
Rabbit sera, of animals carrying either the Brown-Pearce carcinoma, the V2 carcinoma, the rabbit sarcoma I, or the Kato sarcoma, have been found to contain an antibody which will in vitro fix complement with extracts of various normal and neoplastic rabbit tissues. The portion of the extracts which react with the antibody are readily sedimentable in the high-speed centrifuge. The antibodies found in these rabbits differ from natural antibodies in that they are not found in normal rabbits and are stable for 30 minutes at 65° C.—D. S.


Rabbits implanted with a Brown-Pearce carcinoma or injected with extracts of the carcinoma, developed an antibody which reacted specifically in vitro with a particular sedimentable fraction of an extract of the tumor. This constituent of the Brown-Pearce carcinoma differed immunologically from other sedimentable fractions which can be extracted from rabbit tissues. The results and implications of the study are discussed.—D. S.


The tumors induced in vitro by Dr. Wilton R. Earle of the National Cancer Institute have been successfully transplanted to guinea pigs and to mice of foreign strains. The ability to survive and to grow in animals of alien species identifies the tumors with the chemically induced tumor: antipyrene, isopropyl antipyrene, acetylsalicylic acid and di-allyl barbituric acid.—Author's abstract.


Peller has suggested that a cured cancer protects against the development of other malignant neoplasms and has advocated the experimental induction of a skin cancer to prevent subsequent occurrence of the more fatal cancers of other organs, while Warren and his associates have presented data which indicate that the incidence of multiple primary cancers is sufficiently high to presuppose increased individual susceptibility. This paper, based on 5,078 records from the Massachusetts cancer clinics, suggests that individuals with skin cancers are predisposed to other skin cancers. There is also an indication that males with lip cancers have some predisposition to multiple skin cancers. There is no evidence that immunity to the formation of a second primary cancer is produced by the presence of cancer in any location.—Authors' abstract.


The Serratia marcescens tumor-necrotizing polysaccharide which Shear and his co-workers have brought to a high state of purity is extremely potent as a pyrogen when injected intravenously into rabbits. Measurable increases in rectal temperature occurred after injection of only 0.005 micrograms per kgm., and elevations of 2 to 3° C. were produced by 0.5 μgm. per kgm. and larger amounts. The fever reaction was intensified and prolonged on very warm days.

Death occurred within 24 hours in some of the rabbits given 20 to 100 μgm. per kgm. Rabbits that died usually exhibited a rather weak fever reaction, and greatly diminished muscular strength.

Elevation of the rectal temperature did not occur as long as the rabbit was tied down on a copper table, or cooled with ice water and cold air. It was possible to minimize the polysaccharide induced fever reaction using the following drugs in amounts that were not acutely toxic to the rabbit: antipyrene, isopropyl antipyrene, acetylsalicylic acid and di-allyl barbituric acid.—Author's abstract.

Clinical and Pathological Reports

Clinical investigations are sometimes included under Reports of Research

Multiple Tumors


This is principally a case report of an 82 year old male who in two years had these histologically proved neoplasms: (1) basal cell carcinoma of the perineum; (2) epidermoid carcinoma of the groin; (3) adenocarcinoma of the prostate; and (4) embryonal carcinoma of the testis.—V. F. M.


It has been shown by means of indirect electroencephalography that a space-occupying lesion has two effects on the electrical activity of the brain. (1) An indirect action due to edema, and vascular change, resulting in the production of delta waves. (2) disappearance of all electrical activity when there is replacement of nervous
tissue by neoplasm, abscess, or hematoma. A needle electrode has been designed by which the electrical activity of the subcortical structures can be directly recorded. The details of the construction of the needle electrode and the technic for use are described. The results following the use of this needle have been clear and consistent although the appearance of the records depends upon whether or not a general anesthetic is being used. Normal cerebral white matter is identifiable by rhythmic electrical activity of the same type as that found in the cortex, while cerebral white matter is identifiable by rhythmic electrical activity of the same type as that found in the cortex, while matter adjacent to a space-occupying lesion shows delta activity similar to that seen in the cortex in the same conditions. The presence of a space-occupying lesion can be detected by its electrical inactivity. From these facts it is possible to delimit with satisfactory precision the spacial extent of a subcortical lesion and the zone indirectly affected by it. The results of the investigations of 4 cases are described and discussed.—M.E.H.

SKIN AND SUBCUTANEOUS TISSUES


The patient, aged 14, was said to have had a severe attack of chickenpox 6 months ago. Many of the lesions became pustular and healed leaving numerous hypertrophic keloidal scars.—E. L. K.


Description of a case.—E. L. K.

BREAST


Both breasts showed solid acinar polygonal cell carcinoma.—E. L. K.

FEMALE GENITAL TRACT


The pathologic diagnosis in the first case was an undifferentiated arrhenoblastoma and in the second a highly differentiated tumor (testicular adenoma of Pick).—M.E.H.


A woman aged 22 who had suffered from continuous uterine hemorrhage for 17 months was found to have a tumor of the right ovary composed of well-formed tubules lined by a single layer of cylindrical cells. There were large amounts of lipid in the inner portions of the cells and in the lumina.—E. L. K.


This study comprises a series of patients upon whom operations were performed. The indication for operation in 319 cases was myoma. Among the other principle indications for surgery were adenomyosis, carcinoma of the corpus, endometriosis, cervical lesions in which the cervix was definitely unhealthy, and sarcoma of the uterus which occurred only once.—M.E.H.

MALE GENITAL TRACT


A review of the literature with discussion.—V. F. M.


The two interesting cases of bladder cancer resistant to treatment, reported here, showed considerable relief from symptoms following bilateral orchiectomy. In one of these there was apparent retardation of growth locally and marked improvement in general condition during the 3 year follow-up period.—V. F. M.


A relationship between the histological appearance of the removed testis and the clinical results obtained by orchiectomy in cancer of the prostate could not be demonstrated. Also there was no connection between the presence or absence of vas deferens obstruction and the degree of tumor activity. “Five percent of all men over the age of sixty develop clinical carcinoma of the prostate” but the histological incidence is much greater.—V. F. M.

URINARY SYSTEM


One tumor was intrarenal and the other was extracapsular. Both were considered benign. Both patients had hypertension which decreased after surgery.—V. F. M.


A case report with illustrations and discussion.—V. F. M.


A renal tubular adenoma 11 cms. in diameter was removed from a 49 year old female.—V. F. M.


This is a good review covering 183 cases collected from the literature and the authors' experience. Forty-two per cent of the cancers were non-papillary. Men were affected
almost twice as frequently as women. The greatest incidence was in the sixth and seventh decades. Metastases were common. Treatment of choice is nephro-ureterectomy.—V. F. M.


A description of two cases with autopsies.—V. F. M.


The authors add one case to the 175 previously reported.—V. F. M.


This is a statistical study. Of 39 cases of papilloma seen from 1916 to 1932, “Six are known to be well.” Of 46 cases of papillary carcinoma, “Four are apparently well; four others reported themselves well in 1935 and cannot be traced at this time.” Of 25 cases with carcinoma one lived 23 years, 4 others died many years later without cancer, and the remainder died of cancer. Statistical observations on a similar group from 1933 to 1944 are presented in tables, the follow-up period being less than a year for many cases. In commenting on the “Papillary Carcinoma” group the author states: “The results are indeed depressing.” Radiation by radon seeds or radium plaque gave the best results in recurring papillomas, papillary carcinomas, and carcinoma—simple fulguration being advised first for simple papilloma. X-ray and resection were disappointing.—V. F. M.


This is principally a review of histology, but the author also considers the problem concerning why vesical tumors are not associated with other growths in the urinary tract, since the histologically similar pelvic neoplasms are quite often associated with other tumors in the ureter and bladder. A possible explanation is given in that a carcinogenic agent might be excreted in the urine and this acts at the site of longest contact or stagnation—the bladder.—V. F. M.


The incidence in infants is about 3 times greater in females than males. The authors’ case is described and illustrated.—V. F. M.


A review is presented based upon 20 years experience in a large Mission Hospital in Travancore, South India. Here epitheliomas of the tongue, jaws, teeth and lips occur more frequently than any other type of cancer.—E. L. K.

**Intrathoracic Tumors**


Hemangiomas were removed from both lungs at two operations. The patient had also hemangiomas on the lower lip. Such conditions of the lung “can be treated successfully by local resection of individual tumors provided none of the lesions are too massive, in which case a lobectomy or pneumonectomy would be preferable. Because of the danger of fatal haemorrhage, operation should not be delayed.”—E. L. K.


Two cases are described of primary squamous-cell carcinoma originating in the apical part of the pleural cavity and invading the ribs and vertebræ. Although both tumors appeared to be intrapulmonary in origin they belong to an unusual group presenting characteristic clinical, radiological and histological features. “We agree, therefore, with Pancoast that they deserve to be more widely known as a special entity, and we suggest that ‘miniature scar-carcinoma of the lung with involvement of the thoracic inlet’ is more descriptive of the pathology than the more general term ‘superior pulmonary sulcus tumour.’”—E. L. K.

**Gastrointestinal Tract**


The author has accumulated a number of surgically resected stomach specimens which were all treated in the same fashion by opening along the greater curvature, pinning out on a cork board, fixing in Bown’s fluid, and then taking ten or more sections from different areas according to a definite plan. There were thus made available multiple sections from 150 stomachs, 50 with gastric carcinoma, 50 with gastric ulcer and 50 without ulcer or carcinoma but were removed because of duodenal ulcer. This material was studied to see if any further information could be elicited which would be of value in deciding whether or not morphological changes in the gastric mucosa could be regarded as precancerous.

It was found that mucosal atrophy may appear as early as the third decade and from then on with ever increasing frequency and extent in the succeeding decades of life. Moreover, in comparable groups of stomachs, mucosal atrophy was found in a larger number of instances and tended to be more widespread in those with cancer than in those without cancer. In attempting to find actual progression from altered mucosal glands, it was impos-
sible to tell when there was juxtaposition of carcinoma and mucosal glands whether the carcinoma was invading the glands or developing from their epithelial cells. In occasional stomachs with carcinomas, multiple sections from various areas failed to show any epithelial changes at all, while other stomachs without cancer showed only minimal changes.—J. L. M.


A round-celled sarcoma, involving the whole of the lesser curvature from cardia to pylorus, was removed at operation.—E. L. K.


The symptoms caused by this lesion were long-standing, dull epigastric distress and synecope accompanied by tarry stools and hematemesis. A mass in the anterior wall of the stomach, having a smooth surface and even rounded contour, was seen on gastroscopy. Blood flowed from the surface. A subtotal gastrectomy was successfully performed. There is a photograph of the specimen and of a microscopic section.—E. E. S.


Report of a case in a 58 year old woman, in whom this benign tumor of the neurogenic type reached such a large size that on roentgenographic examination it resembled a bezoar.—W. A. B.


The outstanding features of the case presented were: fever, tender epigastric mass, palpable spleen, achlorhydria, occult blood in the stool, and a stomach that filled poorly with barium and had a persistent deformity. At operation a soft mass at the pylorus and antrum resembled a granuloma, while the fundus was stony hard. This proved at autopsy to be a reticulum-cell sarcoma. The symptoms are discussed in detail in relation to differentiation of this lesion from a gastric carcinoma.—E. E. S.


A case report. A hard mobile tumor 5 cm. in length, involving the midjejunum was found, on histologic study, to be an adenocarcinoma. Malignant growths of the small intestine are 36 times less frequent than those of the large bowel, but they occur with about equal frequency in all three divisions.—M. E. H.


Case report.—J. G. K.


The chief manifestations of leiomyomas of the small bowel are enterorrhagia and intestinal obstruction. The diagnosis is often not made because of the presence of a tumor in the small bowel is not considered. Failure to make a correct diagnosis roentgenographically may be due to the subserosal position of some tumors and superimposition of bowel shadows. Introducing barium through a tube directly into the small bowel is sometimes helpful. A case is presented with a history of melena at intervals for 14 years and previous gastroenterostomy with no change in the patient's course. It is pointed out that if a celiotomy, which was indicated in spite of negative roentgenograms, had been performed, the subserosal leiomyoma found at autopsy could have been removed.—W. J. B.


Description of a case.—E. L. K.


The authors report three cases in which the perforation was situated at or very near to the obstructing lesion. All three patients recovered. The ancillary use of chemotherapy was of great importance, since recovery before the advent of the sulfonamide drugs and penicillin was unusual.—J. L. M.


A review of 50 consecutive autopsy records of cases with cancer of the rectum or sigmoid indicated that 21 had invasion of the bladder. Two clinical cases also described.—V. F. M.


In a series of 46 cases of resectable cancer of the colon, intestinal anastomoses were done in 34—in 27 as primary operations and in 7 as secondary (right colon) procedures—with a mortality of 3%. Mikulicz resection was done in 18 cases, with colostomy closure in 10, without closure in 8 cases; there was a mortality of 11%. The authors recommend that the Mikulicz operation in cancer of the colon be used only in cases in which it seems impossible to re-establish continuity of the intestine by direct intestinal anastomosis, or unwise to attempt it. They find that with careful preoperative preparation, including preliminary colostomies as indicated, with meticulous surgical technic and with individualized postoperative treatment, most patients having cancer of the colon can be safely operated on by resection of the lesion and intestinal anastomosis, and propose this as the method of choice.—C. W.

A brief review of the subject, and a report on 4 cases of lymphosarcoma and 1 case of reticulum-cell sarcoma of the bowel, treated surgically at the Children's Hospital during the past 15 years. Although a very rare condition, lymphosarcoma makes up such a large proportion of cases of neoplastic disease of the bowel in childhood that it is justifiable to consider a neoplasm of the intestinal tract in an infant or child as lymphosarcoma until it is proved otherwise. Four of the 5 patients died, 2 with terminal lymphatic leukemia. Radical surgical excision and heavy x-ray therapy (employed in the surviving patient) are recommended as offering the best chance of cure.—C.W.


General discussion.—J. G. K.

Surgical Treatment of Carcinoma of the Rectum.


This is a statistical study of 346 patients admitted to the University of Iowa Hospitals because of carcinoma of the rectum during the 7 year period from January 1, 1937 to January 1, 1944. One hundred and thirty-nine patients, or 43%, presented operable lesions. There follows a discussion of the type of operation used, the preoperative and postoperative care.—M. E. H.

Bone and Bone Marrow


Giant-cell tumors arising from the sphenoid and ethmoid bones of the skull have been reported fairly frequently. The authors report what they believe to be the second case of giant-cell tumor of the occipital bone and the first case of giant-cell tumor in which there were obvious signs of increased intracranial pressure.—J. L. M.


Description of three cases.—E. L. K.


This is a case report, illustrated with roentgenograms and details of successful roentgen therapy.—E. H. Q.


A case of Ewing’s sarcoma in a 2 year old girl is reported. The course of the disease was extremely rapid with every bone in the body involved within 2 months. Extensive calcification of arteries was observed.—R. E. S.


A report of a myeloma in a boy whose first cousin was known to have died of myelogenous leukemia is presented. This present patient has remained well for 4 years following surgical removal of the tumor from the occipital bone and x-ray therapy.—W. A. B.


General discussion, with presentation of 6 unselected cases.—J. G. K.


A case report.—W. A. B.


A case report.—C. W.

Leukemia and Hodgkin’s Sarcoma


A report of a patient believed by the author to have had eosinophilic leukemoides, and a discussion of the differences between this disease and true eosinophilic leukemia.—M. H. P.


Case 78 was one of Hodgkin’s sarcoma involving the stomach, lungs, liver, spleen, and tracheobronchial and preaortic lymph nodes. The tumor had extended from the wall of the stomach to involve the body and tail of the pancreas. There were ascites, bilateral hydrothorax, and atrophy and fibrosis of the bone marrow.—M. E. H.

Carotid Body

The literature on carotid body tumors is reviewed. The tumors are usually slow-growing, and benign in the first years of their growth, and tend to recur. The one constant symptom is a swelling at the level of the bifurcation of the carotid artery. There may be associated attacks of faintness due to carotid sinus irritation. These features are well demonstrated in the 2 new cases presented here.

—W. A. B.


Description of a case.—E. L. K.


A short review of the subject and case report.—C. W.


A case report.—W. A. B.

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**ADRENAL**


A male aged 29 who suffered from attacks of hypertension was found to have a tumor of the right adrenal. During manipulation of the tumor the blood pressure rose to 225/145, and dropped to 90/70 within ten minutes after the growth's surgical removal. The tumor, a pheochromoblastoma, was composed of large polyhedral cells giving a chromaffin reaction.—E. L. K.


The patient who had lived first as a female and then as a male, died from peritonitis. At the autopsy there was found: 1) mammary carcinoma with hepatic metastases; 2) bilateral ovarian dermoid cysts; 3) epithelium arising in the right ovarian dermoid and invading the colon; 4) right adrenal represented by ridges of thickened cortex upon a calcified and ossified medulla.—E. L. K.


Case report.—V. F. M.

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**PANCREAS**


After a review of the literature, 6 cases of carcinoma of the pancreas are reported. Resection of the body of the pancreas and the spleen was done in 4 cases and total pancreatectomy, duodenectomy, and splenectomy in 2. There was an immediate mortality of 50%, while the longest survival was 3 years and 11 months. An outline of the surgical procedures is included, and the importance of blood transfusions is stressed. Although the results may seem discouraging, there was postoperative relief of pain in 3 cases, and the present work is regarded as only one stage in the development of effective therapy.—W. J. B.


A case report. Carcinoma of the pancreas should be suspected if indigestion is accompanied by a back pain that is worse when the patient lies down and is relieved when he bends forward.—J. G. K.


The authors review the literature on islet-cell tumors and have collected 60 additional cases, 56 of which were benign, and 4 malignant. The physiology of hyperinsulinism is briefly discussed. In addition there is presented a summary of the more interesting cases in the literature of the past five years. This paper adds to the literature on islet-cell tumor, a benign adenoma. This brings a total of islet-cell tumors to 176. Of these 127 are benign adenomas, 27 carcinomas, and 22 questionable carcinomas. Two case reports are presented.—J. L. M.

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**THYMUS**


The authors have attempted in a general way to clarify the problems of malignant thymoma by indicating its histogenic nature. The position of the two cell types, epithelial and lymphoid, in thymic oncology is discussed. Representative cases are presented.—M. E. H.

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**MISCELLANEOUS**


The pathology, diagnosis, and surgical treatment of endometriosis are discussed, on the basis of 754 cases in which operation was performed between the years 1938 and 1941 for endometriosis of the genital, urinary, and digestive tracts, and various other parts of the body.—M. E. H.


The chances for cure after proper treatment are related directly to the extent and activity of the growth at the time treatment is started. The early recognition and diagnosis of cancerous growths and the guidance of public education are the duty of every qualified physician.—M. E. H.


The author predicts that renewed interest in the cancer program as well as the prospects of increased funds will touch the life and practice of every person in the medical profession. The service provided to the patient will make changes in our present clinic programs. The good ultimately will depend to a great degree on the efforts of the medical practitioner.—M. E. H.
A brief discussion of the problem is presented together with a report of a patient with carcinoma of the colon.—J. L. M.

Federal meat inspection service disclosed that there were 32,709 cattle in 1944 which were found to have tumors, many of them malignant, but none occurred in the udder. This is especially striking in view of the frequency of breast cancer in many other species.—E. E. S.

STATISTICS

The recorded deaths from cancer among the white population of New York City, 15 years of age or older, during the 3-year period 1939 through 1941, were analyzed with regard to marital status. The over-all mortality rate for cancer of all types and in all sites was slightly higher in the unmarried population both male and female. In the female population, cancer of the breast and genital organs other than uterus was more prevalent among spinsteres, while uterine cancer occurred at a higher rate among married women. Of the tumors in the male, prostatic cancer resulted in a higher mortality rate in the married group, while cancer of the buccal cavity and pharynx had a 73% higher rate among single men. In the case of cancer of the stomach, the married group showed the higher rate, 5% for the males and 20% for the females. The mortality rates for cancer of the peritoneum and digestive tract (other than the stomach) and the respiratory system were not significantly different in the married and unmarried groups, although cancer of “other and unspecified organs” was slightly more prevalent in the unmarried group. Some of the implications of these statistics were discussed.—R. A. H.

The information regarding the incidence of cancer in India has been very conflicting in the past. The author has, therefore, reviewed the clinical experience of trained observers from different parts of the country, as well as his own experiences covering 3,919 autopsies performed at the King Edward Memorial Hospital, Bombay, and clinical cases at the Tata Memorial Hospital. He has analyzed the official vital statistics after noting the limitations and shortcomings of such data in India. He finds that wherever reasonably accurate information is available the total incidence of cancer in India, Europe, and America shows very little difference; and that any apparent difference disappears when comparable age groups are considered. He further shows that even though there may be no racial difference regarding the total incidence of cancer in human beings, there exists a considerable difference in the incidence of separate forms of cancer, or of cancer of various parts of the body in the different peoples of India.—Author’s abstract.

CANCER CONTROL AND PUBLIC HEALTH

A Committee was appointed to consider among other things (a) the prevention of mule spinners’ cancer and (b) the provision of mechanical means of wiping-down the carriage tops and roller beams of the mules in order to eliminate manual methods. The Committee recommended (1) that the oils used for spinning mules should conform to certain specifications of refractivity and specific gravity (2) that devices be provided to prevent the splashing of oil from mule spindles (3) that a private medical examination be provided every 6 months for all persons engaged in mule spinning and (4) that mechanical means of wiping-down be provided as stated under (b) above.—E. L. K.

The tumor clinics serve a humanitarian role by providing the best available treatment for the patients, and also give an opportunity to collect data on cancer. Furthermore they serve as important educational opportunities for physicians. The author urges more tumor clinics for Iowa.—M. E. H.

At the present time there is scarcely a home in the State of Connecticut more than 25 miles from a cancer center. The percentage of individuals with cancer receiving treatment within 1 month of the first symptoms has steadily increased, and the number of individuals who received treatment within 4 or 6 months of this disease is also greater. Twenty-one hospitals in Connecticut have provided the facilities for the diagnosis and care of cancer patients. As of July 1945, 27 hospitals have complete registries, 3 others have partial registries, and the remaining will start this service as soon as time permits.—M. E. H.

Correction
Volume 6:282 (Abstracts) 1946. Effects of Implantation of Methylcholanthrene in the Brain of the Dog, the second line “dogs provoked a chronic granulomatous reaction on the” was omitted.