hereditary localization factor for certain types of tumors. Reference is made to investigations with inbred mouse strains showing that undoubtedly different genetic behavior in susceptibility to tumors of a particular type exists. Most workers agree that there is an inheritable specificity for tumor type and tumor site. However the factor of heredity is not the sole cause of cancer growth, and other influences play a role. Other aspects of cancer research mentioned briefly are the role of a virus, carcinogenic substances, and the influence of the endocrine glands. Recognition of the effects of heredity in the causation of cancer may lead to the development of some means of prophylaxis.—E. E. S.


Abstracts of general discussions.—A. Cnl.

Clinical and Pathological Reports

Heredity


In a family of 7 children 6 were found to have polyposis. In 2, malignant change developed in the polyps. The father of the children died of carcinoma of the rectum at the age of 48, and the paternal grandfather succumbed to "cholera morbus." The author recommends early and radical operation as the treatment of choice.—G. H. H.

Therapy—General


The author emphasizes the danger in relying on morphone for relief of severe pain associated with carcinoma of the mammary gland since many patients may survive for a long period. The pain is often due to invasion of the brachial plexus. The procedure of choice was found to be intraspinal division of dorsal roots. Other procedures are discussed, and objections to their use are noted. An illustrative case is presented.—E. E. S.

Radiation—Diagnosis and Therapy


The first reported case of sarcoma of the neck following roentgen therapy of Graves’ disease is described. Degenerative radiation changes (pigmentation and telangiectasis) in the skin of the neck occurred 2 years after the treatment. Eighteen years later a fibrosarcoma developed at the site of these skin changes. Five months after excision of the tumor a recurrence was noted. A radical neck dissection resulted in freedom from recurrence for a period of 23 months.—S. A. G.


Seventy-five patients with proved cancer of the breast received intensive preoperative roentgen therapy. Pathologic studies after subsequent mastectomy revealed no evidence of the primary tumor in 13% of the cases. The fact that 63% of the axillary nodes were found to be involved indicates that no carcinocidal action of the radiation occurred in these deposits. In view of these findings the author believes that radical mastectomy should be recommended as the treatment of choice in operable cancer of the breast without the delay and questionable benefit of preoperative roentgen therapy.—S. A. G.


Treatment by radiation can be effected by radium, radium emanation, and low, high, and super voltage roentgen rays. The selection of the method to be used depends on the convenience of application and upon the depth and size of the tumor. Irradiation causes degeneration of tumor cells and premature aging, i.e., fibrosis, of the tumor bed. There is no evidence that tumor growth is stimulated by such treatment. Tumors originating from the white blood cells, blood forming organs, gonads, and tissues of embryonic type are the most sensitive. Tumors arising from nerve tissue, bone, or muscle are characteristically resistant. A few general observations concerning technic are made. The author believes preoperative irradiation has some beneficial effect. Postoperative irradiation should be attempted only when it is known that the tumor is of a high grade of malignancy or when surgical removal is incomplete. The majority of patients referred for radiation therapy are incurable. Treatment in these cases is purely palliative and systemic reactions should be avoided. The hazards of treatment are injury to normal tissues and systemic reactions such as roentgen sickness and injury to blood-forming organs, but the latter is regarded as of minor importance. Any source of infection should be removed before treatment is undertaken.—E. E. S.


The author reviews 20 cases in which cancer of the cervix or corpus uteri followed irradiation therapy and concludes that the previous irradiation of the benign condition was probably not the cause of the malignant change.—A. K.


The various types of radiation cancer, both human and experimental, have certain fundamental features in common. The exact amount or dose of radiation necessary for the production of radiation cancer is not known, nor is it
Cancer Research

so important as the fact that the radiation must be administered over a long period of time, either continuously or intermittently.

If radiation is given in doses sufficient to destroy the tissue irreparably, a condition known as radionecrosis is produced. Radionecrotic tissue, being practically devoid of any viable elements, seldom undergoes malignant change, but cancer may occur in the viable tissue at the edge of a radionecrotic area. However, if the dose of radiation is such as to produce incomplete destruction of various tissue components, then a complex balance of necrosis and repair is set up that may eventually lead to malignant neoplasm formation. The injury so produced in the irradiated tissue is of such character that degenerative and regenerative processes occur concomitantly. Both processes are progressive and continue indefinitely even though the injurious agent may be withdrawn, thus accounting for the extremely variable and unpredictable length of time between the administration of radiation and the appearance of the neoplasm. The histologic character of the tumor is dependent, not upon the nature of the injurious agent, but upon the type of tissue affected by radiation. The neoplasm is limited in origin to the irradiated tissue, but once established, it behaves like any other malignant growth of similar histology.—S. A. G.


The use of x-ray therapy is seldom advisable in gynecologic cases during the first 2 decades of life except in the rare instances of malignant neoplastic disease. The treatment of carcinoma of the cervix constitutes the greatest use that can be made of irradiation during the reproductive period of life. It is the best mode of therapy in all stages of this disease. It is felt, however, that by semi-annual examination the disease could be detected in its incipiency, and relatively simple therapeutic methods be used. Carcinoma of the vulva should never be treated by any form of radiation therapy because of possible skin reaction. In the advanced stage of malignancy regression of the growth and relief from pain may be achieved by radiation therapy. X-ray treatment of desperately ill or very aged patients is not recommended. A knowledge of the life cycle of the tumors and their sensitiveness to radiation therapy are prerequisite to the treatment of these lesions.—A. K.

SKIN AND SUBCUTANEOUS TISSUE


Forty previously reported case studies of sebaceous gland carcinoma are reviewed and another case is added. The treatment proposed is: complete surgical excision of the primary tumor, regional node dissection, and roentgenotherapy when indicated.—M. R. D.


The author describes a patient with 46 adenocarcinomatous skin metastases that were thought to be from an ovarian tumor because a pelvic mass was present. Cutaneous metastases are so rare that the simple explanation of seeding is not adequate. If seeding were involved, with the present frequency of cancer, cutaneous metastases would be common. The idea is discussed that a histological affinity is necessary between the tissues at the site of primary and secondary lesions, but it is pointed out that primary cutaneous cancers almost never metastasize to skin. Cutaneous metastases usually grow rapidly. A plea is made for histological examination of all removed skin lumps.—V. F. M.


The case reported is unique in that it presents in association with psoriasis the hitherto undescribed feature of tumor formation. This type of psoriasis because of its resemblance to other dermatoses and in many ways suggests sarcoma, especially Kaposi's hemorrhagic sarcoma, but biopsies show that it is not the same.—A. Cnl.


An unusual case of malignant tumors and large ulcers of the leg is reported. The histopathologic studies made prior to the institution of therapy revealed evidence of immature squamous cell carcinoma and amelanotic melanoma. Following intensive roentgen-ray therapy there was temporary retardation of growth and partial involution of the tumors. Amputation became imperative, however, because of extension of the ulcers and the occurrence of intense pain. Histopathologic study of the tissue after amputation revealed no further evidence of malignant growth, probably as a result of the intensive radiotherapy. Examination 10 months later showed no evidence of regional adenopathy or of metastases in other regions of the body.

The differential diagnosis and therapy of these lesions are discussed.—S. A. G.

Nervous System


The occurrence of a large tumor in the iter and fourth ventricle of a 5 week old infant with a meningo- myelocele and cerebellar aplasia is reported. The case described appears to lend support to the theory of the congenital origin of some of the infiltrating tumors of the brain.—S. A. G.


A brief review of the literature and report of a case. The patient showed no signs of recurrence 18 months after operative removal of the tumor.—G. H. H.
Multiple Calcified Intraventricular Meningiomas.

Single meningiomas lying entirely within one of the ventricular cavities constitute a very small percentage of the total number of intracranial meningiomas. About 40 intraventricular meningiomas have been reported so far; Cushing encountered but 2 in his 295 cases of intracranial meningiomas. Some of these intraventricular tumors are densely calcified, but the majority of them are not. Multiple intraventricular meningiomas are exceedingly rare. A patient with multiple calcified intraventricular meningiomas, who had been operated upon, is reported by the author. The calcification was seen on the flat x-ray plate of the skull and, after delineation by injection of air, in both lateral ventricles and in the third ventricle.

There is nothing characteristic about the symptomatology or physical signs in this type of tumor. Localizing signs are absent, and accurate localization will depend upon air ventriculography. The fact that the sole blood supply comes from the choroid plexus makes the lesion particularly favorable for extirpation.—A. G.


Seven cases of atypical acoustic neuroma are described. The importance of an accurate history giving the chronologic nature of events is emphasized, and reasons for errors in diagnosis are suggested.—S. A. G.

FEMALE GENITAL TRACT


This is a report of an adenocarcinoma of the uterine fundus, of a low grade of malignancy, which metastasized to the ovary where it produced keratin. This case is in keeping with the Novak statement of that squamous cell metaplasia occurs "in adenocarcinoma of the lesser degrees of malignancy."—A. K.


A case report.—A. K.


Theories of the origin of endometriosis are reviewed, and the pathologic role of estrogen stimulation is discussed. In a series of 203 cases of adenomyosis, 23 were in women past the climacteric. An additional case is reported. In the women past the menopause there were no symptoms attributable to the adenomyoma itself. There is no evidence to indicate that these tumors can originate de novo after the climacteric, or even persist in active, symptom-producing growth. Although uterine endometriosis is not infrequent in women past the menopause, such lesions are to be regarded as in a state of regression.—A. K.


This is a statistical analysis of the cases of carcinoma of the vulva, treated at Woman's Hospital, Detroit, between 1932 and 1941. This tumor constitutes about 5% of all carcinomas occurring in organs of the female pelvis. When the patients were seen, 71% already had metastases in the regional lymph nodes. Leukoplakie vulvitis preceded development of the tumor in more than half the patients. Vulvectomy is, therefore, recommended for this precancerous condition. Pain and burning on urination, vulvar sore, bleeding, and vaginal discharge were the most common symptoms. The tumors either projected in papillary form or were seen as indurated ulcers. Secondary carcinoma in this location was very rare. Radical vulvectomy is considered the therapeutic procedure of choice.—E. S. E.


A report of two cases.—A. K.


A case report of a primary epidermoid carcinoma of the labia majora complicating a 6½ months' pregnancy in a woman 26 years of age. Treatment was simple excision of the tumor, cesarean section, bilateral radical groin dissection, and postoperative x-ray therapy. Five similar cases were collected from the literature.—A. K.


The incidence of fibromyomas in negro women near Augusta, Ga., was 3½ times that in white women. In the Negro women, the tumors were larger, and chronic salpingitis in conjunction with fibromyomas was encountered more often. Tumor necrosis was twice as frequent as in white women. Fibromyomas were found to be relatively free from malignant complications, but sarcoma was more frequent in the Negro, carcinoma more common in white women. The complicating ovarian changes found relatively frequently were follicular and luteal cysts.—A. K.


It was found by the author that carcinoma of the stump is neither more serious nor more difficult to treat than cancer of the cervix with the fundus present except that there may be an increased frequency of vesicovaginal fistula. If castration is performed in conjunction with subtotal hysterectomy, diminished circulation might act as a retarding factor in the development of cancer of the stump. The author considers, however, that total hysterectomy is the preferable procedure in carcinoma of the corpus,
but that this is true only for the experienced surgeon. For the less experienced operator the subtotal procedure in conjunction with detailed examination of the cervix is to be recommended. In all subtotal operations careful subsequent observation of the patient for an extended period of time is essential for safety.—A. K.


Description of an instrument combining curettage and suction for endometrial biopsy.—A. K.

Urinary System—Male and Female

Occult Carcinoma of the Kidney With Metastases Simulating a Primary Carcinoma of the Nasopharynx. Kolotsky, S. [Western Reserve Univ. and University Hosp., Cleveland, Ohio] Ohio State M. J., 37:1180. 1941.

The tumor appeared in the nasopharynx of a 23 year old boy and rapidly spread to mouth, sphenoid, ethmoid, and temporal bones. Necropsy revealed a carcinoma in the kidney, extending into the renal vein. The tumor nodules in the lymph nodes, liver, and vertebrae, as well as those noted clinically in the skull, were regarded as secondary to the kidney lesion.—E. E. S.


A report of the removal of a papillary carcinoma of the kidney 20 months after fracture of the overlying rib.—V. F. M.

Intrathoracic Tumors—Lungs—Pleura


Control or arrest of carcinoma of the lung in its advanced stages has proved almost impossible. This type of malignant growth has shown notable resistance to x-radiation, and the benefit obtained has been so limited that x-ray treatment has been discarded as a curative procedure. X-rays and radium have the same physical effects, but the technical ease of application makes x-ray therapy to favorably.--A. K. A.


A classification of all tumors, benign and malignant, occurring in the mediastinum is presented. The common symptoms and signs are listed. The author believes operation should be performed on all benign tumors, and on the malignant tumors when diagnosis can not be established otherwise. Brief case histories of patients with a teratoma, a neurogenic tumor, an aberrant pulmonary lobe, and a lymphangiendothelioma, respectively, are appended. These patients recovered following operation.—E. E. S.


A case is reported of diffuse neoplasm of the pleura, arising from the mesothelial lining cells. The complex structure of the tumor, chiefly composed of lipophagic reticulum cell-like elements and of cells resembling lymphocytes in different phases of development, is explained on the basis of the multiple developmental potentiality of the mesoderm comprising the coelomic "mesothelium."—S. A. G.


Four cases are presented that were treated by local removal of the tumor by means of the bronchoscope. After giving a brief historical review of the subject, the author outlines the difficulties in diagnosis and management of this tumor.—M. E. H.


A case report.—G. H. H.


This study is based upon 300 cases of carcinoma of the lung diagnosed during life or at postmortem examination. In 62 of these cases there was clinical evidence of involvement of the nervous system. An analysis of the neurological signs and symptoms is presented in detail, and the literature is reviewed.—S. A. G.

Gastrointestinal Tract


A 60 year old man in whom a roentgenogram showed a filling defect in the distal half of the stomach was operated
upon about 6 months after onset of symptoms. A radical total gastrectomy was performed including the greater omentum, duodenum, and a portion of the esophagus. The esophagus was then anastomosed to the jejunum. Postoperative complications included pneumothorax, localized atelectasis relieved by bronchoscopy, and parotitis, which cleared following roentgen and radium therapy. Whole blood, plasma, and saline were frequently given, and the patient received peptonized protein, carbohydrate, salt, and vitamin through an indwelling Levine tube. The serum protein level did not rise to a low normal level for about 1 month. The operative details are discussed.—E. E. S.


Report of a case. The original lesion was a mucocoele of the appendix. The literature is reviewed, and a discussion of the pathogenesis, clinical picture, and prognosis is given. The malignant potentialities of pseudomyxoma peritonei arising from an ovarian cystadenoma are stressed.—G. H. H.


In a series of 165 patients with chronic gastric ulcer, operated upon at The Mount Sinai Hospital during the period from 1925 to 1935, 20% of the lesions were diagnosed roentgenologically as carcinoma of the stomach. Twelve per cent diagnosed as benign ulcer were subsequently proved to be malignant. In the past 3½ years among 28 consecutive ward cases there were 6 additional instances in which benign ulcer was suspected but in which carcinoma was disclosed at operation. The author presents one case typical of the latter group; another case of a carcinoma of the stomach. The authors believe that the hazards of severe hemorrhage and malignant change constitute valid indications for surgical treatment of all benign gastric tumors.—G. H. H.


Since syphilis of the rectum and some benign growths produce symptoms similar to those of an early carcinoma, careful examination with the aid of a proctoscope and biopsy of suspicious areas, as well as the Wassermann test and x-ray studies are urged.—E. E. S.


A case report.—G. H. H.


This procedure was carried out successfully on a patient who refused permanent colostomy even though the risks include the higher mortality, difficulty in healing due to impaired blood supply, the possibility of less accuracy in the suturing of the anastomosis, and the greater likelihood of infection.—E. E. S.


The importance of symptoms of change in bowel function as an early sign is stressed. More general use of the sigmoidoscope is urged. Associated conditions, such as gall bladder disease or hemorrhoids may obscure the diagnosis. All bleeding from the colon must arouse suspicion. Amebic disease may produce a tumor simulating cancer. Colonic spasm is a problem in diagnosis.—M. E. H.


Two patients with adenocarcinoma of the rectum are reported. In the first patient, an enlarged supravacular node revealed the presence of carcinoma, and the primary tumor was found at necropsy. The second patient appeared perfectly healthy, but section of a rectal polyp that became prolapsed showed evidence of malignant transformation. There had been no recurrence at the time of writing.—E. E. S.


A subtotal gastrectomy was performed for this tumor that had invaded the regional lymph nodes. At present, 1 month later, the patient is living and well.—W. A. B.

The Importance of Proctoscopy in the Diagnosis and Treatment of the Lower Bowel. REICHMAN, H. R.
Six cases of malignancy of the rectum were diagnosed by means of the proctoscope. In one case x-ray failed to reveal the lesion. Use of the proctoscope is an essential part of the examination of patients with rectal or colonic complaints.—M. E. H.

**Treatment of Large Gastric Ulcers. Résumé of a Ten Year Study.** Steigmann, F. [Cook County Hosp., and Univ. of Illinois Coll. of Med., Chicago, Ill.] *Arch. Surg.*, 45: 764-775. 1942.

The author concludes from studies and observations during a period of 10 years on more than 200 patients with large gastric ulcers that surgical intervention is the treatment of choice. In most cases it cannot be definitely ascertained preoperatively whether the lesion is benign or malignant. Large benign ulcers tend to heal poorly, bleed dangerously, and rarely to undergo malignant change.—G. H. H.

**Leukemia, Lymphosarcoma, Hodgkin's Disease**


The mode of onset, presenting symptoms, and features of the physical examination in cases of acute and chronic leukemia are briefly described. Details of the blood smear are given. Bone marrow biopsy is often of great assistance in making the diagnosis. The differential diagnosis includes agranulocytosis, pertussis, infectious mononucleosis, pyogenic infections, tuberculosis, and the leukemoid reaction to tumors metastasizing to bone marrow.—E. E. S.


The author discusses the previously proposed classification of skin lymphoblastomas and points out the uncertainty in placing many lesions in one of these groups. Two cases are described in detail and illustrated. One was a 74 year old male with multiple recurring lymphosarcoma cutis. Autopsy revealed extensive internal metastases. The other was a 9 month old male infant with a single subcutaneous lymphoma. Postmortem examination revealed no internal metastases but the right cervical region was extensively involved. The lesions in both instances were very radiosensitive, but new crops of nodules would appear rapidly. The author cites the following criteria as characteristic of lymphosarcoma cutis: (1) local lymph node invasion; (2) skin invasion without ulceration, papules, exfoliation, or hemorrhagic dermatitis; (3) no pronounced changes in blood picture except myelophthisic anemia; (4) mature and malignant lymphocytes in the biopsy; (5) radiosensitivity; (6) generalized nodular spread into internal organs. He considers lymphosarcoma cutis actually to be secondary to initial involvement of internal or contiguous lymph nodes.—V. F. M.

**Pituitary**


In the records of the Johns Hopkins Hospital there are 113 cases of tumor of the craniopharyngeal duct, arising from the cells that later form the pars intermedia and the pars tuberalis of the hypophysis. In this group the author found 12 cases of adamantinoma. He reports one in detail and summarizes 11 briefly. Photomicrographs demonstrate the characteristic structure of adamantinoma.—S. A. G.

**Thyroid**


A case report.—G. H. H.

**Statistics**


There was a further reduction in the number of reported cases of epilitheliomatous ulceration—113 (8 fatal) as compared with 128 (11 fatal) in 1941. Eighty-five (2 fatal) of these were due to pitch and tar, and 28 (6 fatal) to mineral oil. Since the beginning of the war the Registrar General has been unable to continue his usual practice of notifying fatal industrial cases that had not been notified during life; if this were possible the figures would be somewhat higher.—E. L. K.


Deaths from malignant disease in 1942 numbered 8,556 being 120 more than in 1941 and 431 above the average for the 5 years from 1937 to 1941. This is the largest number hitherto registered in Scotland but it is probable that the greater part of this increase may be attributed to the aging of the population. The death rate is 171 per 100,000 of the population estimated for 1939 (168 in 1941).—E. L. K.

**Correction**

The authors of "The Metabolism of 1,2-Benzanthracene in Mice and Rats" (3:686, 1943) point out that the last compound in Fig. 3, page 690, should be 9,10-Dimethoxy-1,2-benzanthracene, instead of 9,10-Dimethyl-1,2-benzanthracene. As this figure is a reproduction by photography of the authors' chart the fault lies in the original.
Clinical and Pathological Reports

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