgens per 100 mgm. hr. are presented and their use is illustrated by several examples.—R. E. S.


A case of Kaposi’s sarcoma. One lesion treated with combined x-ray therapy and local galvanic current showed better clinical response than a control lesion in the same patient, treated by x-ray alone.—R. E. S.


A case of meningioma of the spinal cord in the cervical region is reported in which the diagnosis could be made by means of roentgenograms because of intraspinal calcification.—R. E. S.


The technic of tissue dosage estimation in combined roentgen and radium therapy for carcinoma of the uterine cervix as carried out at the Brooklyn Cancer Institute is described. Examples are given.—J. L. M.


The frequent damage to the ureters as an aftermath of heavy radium or roentgen irradiation of the cervix is emphasized.—R. E. S.


For roentgen aid in diagnosis of tumors of the liver, gall bladder, and extrabiliary ducts, chest plate and fluoroscopy, flat plate of the abdomen, and films of the gastrointestinal tract are indicated. Liver enlargement displaces the stomach and duodenum to the left and backward, while disease of the gall bladder displaces them only to the left. A defect in the region of the superior angle of the duodenum may occur as the result of pressure from the neck of the gall bladder or the cystic or common duct dilated by a neoplasm or stone.—R. E. S.


An experimental study, on a small number of dogs, of the effect of radiation on rectal mucosa led to the conclusion that doses exceeding 900 r (air dose) produced ulceration and perforation of the rectum, and death of the animals. An analysis of 195 cases of carcinoma of the rectum in man showed that x-ray has a definite place in the palliative treatment of this disease. Treatment was given: (1) in cases of primary inoperable tumors, sometimes with radon implantation as well as x-ray; (2) in cases in which the tumor became operable after a cycle of radiation; (3) postoperatively; (4) for recurrent disease. The value of postoperative therapy has not been incontrovertibly determined.—R. E. S.


Report of a case treated by x-ray, with temporary benefit. Physicians and dentists are urged to take specimens
for biopsy of every noninflamatory lesion of the gums, alveolar processes, and jaw bones.—R. E. S.


A study of the relationship between basal metabolism and leukemia indicates that the course of the disease can be followed by the basal metabolic rate. When an exacerbation is approaching, the basal metabolic rate is elevated before any other manifestations appear, and the rate drops when effective treatment has been instituted. Very small amounts of x-ray are usually all that are necessary to control the disease, and if the metabolic rate is used as an indicator, the patient may be allowed to tolerate treatment for a longer period, and life may be prolonged. Illustrative case histories are given.—R. E. S.


In the United States during the past 15 years, leukemia was responsible for 8 (4.5%) of 175 deaths of radiologists, and for 221 (0.44%) of 50,160 deaths of physicians who were not radiologists. Besides the 8 cases in the United States, there are 23 cases, reported in the world literature, of leukemia in persons exposed for a long period to radiation.—M. H. P.


The necessary precautions against radiation exposure in industrial plants are discussed with protection charts given for various voltages, milliamperes minutes, and distances.—R. E. S.


Australia has 5 radon-producing centers from which radon is issued to smaller qualified hospitals and private practitioners. The system has many advantages, which are discussed in detail.—R. E. S.

Nervous System


Tumors derived from the meningeval coverings of the brain are among the more common types of brain tumor and lend themselves to successful surgical removal. A review of the current workable concepts relative to gross anatomical, histological, and clinical features of these tumors serves as the main theme of this comprehensive paper. The illustrative cases include 74 verified by postmortem examination and 90 proved by biopsy. The incidence of the tumor, anatomical distribution, clinical and roentgenologic characteristics, cerebrospinal fluid, and electroencephalographic findings in these cases are discussed. The histological classification of Globus and the clinical classification of Cushing together offer the clearest, most comprehensive, and most workable basis for the recognition, localization, and final diagnosis of these tumors.—A. Cnl.


The material examined in this study consisted of the cerebellums of 161 embryos, fetuses, and infants; the youngest embryo was one of 8 weeks, and the oldest child was 5 years of age. Of 104 cerebellums in which the posterior medullary velum was examined microscopically, 23 contained abnormal collections of cells. These cells were morphologically similar to cells of the medulloblastoma. Since the site of abnormal collections of cells and the point of origin of medulloblastomas were observed to be the region formerly occupied by the germinal bud, the authors think the medulloblastoma arises frequently, if not exclusively, from cell rests that occur in this region.—M. E. H.


A case report. The possible success of the surgical removal of a psammomatous meningioma was marred by fatal hemorrhage from a tracheotomy wound.—M. E. H.


A review of 27 verified cases of intramedullary gliomas of the spinal cord. The clinical features have been correlated with the pathologic findings in an attempt to clarify their diagnostic characteristics.—M. E. H.


Report of a tumor of the radial nerve in a 35 year old male. The tumor expanded the nerve at the bend of the elbow and extended cephalad within its sheath. One year after amputation of the arm there was x-ray evidence of bilateral lung metastases. Histologically the tumor was composed of undifferentiated cells. Mitoses were present. Cultivated in vitro, the tumor cells exhibited the growth characteristics of early undifferentiated embryonic epithelium. Cultivation was stopped after 25 days as no changes in morphology or behavior of the cultures occurred. The authors interpret this explant as neuroepithelioma and classify the tumor as neuroepithelioma.—C. A.


Report of a case in which a tumor the size of a walnut arose at the site of a blow on the chin.—C. W.


A case report.—J. G. K.
Abstracts


The author points out that these tumors are usually single and nonmalignant, and if adequately removed do not recur. They must be differentiated from the neurofibroma of von Recklinghausen's disease. They produce symptoms by pressure effects and by constitutional reaction secondary to degenerative changes. The histological picture is that of capricious degeneration, in which zones of intercellular edema are present pari passu with the characteristic nuclear palisades.—L. W. P.

Breast


Of 78 and 156 women operated upon for cancer of the breast in 1914 to 1923 and 1924 to 1933 respectively, 18% and 34% were free from recurrence 5 years after operation. The difference between the results for the 2 decades is not statistically significant. During 1929 to 1933, when radiological therapy was generally employed as an adjuvant to surgery, the results were not better than during 1924 to 1928. The age of the patients had no apparent bearing on the outcome of surgery.—M. H. P.


Description of a 22 lb. tumor with no pathological report to support the diagnosis "malignant."—W. A. B.


Ellis, F. Of 21 patients, ages 35 to 81, who received about 15 mgm. of stilbestrol daily without radiation treatment, 3 were intolerant, 4 (mean age 64.2 years) improved.

Adams, S. B. A woman of 82 had nodular recurrences that disappeared under treatment (5 mgm. 3 times a day) lasting 2 months. A dose of 1 mgm. daily may produce noticeable improvement.

Blomfield, G. W. No striking results were obtained in 10 cases (2 to 15 mgm. daily) and no change in growth rate of the tumor was noted in 5 of these cases in which accurate measurement was possible.

Haddow, A. Thirteen patients received a mean total dose of 350 mgm. in over 11 weeks. Details of these cases are given elsewhere (Brit. M. J., 1:393.398. 1944; abstr. in Cancer Research, 5:128. 1945). Nine of the patients seemed to be quite unaffected; in 3 there was temporary retardation of tumor growth or regression; 1, of whom photographs are given, showed considerable regression of the primary tumor and of deposits in the axillary lymph nodes. The mean age of the 4 patients showing any favorable response was 62, and that of the remaining 9 patients was 48.

Livitt, W. M. Improvement was maintained for 4 months in 1 patient, aged 69; 10 other patients, all under 60, did not respond. The dosage was 2.5 to 5 mgm. 3 times a day.

McWhirter, R. "Very definite improvement" occurred in 6 (youngest 52, mean age 62 years) of 37 patients, but was not maintained in 2 of these. The dosage was 5 mgm. twice a day.

Thurcar, J. L. Ten consecutive patients received not less than 10 mgm. daily. Favorable responses occurred immediately if at all. In 5 cases no effect was observed; in 5 patients there was some improvement, 1 of these (aged 58) showing a "rapid and spectacular response," and 2 showing continued and 2, transient improvement. No patient under 58 improved, and the majority of persons who responded were well over 60. Some metastases may regress while others enlarge or new ones appear. Cancer of the breast may show spontaneous remissions or regressions.

Walker, J. Z. Ten patients received 1.2 to 10 mgm. thrice daily; the average age of 3 showing considerable improvement was 67-3 years. Five patients were not benefited and in 2 the effect was adverse.

Winey, B. W. Of 10 very advanced cases, 3 showed "demonstrable improvement." Doons, E. C. Hexestrol and dienestrol were suggested for trial as possible substitutes for stilbestrol.

Paterson, E. Stilbestrol (average 5.8 mgm. daily) was given to 13, and triphenylchloroethylen (average 3 gm. daily) to 23 patients. Regression under either drug was most distinct in "the established primary mass, whether this was the original breast tumor or recurrent nodules in the chest wall. Bone metastases were also sensitive either regressing or ceasing to give pain (4 cases)." Metastases in lymph nodes were on the whole less sensitive. Regression appeared if at all within a few weeks of the commencement of treatment. The more cellular tumors responded best. Neither compound proved as effective as palliative x-ray therapy.

Symptoms attributable to stilbestrol that were noted by various contributors to the discussion were nausea, vomiting, tenderness of breasts, swelling and pigmentation of the areola, resumption of menstruation (so severe in 1 case as to necessitate a blood transfusion), and edema of the ankles.

Those observers who reported favorable results were unanimous in finding that these occur among the older women: improvement was noted in 27 of 68 women aged 60 years or more, and in 14 of 100 less than 60, according to combined tabulated data. Dr. Haddow in his contribution discussed the lines of research that must be pursued to throw light on this matter.—E. L. K.


Emphasis is laid upon the 2 most common conditions that might be encountered—diffuse hyperplasia and carcinoma. Their clinical and pathological features and treatment are presented.—C. W.
MALE GENITAL TRACT


From an analysis of 88 cases of carcinoma of the prostate gland, it was concluded that castration and stilbestrol therapy are very valuable but not curative. The commonest causes of death in this series were carcinomatosis, urinary tract infection, and degenerative diseases associated with age. Among 46 autopsies, metastases were found in 22 instances, and malignant tumors elsewhere in the body in 7. It is evident that diagnosis is difficult since 22 carcinomas were discovered only at autopsy, and 4 patients had had transurethral resections for tumors diagnosed before death as benign.—V. F. M.


Short review paper including discussion of rationale and surgical technic of orchidectomy, with case reports selected from 22 cases of carcinoma of the prostate treated by the authors during 1942. The results in all cases are not tabulated, but interesting features of some of them are discussed to illustrate the following points: (1) negative roentgen ray findings for lumbar spine and pelvis, and absence of pain do not exclude the presence of metastases, (2) serum acid phosphatase level is of great significance, but changes do not in all instances correlate well with the clinical course, (3) relapse may occur after cases have apparently been brought under control, or improvement may continue after orchidectomy, with regression of metastases and calcification of involved bone. In general, the authors conclude that no other method of therapy for far advanced cases offers relief for so long or so completely as do the procedures described. The relief and comfort obtained in cases of remission following routine deep x-ray therapy have been striking.—C. W.


The authors summarize very briefly the literature relating to acid phosphatase and the normal and cancerous prostate and refer to the review by Haddow (Brit. J. Radiol., 16:193. 1943) of this subject. The estimations of acid and alkaline phosphatase were carried out by the method of King et al. (Lancet, 242:207. 1942). The range in the plasma of normal persons was 1 to 5 units of acid, 3 to 10 units of alkaline phosphatase per 100 ml. In 50 cases of anemia, heart disease, cholecystitis, catarrhal jaundice and hepatitis, obstructive jaundice, and primary carcinoma of the stomach, and in 12 cases of enlarged prostate, the acid phosphatase values were within this normal range, while in 8 cases of prostatic carcinoma without bony metastases the range was 1 to 6, and in 7 cases with such metastases the range was 6 to 19 units. The alkaline phosphatase, which reached very high levels in obstructive jaundice (10 to 163 units), showed a similar difference between cases of cancer of the prostate without (4 to 11 units) and with (7 to 87 units) bony metastases. Human seminal fluid contained amounts of acid phosphatase about 100,000 times greater than those present in plasma; fluid from 2 cases of eunuchoidism showed about 1/100 of the normal concentration.

In a further series of 10 patients with prostatic carcinoma, 6 had abnormally high plasma acid phosphatase values (up to 41 units) and in 5 of these there was radiographic evidence of metastases in bone. The plasma acid phosphatase was increased also in some cases of Paget's disease. When a patient with prostatic carcinoma is treated with stilbestrol (intramuscular), the plasma acid phosphatase, if raised previously, falls abruptly to the normal level, while the alkaline phosphatase shows an increase followed by a gradual fall. Details are recorded of 10 patients treated with stilbestrol given usually at first by the intramuscular route (dose: 34 mgm. in 28 days to 525 in 21) and then orally (1 to 5 mgm. once, twice, or thrice daily). Intramuscular injection seems to have no advantage except that the amount introduced is known exactly. In 4 of the 10 cases some regression of the primary tumor took place, and in 3 cases there was a slow diminution during treatment in size of lymph nodes bearing secondary deposits. Metastases in bone may show by x-ray examination an increase in size and number, or increase in density. Nine of the 10 patients showed some improvement in general condition (relief of pain, lesser frequency of micturition, increase in hemoglobin, gain in weight), but the authors recognize that rest and administration of iron may have contributed to these changes.—E. L. K.


A general review of the literature accompanies the case report.—M. E. H.
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