The abstracts which follow have been classified for the convenience of the reader under the following headings:

- Experimental Studies; Animal Tumors
- General Clinical Observations
- Diagnosis and Treatment

Intrathoracic Tumors
- The Digestive Tract
- The Biliary Tract
- The Suprarenal Glands
- The Female Genital Tract
- The Genito-Urinary Tract
- The Nervous System
- Bone Tumors
- Leukemia

- The Skin
- The Oral Cavity
- The Salivary Glands

- Thyroid and Parathyroid Glands
- Carotid Body Tumors
- The Breast

As with any such scheme of classification, overlapping has been unavoidable. Shall an article on "Cutaneous Melanoma, an Histological Study" be grouped with the articles on Histology or with the Skin Tumors? Shall Traumatic Cerebral Tumors go under Trauma or The Nervous System? The reader's choice is likely to depend upon his personal interests; an editor may be governed by no such considerations. The attempt has been made, therefore, to put such articles in the group where they would seem most likely to be sought by the greatest number. It is hoped that this aim has not been entirely missed.

If readers of this JOURNAL wish to communicate with the writers of articles abstracted in its pages or to secure reprints, the editorial staff will be glad, so far as possible, to supply the addresses of these authors. Photostats of original articles will also be furnished, if desired, to be charged at cost.
**ABSTRACTS**

**EXPERIMENTAL STUDIES; ANIMAL TUMORS**

**Production of Internal Tumors with Chemical Carcinogens**, H. P. RUSCH, C. A. BAUMANN, AND G. L. MAISON. Arch. Path. 29: 8-19, 1940.

The authors injected solutions of 3:4-benzpyrene and 1:2:5:6-dibenzanthracene dissolved in corn oil into 64 rats and 46 mice, the injections being made into the submaxillary gland, spleen, liver, testis, epididymis, uterus, submucosa of the stomach, duodenum and bone marrow. The following tumors were obtained: 12 squamous-cell carcinomas and one sarcoma in mice and 2 spindle-cell sarcomas of the submaxillary gland in rats; a myoma, a spindle-cell carcinoma and an adenocarcinoma of the stomach in rats; 3 periosteal fibrosarcomas; a myogenic sarcoma of the uterus, and a spindle-cell sarcoma of the spleen. [The work on the production of squamous-cell carcinomas in the submaxillary gland should be repeated with paraffin pellets, as the leakage of the oil with its dissolved carcinogen may easily reach the epidermal layers of the skin and there give rise to a cancer which may invade the gland.—Ed.]

In order to study the effects of wheat-germ oil on tumor production 25 young adult male mice of strain A were given a diet of 93 parts Steenbock stock ration plus 7 parts wheat-germ oil; to another 25 the same diet was given with 0.05 per cent aminoazotoluene added; while 6 others received a diet of 75 parts Steenbock stock ration and 25 parts of wheat-germ oil. The latter was prepared by extracting wheat germ with ethyl ether and evaporating the ether under reduced pressure. No tumors were obtained by feeding the wheat-germ oil [which adds another failure to reproduce the results of Rowntree, Steinberg, Dorrance, and Ciccone: Am. J. Cancer 31: 359, 1937.—Ed.].

**Induction of Tumours by Injected Methylcholanthrene in Mice of a Strain Especially Sensitive to Carcinogenic Agents Applied to the Skin, and a Comparison with Some Other Strains**, G. M. BONSER. Am. J. Cancer 38: 319-327, 1940.

Mice of a strain, IF, which is particularly susceptible to carcinogenic agents applied to the skin, proved more resistant to subcutaneous injections of a lard solution of methylcholanthrene than mice of 4 other strains, 3 of which are known to develop skin warts and cancer late. Tumors were produced in 52 of 56 IF animals but appeared only after an average interval of 19.3 weeks as compared with 14.7 weeks for Strong A mice, 17.1 weeks for CBA animals, 14.3 weeks for Kreyberg's white label stock, and 15.2 weeks for market mice. The tumors were usually spindle-cell sarcomas but some squamous carcinomas and mammary adenocarcinomas were observed, though IF mice do not develop this last tumor spontaneously. References are appended.


Of 40 hamsters injected subcutaneously with benzpyrene (0.25 c.c. in lard) at intervals of three or four weeks, 9 died within the first three months of treatment and 29 of the remaining 31 developed tumors, some of which were transplantable to other hamsters. One strain carried through successive passages showed a peculiar tendency to lymph node metastasis in the later generations, though the original animal showed no metastases at autopsy. Transplantation of the enlarged nodes produced tumors resembling the original growth. Subcutaneous injection of blood from an animal showing lymph node metastases also gave rise to tumors. Neither splenectomy nor irradiation prior to inoculation appeared to influence the incidence of metastases but the number of animals thus treated was small.

Photographs and photomicrographs are reproduced and references are appended.
ABSTRACTS

3 : 4-Benzpyrene, Paramecium and the Production of Tumours, J. C. MOTTRAM.
Nature 145: 184-185, 1940.

Prolonged exposure of Paramecium to the carcinogenic hydrocarbon 3 : 4-benzpyrene produced a certain number of abnormal individuals. If the concentration of the hydrocarbon was one in five hundred thousand, large abnormal organisms appeared on the sixty-second day. Similar abnormal organisms were also found on the one hundred and twenty-second day when the concentration was one in a million. The strain of Paramecium used had been continuously under cultivation for two years and this type of abnormal form had not previously been seen either in control or experimental cultures.

If these abnormal specimens were picked out and placed in normal media as single cell cultures, they grew into populations of abnormal Paramecia, some many times the normal size, some midgets, some "Siamese twins," some triplets, some no more than knobly monsters, some presenting little departure from the normal and some apparently quite normal. This state of abnormality was retained during reproduction through many generations.

The author draws attention to the following similarities between tumor formation by 3 : 4-benzpyrene and the changes he has observed in Paramecium under the influence of the same hydrocarbon. (1) The changes occur among cells long stimulated to a growth rate above the normal by long exposure to the hydrocarbon. (2) Only a very few of the exposed cells present the change. (3) Once the change has been effected, it is reproduced by cell division for many generations after the carcinogenic agent has been removed. (4) Wide morphological variations are shown in the resulting cell populations.

Two drawings show the types of abnormal organisms produced. A. F. WATSON

Production of Tumors in White Mice Following Treatment with Irradiated Ergosterol,


Skin paintings with a solution of vigantol in oil were begun at three months of age in 20 mice and repeated every two to three days. Adenocarcinoma of the breast had developed in 6 (4 females, 2 males) of 15 surviving animals after thirteen to nineteen months.

In a second group of 20 mice 0.2 c.c. of vigantol was administered subcutaneously in the dorsal region. Thirteen animals survived after four months. Mediastinal lymphosarcoma, apparently of thymic origin, occurred in 2 females dead after four and twelve months, a spindle-cell sarcoma of the flank in a male dead after nine months, and a breast cancer in a male which survived ten months. The first animal received 19 injections, while the remaining had 27 treatments. No tumors were observed in controls receiving skin paintings or subcutaneous injections of 1 per cent cholesterol in oil.

Photomicrographs are reproduced.

[No data are included on the mice employed beyond the surprising statement that spontaneous tumors have never been observed in animals of the strain. It might be more logical to assume that previously animals were not kept sufficiently long for neoplasia to occur. The mammary adenocarcinomata observed by the author in males are possibly of significance, but it is difficult to ascribe the development of the few remaining tumors to the action of the irradiated ergosterol. In any case the number of animals is small.]

MILTON J. EISEN


Of 149 mice of the C57 strain which had been treated with varying amounts of estrogens, 22 developed tumors with or without leukemia. None of 117 control animals, untreated or treated with substances other than estrogens, showed lymphoid tumors. No myelogenous tumors were observed. The estrogen preparations used were estradiol
dipropionate, carotene and estradiol benzoate, estradiol benzoate alone, equilin benzoate alone and with an extract of adrenal cortex. The lymphoid tumors appeared in 175 to 517 days. Considerable amounts were injected, the maximum being one-tenth of a milligram of substance per week. Classification by sex is not given, but it is stated that there was no sex limitation.


Studies on the reputed advantages of variations in the technic of tumor transplantation are recorded. Growth of the Ehrlich mouse cancer was identical following the inoculation of comparable quantities of tumor suspension in olive oil or saline. Daily subcutaneous injections of olive oil and lard in tumor mice failed to influence the growth of the neoplasm. Mice two to three weeks of age and adults were equally susceptible to transplants. Saline suspensions of the liver of tumor mice failed to produce growths. Attempts to graft large tumor fragments in rats injected intraperitoneally with 2 c.c. of 3 per cent lactic acid daily prior to and following transplantation, or in untreated animals, were wholly unsuccessful.

MILTON J. EISEN


Transplantation of the Brown-Pearce tumor was successful in 90 per cent of a total of 110 animals of consecutive generations. Tumor emulsion in saline injected intratesticularly appeared the most favorable method of grafting. Generalized metastases occurred in a large number of animals, peritoneal dissemination without ascites being the type most commonly observed. Metastatic tumors were readily produced after subcutaneous transfers. Intracutaneous injection of cell suspensions resulted in progressively growing tumors. Indications of tumor immunity were not observed.

MILTON J. EISEN


In animals receiving a diet adequate in point of composition but insufficient in amount for normal growth the incidence of tumors, both induced and spontaneous, was lower than in animals receiving the same diet in normal amounts, and the initiation of the tumors was retarded. Once formed, the tumors in underfed animals grew at the same rate as those in the full-fed controls, but the tumors in the latter showed a diminution in rate of growth when the hosts were subsequently underfed. Photographs and references are included.


Nuclei were taken from rat tumor tissue and injected intraperitoneally into rabbits for one year. At the end of the year serum from these rabbits was injected into rats inoculated three weeks previously with carcinosarcoma 256. At the conclusion of the experimental period the average tumor size in the treated rats was less than that in the control rats.


Heptaldehyde added to the diet of Marsh-Buffalo mice in sublethal doses failed to cause any retardation in spontaneous tumor growth or to bring about liquefaction of the tumors.


The authors were unable to demonstrate any influence of zinc chloride injections into the thymus gland on the incidence of thymic tumors in female virgin mice of the Marsh-Buffalo strain.
ABSTRACTS


Lymph nodes from mice bearing sarcoma 37 were implanted subcutaneously in normal mice. Of 216 nodes from 36 mice, 27 from 14 animals gave rise to tumors. One hundred and thirty-four nodes from 48 mice with growths similar in age and site to those inoculated were examined histologically and manifest tumor cells were found in 31, from 20 animals. It is thus unnecessary to assume the presence of an unknown etiologic agent in the inoculated nodes as Parsons (J. Path. & Bact. 47: 501, 1938. Abst. in Am. J. Cancer 36: 130, 1939) has done in a similar experiment. Photomicrographs and references are included.


Evidence is submitted to show that the activating effect of extracts of the Rous sarcoma on the growth of fibroblast cultures in vitro is not greater than that of extracts of normal adult tissue. For the preparation of the latter, cardiac and smooth muscle of chickens was used. The finely minced normal and malignant tissues were each extracted in four times their volume of Tyrode. The resulting extracts were used in their original concentration. The stimulating action of extracts was tested quantitatively on fibroblast cultures grown in Carrel flasks, the growth rate of the colonies being estimated daily for seven days by the Ebeling technic. During this period the medium was not changed. The fibroblast colonies in both cases were uniform and regular in structure, but the cells growing in the tumor extracts were somewhat more granulated. The results showed that the growth-activating effect of the sarcoma extract was certainly not greater but, on the average, weaker than that of adult muscle extracts. The mean for the growth-activating effects of the tumor extracts was about 75 per cent of the latter.

The authors conclude: "The peculiar behaviour of malignant cells in the organism is, therefore, obviously not to be found in any unusually high growth capacity of these cells, or in any unusually high amount of growth-promoting substances in neoplastic tissue. In order to explain the autonomous growth of the malignant cell it is necessary to postulate some intrinsic change in the mechanism which in the body normally controls and holds in check this ever-present growth potentiality."

A. F. Watson

Details of the experiments are promised elsewhere.


The author believes that there exists an inhibitory agent in the lipid fraction of the Rous sarcoma. The residues of 11 of 12 desiccated tumor samples retained their ability to produce neoplasia following extraction of the lipids by acetone or carbon tetrachloride, while in 3 instances inactive tumor material was rendered capable of producing tumors after extraction with the fat solvents. In 6 of 7 experiments the lipid constituents, when mixed with double the quantity of active residue, either abolished or reduced the activity of the latter. [See also Fraenkel and Mawson: Nature 139: 282, 1937. Abst. in Am. J. Cancer 30: 382, 1937.]

Milton J. Eisen


In 1934 Green in England (Brit. J. Exper. Path. 15: 1, 1934. Abst. in Am. J. Cancer 21: 666, 1934), using a titration method requiring 0.5 c.c. of serum, showed that the esterase content of the serum of rats fell progressively during the growth of the Jensen sarcoma. Owing to the large amount of serum required it was necessary to sacrifice an animal for each determination, and the change in enzyme activity with tumor development could not be followed in the same animal at progressive stages. Troescher and Norris have overcome this difficulty by the use of a micromethod enabling the blood esterase activity of an individual rat to be measured at frequent intervals. The de-
crease in pH of a buffered solution, due to the butyric acid liberated from the hydrolysis of ethyl butyrate by rat blood, was taken as a measure of the blood esterase. Using Wistar rats with implanted adenocarcinomas the authors confirmed the fall of esterase activity during tumor growth well below the range of fluctuation of the values obtained for normal animals. The presence of a regressing tumor was accompanied by a rise of the esterase activity toward normal values.

A. F. Watson


In a strain of rats (A–S) characterized by a low fertility and a high incidence of mammary tumors there was found an inherent ovarian dysfunction manifested by an abnormal estrous cycle. This was more marked in the tumor-bearing rats. Histologic studies of the ovaries showed regressive changes especially in the animals with tumors. A bibliography is furnished.


Observations on breeder mice of two strains—the high-cancer A strain and the relatively cancer-resistant CBA strain—at forty-day intervals from 120 to 640 days of age, showed a continuous and precipitous fall in the level of hemoglobin in the cancer-susceptible animals but no such fall in the cancer-resistant strain. References are appended.


Continuing investigations of the proliferation-promoting intercellular wound hormones produced by cells injured by lethal ultra-violet radiation (Nature 144: 939, 1939. Abst. in Am. J. Cancer 38: 284, 1940), the authors submit evidence suggesting that disintegration of dead cells cannot account completely for these substances. Their results support the hypothesis that the release of such substances into the surrounding medium is one result of cell injury.

A. F. Watson


A labile water-soluble or dilute alkali-soluble photo-oxidation product possessing a characteristic absorption spectrum has been prepared from 3:4-benzpyrene, although this hydrocarbon gives no photo-oxide of the peroxicid type (Cook, Martin and Roe: Nature 143: 1020, 1939. Abst. in Am. J. Cancer 37: 121, 1939). The labile extract, which Schulman and Rideal have shown (Nature 144: 100, 1939) can be readily adsorbed onto protein monolayers, produces a high percentage of abnormal mitotic cells in embryonic heart tissue cultures.

A. F. Watson


Measurements were made of the oxidation-reduction potentials of eighteen quinones derived from carcinogenic and non-carcinogenic hydrocarbons, all the compounds being substitution derivatives of 1:2-benzanthracene. Although the position of the substituent was found to have a marked effect on the oxidation-reduction potential, there is no apparent correlation between potential and carcinogenic potency. References are appended.


Evocation of neural tissue in the chick embryo can be produced by a variety of chemical substances including sodium-1:2:5:6-dibenzanthracene-endo-α-β-succinate and 1:2:5:6-dibenzanthracene.

A. F. Watson

An apparatus is described for studying the mobility of animal viruses and their neutralizing antibodies in an electric field. An extensive report on the use of the apparatus is promised in the *Onderstepoort Journal* (South Africa).

A. F. Watson

CHEMICAL AND METABOLIC STUDIES


The claims submitted by the Dutch workers Kögl and Erxleben (Ztschr. f. physiol. Chem. 258: 57, 1939. Abst. in Am. J. Cancer 38: 116, 1940) that the proteins of malignant tissues are partially racemized have aroused widespread interest. The three letters to Nature listed above do not lend themselves to detailed abstraction but the views expressed by the authors may be summarized as follows.

(1) Chibnall and his colleagues, who were the first to question the claims of Kögl and Erxleben (Chibnall, Rees, Tristram, Williams, and Boyland: Nature 144: 71, 1939. Abst. in Am. J. Cancer 38: 117, 1940) still find themselves at variance with the conclusions of the Dutch workers. They conclude that racemization of amino acids is not a characteristic of malignancy.

(2) Konikova of the All-Union Institute of Experimental Medicine, Moscow, has been able to demonstrate the partial racemization of glutamic acid in a few cases in malignant tumors. In the majority of tumors, however, no "unnatural" glutamic acid was present. It is concluded that the presence of d (-) glutamic acid in tumors is not a regular phenomenon attending malignant growth.

(3) Town, of St. Bartholomew’s Hospital, London, describes experiments which indicate that a vegetable protein such as gliadin also contains part of its glutamic acid in a racemic form and that this is probably a general characteristic of proteins and not of special significance for the proteins of tumors.

Johnson, using the Jensen rat sarcoma, also examined the claim of Kögl and Erxleben that a large proportion of the glutamic acid obtained by hydrochloric acid hydrolysis of cancerous tissue appears as the d (-) form. He concludes that "whereas l (+)-glutamic acid is the principal constituent of the glutamic acid fraction from tumor and from normal liver tissues, it seems probable that a small amount of d (-)-glutamic acid is also present in the hydrolysate of normal as well as tumor tissue." These findings suggest the possibility of a slight racemization during hydrolysis of the protein.

A. F. Watson


Using certain special methods, which they describe, the authors measured the oxygen uptake, aerobic and anaerobic glycolysis, and R.Q. of normal skin epithelium and Shope papilloma. The values obtained for the two tissues were almost identical and very similar to the values for many squamous carcinomas quoted in the literature. It is concluded, therefore, that aerobic glycolysis and a low R.Q. of a glycolysing tissue are both normal physiological processes, and do not represent a pathological disturbance characteristic of tumor growth. References are furnished.


The author has studied the action on the Pasteur effect of guanidine and amidine derivatives, some of which King, Louie, and Yorke (Lancet 2: 1360, 1937) have shown to have powerful trypanocidal action. The following are his conclusions.
M/1000 guanidine completely and reversibly inhibits the Pasteur effect in slices of rat brain cortex, the respiration continuing usually at a higher level while the aerobic (lactic) acid formation attains or exceeds the anaerobic. Complete restoration occurs on transference to guanidine-free medium. These effects are absent or less marked in other tissues and cells (amnion, medulla of kidney, Jensen sarcoma, baker's yeast).

Methylguanidine acts like guanidine, but the dimethyl derivative shows little typical action.

Glycocyamine, arginine and creatine (10⁻⁸ M) are toxic.

Agmatine causes a slow inhibition of the Pasteur effect. Biuret, urea and acetamide have no action on respiration or glycolysis.

Certain substituted guanidines and amidines are the most powerful inhibitors of the Pasteur effect yet described. Both 1:11-undecanediadimidine and decamethylenedi-guanidine (synthalin) are fully active at concentrations of 10⁻⁴ — 10⁻⁶ M. Both are powerful trypanocides. This power of inhibiting the Pasteur effect, however, is not shared by all trypanocides since Bayer 205 and trypan blue do not effect brain metabolism. Decamethylenediisothiourea causes an incomplete inhibition of the Pasteur effect.

The bearing of the results on the mechanism of the Pasteur effect, and the possibility of their connection with tetany and specific antisepsis are discussed.

A. F. Watson

GENERAL CLINICAL OBSERVATIONS; MISCELLANEOUS CASE REPORTS


In the course of the numerous complex developmental processes in the human embryo involving the medullary or neural tube, the primitive intestinal tract, the notochord, and the cloaca, certain vestiges may persist into adult life and give rise to cysts of a single germ layer, tumors, or fistulae.

Two cases are here recorded of cysts of caudal duct origin in women of twenty-six and thirty-six years; one of a perineal cyst probably arising in vestiges of the cloacal membrane, in a twenty-three-year-old man; one of a cloacal membrane cyst in a woman of thirty-five, associated with a cyst probably originating in heterotopia of the ectoderm of the dermal cleft.

Two examples of lesions arising in the anal glands are also recorded—one a fistula and fissure in ano and the other a rectal ulcer.

Drawings illustrate the embryological development of the caudal region and photomicrographs accompany the case histories. References are appended.


A man of twenty-one had a cystic tumor at the lower end of the spine which had been present at birth and had gradually enlarged with the general bodily development. It was found on operation to be a sacroccygeal teratoma containing well formed bones of the forearm and hand, with nails on the terminal phalanges, as well as hair and sebaceous material. The patient made a good recovery.

The literature is reviewed and references are furnished. Photographs of the tumor and roentgenograms are included.


The author has previously described the clinical, developmental, and pathologic characteristics of fibrosarcoma of the extremities (see Absts. in Am. J. Cancer 24: 420, 1935; 35: 282, 1939). Here he devotes himself to an analysis of the late results in 20 cases for which adequate data are available. Nine of the patients died of neoplastic disease within a five-year period; 8 were alive without evidence of disease after five years. One patient died of bronchopneumonia four years after excision, without recurrence;
one died nine years following amputation, with roentgen evidence of pulmonary metastases, though the nature of these was not demonstrated microscopically; a third patient was alive after five years, having suffered repeated recurrences.

From his study of these cases and 4 others in which the five-year results were not yet available, the author concludes that the procedure of choice for any fibroblastic tumor of the extremities is complete surgical excision, including not only the visible tumor tissue but enough of the surrounding normal structure to make sure that there is no residue. When complete surgical excision is not anatomically feasible, amputation of the limb is imperative at the time the primary tumor is judged malignant by competent study of the gross specimens in situ and by microscopic study of adequate tissue. This is true regardless of the degree of malignancy as judged by the pathologist. It will be found that many fibrosarcomas of the deep fascial tissues of the thigh or fibrosarcomas originating in the periosteum of the femur fall within this category; that is, their complete surgical removal is difficult to assure. Amputation is imperative at the first sign of recurrence. Irradiation has not proved of value.


A man fifty-nine years of age had a tremendous enlargement of the entire left leg, which had been increasing for thirty-five years. When it ulcerated he came for treatment, an amputation was done, and a plexiform neuroma of the sciatic nerve and its branches was found, as well as a large diffuse fibrolipomatous tumor with sarcomatous degeneration. No follow-up is given, nor are there any illustrations.

Edward Herbert, Jr.


A sixteen-year-old boy complained of painful swellings of the left leg which had been present for some years. Examination revealed a fluctuant tumor on the lateral aspect of the knee and a swelling of the middle third of the lateral aspect of the thigh. After exercise these swellings were more pronounced and were tender. There was a smaller tumor in the left gluteal region. The tumors yielded pure blood on aspiration. They were clearly shown in roentgen films following the injection of a contrast medium.

The three tumors were removed at operation together with contiguous healthy muscle. The muscles involved were the gluteus maximus, vastus lateralis, and biceps femoris. Microscopic examination demonstrated the characteristics of a cavernous hemangioma. There were numerous tissue spaces lined with endothelium and filled with blood. Many histiocytes were present, containing hemosiderin. The angiomatous tissue was not sharply separated from the normal striated muscle. Roentgenograms and a photomicrograph are reproduced.

WM. Mendelsohn

DIAGNOSIS AND TREATMENT


A series of 130 cases was studied to determine the usefulness of a reaction employed by Bühne for the diagnosis of cancer, based on that of Lehmann-Facius and Nakagawa. This consists in an antigen-antibody reaction utilizing a phosphatide extract of carcinoma tissue which causes a heavy flocculation of the euglobulin of positive serums. A negative result is manifested by a fine flocculation or only uniform turbidity. A low euglobulin concentration in the serum, hemolysis, and jaundice are interference factors causing false reactions.

In 45 cases of known cancer without interference factors the test gave 80 per cent correct results. The results were also good in cases of recurrent malignancy. Cases of carcinoma with interference factors showed 27 per cent negative tests and a series of patients known to be free of cancer gave 32 false positives.
Correlating the findings for the entire series, the author found the test to be accurate in 77 per cent of the cases. He does not consider this to be good enough to warrant its routine employment in clinical practice.

**Value of Lactogelification of the Serum in the Diagnosis of Malignant Tumors, T. Anardi.** Il valore della lattogelificazione del siero per la diagnosi dei tumori maligni, Tumori 12: 120-138, 1938.

As has been demonstrated by a number of investigators, the lactogelification reaction of Kopaczewski (see Absts. in Am. J. Cancer 32: 296, 1938; 33: 587, 1938) proved valueless as a method of diagnosis of cancer.


Contrary to the experience of Rodewald (see Absts. in Am. J. Cancer 35: 585, 1939; 36: 317, 1939) the authors, using a more specific and sensitive technic, were unable to detect in cancer sera any inactivating influence on melanophore hormone.


By use of the Freund-Kaminer cytolytic test, studies (details not recorded in this paper) on the urinary content of organic acids, indican and skatoxyl, and the isolation of an abnormal strain of *B. coli* from the stool, the author asserts that he is able to demonstrate a general cancer disposition which may antedate by several years the clinical appearance of malignant disease. A number of case records are included.


There are today a number of rapid methods in use for the diagnosis of malignancy in biopsy material taken in the operating room. Each has its own limitations but none can compare with histologic preparations made by the paraffin or celloidin technic. If the clinical diagnosis does not agree with the rapid diagnosis, further study of permanent sections must be made. When the clinical diagnosis is carcinoma, the rapid method serves as additional corroborative evidence.

The author cites an example of radical mastectomy performed because of a mistaken "rapid" diagnosis of cancer. The permanent sections revealed a chronic cystic mastitis. [On the other hand, any pathologist can cite plenty of examples of mutilating surgery done on a mistaken clinical diagnosis of malignancy.—Ed.] WM. Mendelsohn


The value of roentgen therapy in the palliative treatment of advanced cancer is emphasized and records of 9 patients with advanced malignant growths are presented as examples.

F. Burgheim


The author supplements an earlier report (Tumori 11: 442, 1937. Abst. in Am. J. Cancer 33: 467, 1938). Interpretation of the results was rendered difficult by the great variation in each group of cases and in the individual urine samples examined twelve to forty-eight or more hours following treatment. The acid-base balance was determined...
by estimation of the pH of the urine, total acidity, and the excretion of free acid and acid valences combined with ammonia. The average values obtained in 42 patients receiving roentgen radiation or radium and in 10 treated surgically demonstrated an increased output of urinary acids following therapy. The results apparently denote a tendency to deviation of the acid-base equilibrium of the body toward greater alkalinity. 

MILTON J. EISEN


MILTON J. EISEN

THE SKIN


Originally palpebral epitheliomata were removed exclusively by surgery. Then radium and roentgen therapy were introduced with good results in certain cases. Unfortunately many unqualified physicians took up these methods, often with disastrous results. Three cases are reported in which, following such treatment, widespread invasion of the orbit and adjacent bones was found in conjunction with marked radionecrosis. Radical surgical removal was the only applicable form of therapy, and in each case, all in elderly persons, the results were good. The inevitable disfigurement from extensive loss of tissue was corrected by the use of a prosthesis with an excellent cosmetic result. There are two illustrations.

EDWARD HERBERT, JR.


A case is presented of a mixed type epithelioma on the back arising from the almost daily application of an ointment containing a high percentage of phenol and ergot, over a period of twenty years. The patient refused treatment either by irradiation or by excision. Photomicrographs are included.

THE ORAL CAVITY


A complete excision of the cervical nodes for secondary carcinoma was done in 31 patients, including 24 with carcinoma of the tongue and oral cavity, 3 with carcinoma of the branchial cleft, 3 with malignant pigmented mole, and 1 with cancer in lateral aberrant thyroid tissue. In each instance one or more nodes were palpable and the presence of cancer was confirmed microscopically. There were 3 operative deaths, all in patients receiving general anesthesia, a procedure which the author has now discarded as unsuitable for so prolonged an operation. In each of these cases the primary lesion was in the tongue. Of the remaining 13 patients with a primary lingual carcinoma, 4 were known to have died of cancer and 1 of pneumonia following excision of the primary growth; 8 were alive for periods varying from a few months to eleven years.

All 3 patients with the primary growth in the mucous membrane of the cheek survived for six years or longer. One died eight years and five months after operation but autopsy showed no evidence of cancer.

Two of the three patients with cancer of the lip died within a few months of operation; 1 was well three years later.
The 3 patients with carcinoma of the branchial cleft and the 3 with malignant pigmented mole all died of cancer within three years of excision of the cervical nodes. Of the other 3 patients, 2 with the primary lesion in the mucous membrane of the jaw died of cancer a few months after operation; the other, with carcinoma in aberrant thyroid tissue, was well after two years and eight months.

In some cases operation was supplemented by irradiation, but the author does not attempt to evaluate this procedure.

Drawings illustrate the operative technic.


A seventy-year-old woman was found to have a small tumor of the left lower jaw which she had noticed for the past eight months. For twenty years she had been aware of a small painless swelling in her neck, which was considered to be a goiter.

The roentgenogram revealed a destructive lesion in the ascending ramus of the lower jaw and operative removal was carried out. The soft tumor tissue was scooped out with a spoon. Microscopic sections disclosed a colloid tumor of the thyroid gland. In order to decide whether it was a malignant growth, the goiter was removed.

Histologic examination of the thyroid mass revealed a benign adenoma. The authors conclude that the thyroid adenoma was the primary tumor and that the lesion in the jaw was metastatic and benign. They were not able to find any other reports in the literature of thyroid metastasis to the mandible.

Roentgenograms and photomicrographs are reproduced. Wm. Mendelsohn


Mixed tumors are found for the most part in the parotid gland but occasionally appear in other regions and their presence should be considered in the differential diagnosis. A well encapsulated tumor was removed from the upper lip of a sixty-year-old woman. Histologic sections showed it to be a chondrofibroepithelioma, namely a mixed tumor. It probably arose from a misplaced remnant of salivary gland tissue.

Wm. Mendelsohn

THE SALIVARY GLANDS


The subject of cystadenomas or adenolymphomas of the salivary glands was reviewed in 1933 by Kraissl and Stout (Arch. Surg. 26: 485, 1933. Abst. in Am. J. Cancer 20: 192, 1934) and in 1935 by Carmichael, Davie, and Stewart (J. Path. & Bact. 40: 601, 1935. Abst. in Am. J. Cancer 25: 450, 1935), and several more recent cases have appeared. Another example is recorded here. The authors attribute the origin of these tumors to the branchial pouches. Photomicrographs and references are included.

THYROID AND PARATHYROID GLANDS


An analysis of the statistics in the literature reveals a substantial decrease in the incidence of malignant tumors of the thyroid gland after 1925. This reduction can be attributed to the increased number of operations performed for goiter before the ages of thirty-five and forty. Malignant tumors of the thyroid are rare and comprise only 0.4–0.5 per cent of all tumors. Where goiter is endemic, however, the figure is 2.5 to 4.0 per cent.

In the Budapest clinic with which the author is associated 17 of 19 malignant
thyroid tumors developed in a pre-existing goiter. He believes that it is extremely unusual for a malignant tumor to arise in normal thyroid tissue.

Early clinical recognition of malignant change is imperative. The presence of any one of the following signs or symptoms should arouse suspicion of malignancy: (1) rapid growth of a nodule in a goiter of long standing or the sudden appearance of a nodule in an enlarged thyroid; (2) rapid hardening of the thyroid, which can be differentiated from calcification by x-ray examination; (3) irregularity of the surface, though absence of this finding does not rule out malignancy; (4) radiating pain, involvement of the recurrent laryngeal nerve, and Horner's syndrome; (5) interference with swallowing and breathing; (6) generalized debilitation, cachexia; (7) increased sedimentation time.

Unequivocal evidence of malignancy is furnished by the presence of metastases in the skull, sternum, long bones and ribs, often causing spontaneous fractures. These metastases are able to produce thyroid hormone.

Tumors of the thyroid may be classified in three groups according to prognostic and therapeutic considerations.

(1) Those without evidence of malignancy. Adenomas belong to this group. Should they become malignant, operative removal followed by x-ray therapy results in 90 per cent cures.

(2) Those in which malignancy can be recognized by clinical signs and symptoms and which are operable. These are the adenocarcinomas. They are moderately sensitive to radiation. The mortality is 50 to 60 per cent.

(3) Inoperable growths—carcinomas and sarcomas. These tumors are resistant to x-ray therapy and the mortality is 100 per cent.

Of the 19 malignant tumors seen in the author's clinic, 5 belonged to Group 1, 4 to Group II, and 10 to Group III.

Brief abstracts of 12 cases are included, accompanied by photomicrographs. A bibliography is furnished.

Removal of a Parathyroid Tumor in Osteodystrophia Generalisata (Recklinghausen),


A fifty-eight-year-old man gave a long history of pain in the limbs, associated with generalized weakness. Because of this he fell frequently and finally sustained a fracture of the upper arm. He also had attacks of ureteral colic and complained of continued thirst and a marked diuresis.

A neurologic examination showed no abnormalities. X-ray films revealed a healing fracture of the upper arm with callus formation. The humerus and other long bones contained numerous cysts and a diagnosis of osteitis fibrosa was made. In the neck, close to the sternoclavicular joint, a small round tumor was palpated. As was expected, the blood calcium was high, 17.7 mg. per cent (normal 9-10 per cent). The blood phosphorus was also in excess of normal, 6.2 mg. per cent, which is unusual.

At operation the tumor was easily found, projecting down into the mediastinum. It weighed 15 gm. and proved to be a benign parathyroid adenoma.

In commenting on the etiology of hyperparathyroidism the author leans towards the theory of a general metabolic disturbance to which he also attributes hyperthyroidism; in this way the two syndromes are analogous. He believes that some stimulus causes a general metabolic disturbance and a tumor of the parathyroid results. Hyperthyroidism is explained as the result of overwork, psychic trauma, etc. The proper attack appears to be on the gland involved, which should be removed. But the all-important causative agent may still be present and recurrence is always to be feared.

The postoperative course in the case recorded was satisfactory. The blood calcium fell rapidly and in three days was 6.6 mg. per cent. Parathyroid hormone was administered to prevent tetany. The urinary function, which was poor before operation, improved slowly. After four months x-ray films of the long bones showed some healing with obliteration of many of the small cystic areas. The general condition was greatly improved.

The illustrations include photographs, roentgenograms, photomicrographs, and charts.

Wm. Mendelsohn
THE BREAST

CAROTID BODY TUMORS

Indication for Operation and Arteriography in Carotid Body Tumors, F. LICHTENAUER.


A twenty-three-year-old woman had a painless, firm tumor in the left side of the neck close to the angle of the jaw. It was considered to be a lymphoma and at operation proved to be intimately associated with the internal carotid artery. In order to remove the tumor the carotid artery would have to be sacrificed. A biopsy was taken and microscopic study revealed a benign carotid body tumor of the perithelioma type. Arteriography demonstrated that the internal carotid artery was not compromised. Inasmuch as the patient desired to be rid of the tumor for cosmetic reasons alone, its complete removal was not undertaken.

WM. MENDELSOHN


The author does not believe that the necessity of ligature of the carotid artery is a definite contraindication to the removal of a carotid body tumor (see preceding abstract). He cites a case in which, in removing a large tumor, the external carotid artery was ligated and then anastomosed in circular manner with the common carotid artery without complications. Later a small carotid body tumor was removed from the other side. If the ends of the severed arteries are too far apart a segment of the jugular vein is interposed.

WM. MENDELSOHN

THE BREAST


This review, based in part on the literature and in part on a series of 439 cases from the Guthrie Clinic (Sayre, Penn.), leads the author to the usual conclusions as to the incidence of breast carcinoma, its diagnosis, operability, and prognosis. References are included. There are no illustrations.


Some pathologists, even including Rokitansky, have denied the simultaneous occurrence of cancer and tuberculosis not only in a single organ but even in the same patient. This denial has stimulated the publication of a large number of microscopically proved examples during the past thirty years, to which the author adds another. The patient was a fifty-three-year-old woman with a tender mass in the upper outer quadrant of the left breast. The breast was removed and microscopic sections of the tumor revealed a picture typical of carcinoma and tuberculosis. A recurrence of the carcinoma took place after one and one-half years and the patient died seven months later. Photomicrographs are included.

WM. MENDELSOHN


A simple mastectomy was performed on a woman fifty years of age for a circumscribed tumor of the upper outer quadrant of the right breast, of four months' duration. Grossly it appeared benign but histologic examination by Askanazy showed it to be a fibromyxosarcoma in conjunction with an intracanalicular fibroadenoma. The patient was in perfect health eight years later. There are no illustrations.

EDWARD HERBERT, JR.
Case of Hemolymphangioma of the Breast, L. Bédard, M. Henry, and M. Dargent.

A girl twelve years old had a tumor of the left breast which had begun to develop seven years earlier. The mass, which was the size of a fist, was removed surgically and found to be a hemolymphangioma, an extremely rare tumor in this location. No follow-up is given. One photograph is included.

Edward Herbert, Jr.

INTRATHORACIC TUMORS


A large invasive tumor of the left posterior chest of a girl eight years of age was removed surgically, three ribs being resected in the process. Histologically it was a rhabdomyosarcoma. Four months later the patient showed beginning cachexia, but without localizing symptoms or signs. Radiotherapy was then given, but no further follow-up is reported. Two photographs and a roentgenogram are included.

Edward Herbert, Jr.


Two instances are reported of intracardiac invasion by neoplastic growth producing indisputable signs of valvular heart disease. In one a tumor of the lung, presumably a late metastasis from a tendon-sheath tumor, entered the left side of the heart by way of the pulmonary vein. In the other a uterine tumor had reached the heart by prolongation through the inferior vena cava and entered the right side. In both instances the tumor, unattached to the endocardium, extended through the auriculo-ventricular valve, seriously interfering with its functioning. In one case the classical signs of mitral stenosis were produced, while in the other the signs were interpreted as those of mitral insufficiency. References are appended.


A man forty-three years of age with a posterior mediastinal tumor was believed clinically to have a dermoid cyst. At operation the lesion was found to be solid and was thought to be a neurinoma. The patient died postoperatively of a left pneumothorax. Histologically the incompletely removed mass proved to be Hodgkin’s disease. According to Leriche, a clinical diagnosis of dermoid cyst is made too often in the presence of a mediastinal tumor. Of five similar cases which he studied only one was a dermoid cyst; one was a tumor of the heart, one a reticulum-cell sarcoma, one a myosarcoma, and one an aberrant goiter. Two roentgenograms are included.

Edward Herbert, Jr.

THE DIGESTIVE TRACT


After discussing the possibility of gastric cancer arising in an ulcer base and considering the criteria for diagnosis, the author reports a study of 1057 gastrectomy specimens from the pathological laboratories of the Mt. Sinai Hospital (New York City), of which 139 were classified as gastric ulcer and 344 as gastric carcinoma. A provisional diagnosis of ulcer carcinoma was rendered for 11 specimens and these were made the object of special investigation. Three were eliminated on a further study of the microscopic sections as failing to fulfill the accepted criteria for ulcer-carcinoma. Two of these were regarded as ulcerated carcinomas and the other as a chronic peptic ulcer with atypical hyperplasia of the mucous membrane.
The 8 remaining specimens were studied by a serial block method. Representative sections of each block were examined for the various features of carcinoma and ulcer. An outline drawing was then made of each microscopic section to show the distribution of the malignant growth. Finally, the entire lesion was reconstructed in the form of a composite relief drawing, thus demonstrating the extent of the tumor in relation to the ulcer's base, its margins, and the surrounding tissues. Only 2 of the 8 specimens met the requirements for a diagnosis of ulcer-carcinoma—namely, the presence of characteristic features of chronic peptic ulcer with localized areas of carcinoma in the ulcer margin and freedom of the base from malignant change. The author points out, however, that a precisely similar picture might conceivably be produced by either of two other processes, namely, the almost complete ulceration of a primary carcinoma and the independent occurrence of ulcer and carcinoma anatomically adjacent to one another, with subsequent fusion.

The two acceptable cases are recorded in detail, as are 3 others in which the diagnosis of cancer arising in a gastric ulcer was ruled out. Photographs, photomicrographs, and references are included.


This investigation is based on a study of 609 histologically proved examples of carcinoma of the stomach observed at the Surgical Clinic at Lund during the years 1924-1933.

In 489 cases (80 per cent of the total) there was no evidence from history, roentgen studies, or histologic reports of any previous ulcer of the stomach. These cases are therefore classified as showing no definite relationship between ulcer and gastric carcinoma.

The remaining 120 cases gave a history of dyspepsia, roentgen evidence of ulcer, or a histologic picture of ulcer. In this group, a diagnosis of "carcinomatous ulcer" could be assumed. In 69 of these cases, the symptoms of dyspepsia were not definite enough to postulate a previous ulcer. Twenty-eight patients gave unequivocal anamnestic evidence of a previous gastric ulcer, and in 18 cases there was additional evidence of ulcer, such as a niche or deformity in the roentgenogram, gastric bleeding, and perforation proved by operation. In the 5 remaining cases, the history of ulcer was short and atypical, but histopathologic studies proved that these cases could be included in this group.

After careful histologic examinations of all specimens there were only 9 cases of the total of 609 in which it could be definitely proved that a benign ulcer had degenerated into a carcinomatous ulcer. In 5 cases the x-ray films demonstrated the presence of an ulcer two to five years before a carcinoma developed in the same place.

WM. Mendelsohn


During ten years in the medical clinic at Lund 186 carcinomatous growths of the stomach were observed. The gastric contents were analyzed in 101 cases. Free hydrochloric acid was present in 34. After the injection of histamine, hydrochloric acid appeared in 7 cases and might have been demonstrable in 10 more had the fractionated test been performed in all instances.

A significant difference was noted between growths involving the pyloric region, 40 per cent of which showed hydrochloric acid, and growths restricted to the body of the stomach, in which it was present in only 4 per cent. The amount was in most instances moderate but occasionally fairly considerable. No connection could be discovered between the age of the patient and the occurrence of hydrochloric acid.

From a practical point of view it was concluded that the presence of free hydrochloric acid, even in considerable amounts, does not rule out the diagnosis of a malignant growth of the stomach, especially if the pyloric region is involved. WM. Mendelsohn

The title refers to urine changes demonstrable in patients with gastric cancer. The urinary volume, acidity, and chloride content were determined at six half-hour intervals after a test meal consisting of 500 c.c. unsweetened tea, meat, bread, egg yolk and salt. In normal persons or patients with non-neoplastic gastric disease a curve is obtained indicating an increase in urinary volume and decrease in acidity and salt output during gastric activity, with a return to normal values at the conclusion of the examination. In 39 of 41 cases of cancer the results were as follows: reduced urine quantity, greater excretion of chloride and a higher total acidity. The values showed little tendency to variation during the period of observation. The results are indicative of serious disturbances of gastric function, but are not necessarily pathognomonic of cancer. Since secretion of hydrochloric acid occurs in the fundus, normal urinary curves were obtained in 2 patients with cancer limited to the pyloric region. Milton J. Eisen


General remarks.


A seventy-four-year-old man with evidence of metastatic malignancy of the liver was found at autopsy to have an epidermoid carcinoma of the stomach. The normal liver structure was almost completely destroyed and replaced by tumor cells similar to those seen in the stomach. Photomicrographs and references are included.


The superiority of protracted fractional roentgen therapy in inoperable carcinoma of the stomach as compared with the single massive dose technic or even with the modified fractional method of Holfelder is pointed out. Daily doses of 200 r up to a total dose of 4000 r per field were administered through one to four fields with a filter of 1 mm. copper. Sixty per cent of the patients showed remarkable improvement in general condition even during treatment, and the average prolongation of life was three to four times greater than with the other methods mentioned. On the assumption that the blood serum may contain tumoricidal qualities during recovery, 100 c.c. of serum was obtained from each patient showing improvement, about six weeks after the last treatment, and injected at intervals subcutaneously or intramuscularly. In those patients in whom the combination of irradiation and blood injections was entirely ineffective, the persistent bleeding from the carcinoma is regarded as the main cause of the therapeutic failure. Hence the operative elimination of the tumor, as described by Westhues, is recommended. It should be preceded and followed by irradiation, the dose being half that mentioned above.

Four illustrations are included and references are appended. F. Burgheim


Jules Péan in 1879 was the first investigator to report an operation for resection of a carcinoma of the pylorus with end-to-end anastomosis (De l'ablation des tumeurs de l'estomac par la gastrectomie, Gaz. d. hôp., Paris 52: 473, 1879). His patient died on the fifth postoperative day and Péan expressed very little hope for the future of this procedure.

Ludwig Rydygier in 1880 reported the second case. His paper appeared in a Polish journal (Przegl. lek. 19: 637, 1880) and later was translated into German (Exirpation des karzinomatösen Pylorus, Deutsche Ztschr. f. Chir. 14: 252, 1881). The patient
lived only twelve hours but Rydygier expressed much optimism regarding the ultimate success of this operation.

It remained for Billroth in 1881 (Wien. med. Wchnschr. 31: 161, 1881), after a few years of experimentation, to work out the operation which bears his name today. His first case was successfully operated upon and from that time on modifications and improvements have been made. Each new change has been accompanied by a new name. But in the last analysis Billroth remains the pioneer in this field of surgery.

WM. MENDELSON


Sarcoma of the stomach is encountered much less frequently than carcinoma and comprises about one to two per cent of all malignant gastric tumors. Clinically it is impossible to differentiate the two.

A thirty-four-year-old woman in the third month of pregnancy was suddenly seized with generalized severe abdominal pain. A perforation of a gastric ulcer or rupture of a tubal pregnancy were considered and a laparotomy was performed. A large tumor situated along the lesser curvature of the stomach was found. In its substance was a small perforation. Because suture of the perforation was not feasible, a subtotal gastric resection was done. The uterus was opened and the fetus removed. The postoperative course was uneventful.

It is interesting to note that at operation the lesion was believed to be a carcinoma. Only after microscopic study did the diagnosis of round-cell sarcoma become apparent.

The prognosis in sarcoma of the stomach is better than in carcinoma; many cures have been reported, for two and one-half to fourteen years. The round-cell type, however, is most malignant. There is no tendency towards slow perforation because adhesions are seldom induced and the first episode is a frank perforation. Sometimes this is the only symptom.

WM. MENDELSON


The author tabulates 43 cases of adenoma of the stomach associated with pernicious anemia. A bibliography is included.

MILTON J. EISEN


A forty-six-year-old man who had suffered from mild gastric symptoms for ten years discovered a mass in the epigastrium and complained of a sense of pressure in that region. The preoperative diagnosis was gastric carcinoma. At operation a large solid tumor was found on the anterior surface of the stomach close to the pyloric region. A gastric resection was followed by recovery.

The tumor measured 10 x 7 x 5.5 cm. and was nodular and firm. Its external surface was covered with serosa. On opening the stomach the base of the growth was found to protrude slightly into the interior and to be covered with thin gastric mucosa. There was no ulceration. Microscopic studies showed a typical benign myoma.

Although myomas of the stomach are rare, they must be included in the differential diagnosis of lesions of the stomach. They may be external and polypoid. The polyps often enter the pyloric canal and cause acute obstruction. X-ray examination cannot always be relied upon for a correct diagnosis but operation, which is inevitable, discloses the true nature of the lesion. A photomicrograph is included.

WM. MENDELSON


A seventeen-year-old boy gave a history of vague abdominal pains since the age of one year. These were unrelated to the time of day or the food. Recently there had been loss of weight and strength. A small firm tumor was present in the upper abdomen.
On examination with a barium meal the tumor was seen to be attached to the stomach, which showed a small niche.

At operation the tumor was found in the posterior aspect of the stomach, adherent to the mesocolon. There was no regional node involvement. The clinical diagnosis was sarcoma and a subtotal gastric resection was performed.

On opening the removed stomach, no ulceration was found but merely a depression extending into the tumor mass and covered by gastric mucosa. A study of the microscopic preparations showed benign fibromyoma occurring in a diverticulum.

Had the author suspected the true nature of the tumor he would have merely performed a local excision. He stresses the importance of recognizing the existence of this rare type of tumor. Thus far only five cases of diverticular myoma have been reported in the literature (Cleve: Virchows Arch. f. path. Anat. 255: 373, 1925; Christeller: Centrallbl. f. allg. Path. u. path. Anat. 33: 175, 1922–23). Another case found on routine autopsy examination is also mentioned. The patient was a seventy-five-year-old woman who had died of cerebral thrombosis.

Roentgenograms and photographs of the gross specimen are included.

WM. MENDELSOHN


Three cases of Hodgkin's disease of the stomach are recorded. The clinical and roentgen diagnosis in cases of this type without peripheral lymph node involvement is inevitably cancer, and the Hodgkin's lesions are ascertained only after histologic study. The author's first patient was observed when moribund and intensely icteric. Autopsy disclosed diffuse submucous extension of Hodgkin's disease in the stomach with compression of the common bile-duct caused by involvement of the lymph nodes of the lesser omentum. In the second case an extensive tumor-like mass was present along the lesser curvature. Despite invasion of the regional lymph nodes the patient appeared symptom-free after radical resection of the stomach. The third patient died following the perforation of a large ulcerated gastric lesion which extended into the pancreas and liver. Infiltrations of Hodgkin's disease were also found in the paratracheal nodes.

MILTON J. EISEN


The author has collected a series of 16 cases of carcinoma of the duodenum based entirely on case records and autopsy reports. The tumors are grouped anatomically as (1) arising from the duodenal wall and possibly from the stomach; (2) arising from the extrahepatic bile passages; (3) arising from the pancreas. They are also classified according as they produced intestinal obstruction, intestinal ulceration, or biliary obstruction.

Short abstracts of the case records with autopsy findings are given. In addition, 4 cases of carcinoma of the papilla of Vater are reviewed with five photomicrographs depicting characteristic lesions. It is interesting that 2 of these cases gave no symptoms during life and were discovered only during routine autopsy examinations.

WM. MENDELSOHN


This is a single case report of a woman thirty-four years old, whose only complaint was increase in the size of the abdomen. A large movable tumor was palpable. At operation it was found to arise from the mesentery of the first portion of the jejunum. In order to remove it 95 cm. of the small intestine had to be resected. Microscopically the tumor was a pure fibroma. The patient was well six months later. One roentgenogram is included.

EDWARD HERBERT, JR.

This report is based on 45 necropsies in which unusual types of carcinoma of the large bowel were found. The symptoms presented by most of the patients were indistinguishable from those of other acute intra-abdominal conditions. Only 15 patients, or one third of the total number, presented a palpable mass in the abdomen on either rectal or abdominal examination. In about half the cases the patients were well developed and well nourished and appeared fairly healthy.

A number of representative examples are recorded. In four of these the disease took an acute fulminating course, with death a few days after the appearance of symptoms. Such patients die before metastases can develop. In a fifth case a carcinoma in the cecum had perforated into the stomach, producing a fistulous communication between these two organs. In another a carcinoma of the splenic flexure had perforated, producing a gastrocolic fistula. This patient had also widespread metastases to the liver, spleen, and thoracic duct. In two instances the bladder was invaded and urinary symptoms were prominent. The annular or constricting form of tumor was frequently encountered in this series. In one of these obstruction was caused by the lodgment of a foreign body at the site of the growth.

Metastases occurred in 16 cases, the liver being the principal organ involved. Two patients had independent carcinomas of the lung and ovary respectively. Twelve had single or multiple polyps of the large bowel.

There are no illustrations. Two references are appended.


There are many operations in use today for the treatment of rectal cancer. Each surgeon chooses certain ones which he adapts to his own needs in order to yield better results and lower mortality. The author employs two types of operative procedure: (1) sacral amputation of the rectum in cases of cancer that are within reach of the examining finger, with a double-barrel colostomy in the left lower quadrant; (2) the combined sacro-abdominal operation in cases in which the tumor cannot be palpated from below, with a single-barrel colostomy in the left lower quadrant from the proximal end of the resected bowel.

The artificial anus is made as small as possible, the ideal opening barely admitting the finger tip. The objective is to avoid the necessity of a colostomy bag. Instead, every effort is made, by means of diet and habit, to induce one bowel evacuation a day, a flat celluloid plate being worn over the artificial anus to prevent expulsion of feces at other times.

The mortality for both operations is 20 per cent. This figure is not high when one considers that 40 per cent of these patients are over sixty. Wm. Mendelsohn


This is a report, with autopsy findings, of a primary carcinoma of the hepatic ducts with metastases in the liver and regional lymph nodes. Cirrhosis of the liver was not present. A stone was found in the cystic duct but it seems unlikely that this played a causative role since there was no malignant change in its vicinity. A few references are appended. There are no illustrations.

Unusual Form of Primary Liver Tumor with Fatal Hemoperitoneum, E. Trizzino. Su una rara forma di cancro primitivo del fegato con emoperitoneo mortale, Tumori 12: 63-90, 1938.

A man aged sixty-seven died suddenly three days following the removal of 4500 c.c. of hemorrhagic ascitic fluid. Necropsy disclosed a primary multinodular liver cancer. Fatal intraperitoneal hemorrhage had resulted following necrosis and rupture of a super-
ficial tumor on the inferior surface of the organ. Histologically two distinct components were identified in the neoplasm: adenocarcinoma, probably of bile-duct origin, and solid cords of cells indicating a parenchymal type of tumor tissue. Photomicrographs and a bibliography are included.

MILTON J. EISEN

THE SUPRARENAL GLANDS


A fifty-year-old woman complained of weakness and attacks of precordial pain of a few years' duration. She was found to have a paroxysmal hypertension which at times reached 300 mm. Hg systolic. Examination disclosed a large tumor in the left hypochondriac region, which on pyelography was found to be compressing the left kidney. At operation a large retroperitoneal cystic mass weighing 2000 gm. was removed together with the adherent kidney. Histologic examination revealed a mixed tumor consisting of suprarenal medullary tissue (adrenalin-producing), or pheochromocytoma, and undifferentiated sympathetic ganglion tissue, or ganglioneuroma. The tumor is considered to be benign. Two years later the patient was in good health with no recurrence.

The author mentions C. H. Mayo (1927) as the first surgeon to have successfully operated on such a case. Brief abstracts of the 15 published cases are included.

WM. MENDELSOHN

THE FEMALE GENITAL TRACT


Taussig has made a microscopic study of 1271 lymph nodes associated with cancer of the uterine cervix or vulva. Except for 19 removed at autopsy, all were operative specimens. They belonged to five groups: the inguino-femoral lymph chain; the external iliac nodes; the obturator nodes; the hypogastric nodes; the ureteral nodes.

Microscopic studies were made of 864 specimens. Metastases were present in the nodes in 30 of 65 patients with vulvar carcinoma and were frequently multiple. The inguino-femoral chain was involved 40 times, 21 times on the right, 19 times on the left side. In only 5 instances were the deeper nodes involved; on the right side the external iliac twice, the obturator once; on the left side the external iliac and obturator each once. In 10 of the 30 cases with metastases, both sides were involved. In four of the more advanced cases the nodes were so firmly adherent to the wall of the femoral vessels that they could not be removed.

Of 90 patients with cervical carcinoma node metastases were found in 31. In 9 patients nodes on both sides were involved. The hypogastric group was the most frequent site of metastatic growth.

Other histologic findings in the nodes are also discussed. Follicle hyperplasia was relatively frequent in the inguino-femoral chain and in the unirradiated pelvic lymph nodes. In the external iliac group fatty infiltration was the usual picture. There was a striking absence of lymph follicles in those nodes that had been subjected to heavy pre-operative radiation, so that there is little doubt that follicles are destroyed by this treatment. Hyaline degeneration was frequent.

In 9 cases of cervical carcinoma endometriosis was found in at least one of the lymph nodes and in 3 of these there was associated ovarian endometriosis.

Photomicrographs and diagrammatic drawings are included and there is a bibliography.


In all cases of metrorrhagia or irregular vaginal bleeding the patient should be examined with the colposcope, and the Schiller test with Lugol's solution should be carried
out. If the results of either method are suspicious, a biopsy should be performed. In this way more early cases of carcinoma and more precancerous lesions of the cervix can be recognized. 

Edward Herbert, Jr.

In Which Stage Can Cervical Cancer be Diagnosed Clinically? H. Hinselmann.


As in previous papers (see, for example, Absts. in Am. J. Cancer 28: 206, 1936; 37: 623, 1939) the author outlines the possibility of early diagnosis of cervical cancer by the colposcopic method.

Milton J. Eisen


This report is based upon 676 cases of carcinoma of the cervix seen from July 1, 1931, to Jan. 1, 1938. Fifty-seven per cent were advanced carcinomas with parametrial thickening, 27 per cent were borderline cases with questionable parametrial involvement, and the remainder belonged to Groups I and II. Great stress has been placed on individualized treatment, taking into consideration not only the clinical grade and histologic type of the tumor, but also the patient’s age and general health, and other factors.

Seventy-six per cent of the patients were treated by a combination of roentgen and radium radiation, 10 per cent by roentgen rays alone, and 11 per cent by other methods; 3 per cent were untreated. The authors believe that almost any of the acceptable contemporary methods of radium and x-ray therapy administration will produce about the same number of five-year survivals; that today the small statistical differences in five-year results reported by various writers are due chiefly to the extent of the lesion when remedial measures are first instituted. All their patients have been followed. Of the 86 treated in 1932, 21 were still alive, a 24.5 per cent six-year survival. Two patients in this group died of other causes than cancer. Ninety-three patients were treated in 1933 and of these 22 were alive, a five-year survival rate of 23.6 per cent.

In this group also there were 2 deaths from other causes than cancer.

The following classification is suggested:

Group I. Any early lesion involving not more than one lip of the cervix or its equivalent.

Group II. Any lesion more extensive than Group I, up to complete involvement of the cervix but with no parametrical thickening.

Group III. Group II cases with questionable parametrical thickening.

Group IV. (a) All cases with definite parametrical thickening or definite bladder, bowel, or vaginal involvement. (b) Frozen pelvis, with or without remote metastasis. (c) With fistula.


Analysis of a composite group of cervical cancer patients from three different hospitals, without regard to the method of treatment, shows that of 197 who survived five years (a 23.6 per cent five-year survival rate), 78 per cent were alive after ten years (18.3 per cent ten-year survivals). In another group of 87 patients who lived five years, 20 per cent subsequently died of cancer. Forty-four of the five-year survivors lived thirteen years and none of these had died of cancer at the time of the report.


A general discussion based on an unstated number of personal cases. The incidence of involutional changes in the cervix and vagina after radiotherapy as given in the literature ranges from 8.6 to 36.5 per cent. In the authors' series it was much higher,
but no figure is given. The paper includes a discussion of the anatomical features, the evolution of the condition, the mechanism of the distortion, and the symptomatic treatment. There are no illustrations.

**Acetone in the Treatment of Metritis and Inoperable Cancers of the Cervix, E. Cabanes.**


The use of acetone in inoperable carcinoma of the cervix is valuable, not as a cure, but to stop bleeding and produce a smooth clean surface on the tumor, thus alleviating certain annoying symptoms.

**Analgesic Medication in Incurable Uterine Cancers; the Tolerance of the Body for Morphine, A. Binet.**


An elementary discussion, containing nothing new.

**Carcinoma of the Cervix During Pregnancy, S. Goldstein.**


A woman of twenty-two in her first pregnancy was found to have a tumor attached to the anterior lip of the cervix. This was removed with the actual cautery and a week later a macerated fetus was spontaneously delivered. About three weeks after the operation the patient was given a course of x-ray therapy and three months later, though there was no evidence of recurrence, she was treated by radium, 3600 mg. hrs. She was well at the time of the report but this was less than a year after the removal of the tumor. It was an adenocarcinoma of embryonic type. A photomicrograph is included.

**Cancer of the Cervix and Pregnancy, P. Ingelrans and G. Patoir.**


This is a brief report of a woman thirty years of age who developed a cervical carcinoma during the fourth month of pregnancy. A total hysterectomy was done with excellent immediate results.

**Cancer of the Cervix and Pregnancy, L. Gernez.**


A woman seven months pregnant came for treatment of an advanced cervical carcinoma, the first symptoms of which occurred during the third month, but were ignored. A cesarean section and subtotal hysterectomy were performed, followed by radium and roentgen therapy. The patient died nineteen months later.

**Vaginal Metastases from a Previously Operated Carcinoma of the Body of the Uterus, E. Delannoy, J. Driessens, and R. Démarez.**


This is a report of a carcinoma of the body of the uterus treated by subtotal hysterectomy. The tumor recurred one year later in the cervical stump and in the wall of the vagina. The patient, who was fifty-three years old, died following an attempted radical resection of the recurrent tumor.

**Bony Metastases from Uterine Cancer, P. Meyer.**


This is a report of two cases, one of a carcinoma of the body of the uterus treated by total hysterectomy with subsequent spontaneous fracture from a metastasis to the
upper portion of the left femur; the other an inoperable carcinoma of the cervix treated by radium therapy, with metastasis to the fourth lumbar vertebra three years later. Skeletal metastases are found in from 10 to 20 per cent of cases of uterine carcinoma.

**Edward Herbert, Jr.**


A woman thirty-two years of age, pregnant for the third time, had uterine hemorrhages and later passed a mole weighing 1515 gm. The quantitative Aschheim-Zondek reaction remained positive, bleeding continued, and the uterus did not return to normal. A total hysterectomy was therefore performed and a chorionepithelioma was found. The patient was well nine months later. There are no illustrations.

**Edward Herbert, Jr.**

**Endometrial Hyperplasia (Puberty), Adenocarcinoma, Fifteen Years’ Follow-up, V. P. Maezola.** Am. J. Obst. & Gynec. 36: 698–701, 1938.

A girl of eighteen was first seen in December 1923 complaining of excessive uterine bleeding. Curettage was done and 50 mg. of radium inserted for eight hours. The diagnosis was endometrial hyperplasia. Relief was only temporary and a second curettage was done the following August, with a second insertion of radium (400 mg. hrs.). For several years following this menstruation was irregular but not excessive and the patient was not again admitted until January 1929, when she complained of profuse bleeding for the past year. Again she was curetted and again radium was implanted for 400 mg. hrs. Microscopic examination continued to show merely endometrial hyperplasia. Excessive bleeding recurred and in April 1929 the patient received 4 roentgen treatments (300 r). In 1933 she had two roentgen treatments (350 r) and in October 1935 was again admitted to the hospital. Curettage now revealed an endometrial polyp with secondary adenocarcinoma. Four roentgen treatments (600 r) were given and a year later a panhysterectomy was done, though symptoms had not recurred. The patient was well at the time of the report, about a year after hysterectomy. Photomicrographs are included and a few references are appended.

**Edward Herbert, Jr.**


This is a single case report as described in the title. The unusual features were that the tumor was 60 cm. in diameter, had undergone torsion, and was filled with seven liters of hemorrhagic fluid. The walls of the cyst were very thin and adherent to the adjacent structures, thus simulating ascites. There are no illustrations.

**Edward Herbert, Jr.**

**Fibroma Treated by Radium, with Subsequent Normal Pregnancy, E. Wallon.** Fibrome traité par curiethérapie; grossesse normale consécutive, Bull. Soc. d'obst. et de gynéc. 26: 143–147, 1937.

A woman thirty-one years of age who complained of severe menorrhagia was found to have a fibroid uterus. Intrauterine radium treatment was given with disappearance of the tumor and restoration of the normal menses. Eighteen months later the patient became pregnant and at term went through a normal delivery. No further follow-up is given.

**Edward Herbert, Jr.**

Two cases are reported of women of thirty-seven on whom myomectomies were done with cesarean section. In one the fibroid was a purely accidental finding, in the other it was causing the dystocia which necessitated operation. Edward Herbert, Jr.


A woman thirty-four years of age was delivered by cesarean section because of a large fibroid occupying the lower segment of the uterus. At the time of operation this fibroid as well as five smaller ones were enucleated. The postoperative course was uneventful. A photograph of the surgical specimens is included. Edward Herbert, Jr.


This is an unillustrated case report amply described by the title. Edward Herbert, Jr.


After normal delivery of her sixth child a woman of thirty-six had a severe hemorrhage and two days later developed complete urinary retention. During her efforts to overcome this she passed per vaginam a tumor the size of a fetal head. Presumably it was a submucous fibroma which had caused the hemorrhage when it became detached. There are no illustrations. Edward Herbert, Jr.


Two tumors of the vesico-uterine pouch are briefly reported. One was a spindle-cell sarcoma, the other an edematous fibroma. Edward Herbert, Jr.


Nine cases of adenoma of Gartner’s duct were found in the literature and an additional case is briefly reported. The only clinical history is that an erosion suggestive of malignancy was found in a woman thirty-seven years of age. Biopsy showed an adenoma of Gartner’s duct. A vaginal hysterectomy was performed and examination of the surgical specimen confirmed the diagnosis. The tumor was bilateral and without evidence of malignancy. There are no illustrations. Edward Herbert, Jr.


Analyzing a series of 1101 cases of ovarian tumor, the author found 103 in which the preoperative diagnosis was appendicitis. In 45 patients whose condition was diagnosed as chronic appendicitis no pathologic change was found in the appendix to warrant this diagnosis. In 58 patients whose condition was diagnosed as acute appendicitis, only 4 appendiceal lesions were found indicating operation. The total diagnostic error, therefore, was 96 per cent. In only 14 per cent of the cases were the operative findings such as to warrant surgical intervention.

A woman forty years of age with a three months' history of abdominal pain was found at operation to have bilateral ovarian tumors, the one on the left invading the sigmoid, as well as numerous hepatic metastases. Biopsy showed a wolffian carcinoma. There are no illustrations.

Edward Herbert, Jr.


The significant findings in 79 cases of ovarian dysgerminoma from the literature are summarized in table form and 19 examples from the records of the Surgical Pathologic Laboratory at Johns Hopkins Hospital and University are added. Brief histories of these latter cases are included. The author has found histologic differentiation between the benign and malignant forms impossible. On the basis of 50 recorded cases with follow-up reports and 17 of his own series of 19 cases, he places the mortality between 35 and 60 per cent. The actual figures for his own series are 7 deaths and 6 five-year cures; with 4 patients well after less than five years and 2 untraced. The treatment of choice is removal of the tumor and the affected tube and ovary only. Recurrences and metastases are best treated by excision and roentgen therapy, although in one case the tumor was successfully treated by roentgen therapy alone. In cases in which removal of the mass is impossible the patients should be given the benefit of irradiation. Twelve photomicrographs are reproduced and a bibliography is appended.


The authors tabulate the hormone studies on ovarian dysgerminomas reported by various workers to date and report a case in a sixteen-year-old colored girl, in which extracts of the tumor tissue were assayed for estrogenic and gonadotropic hormones. The former was absent altogether but a total of 60 rat units of the pituitary hormone (prolan A) was found to be present in the tumor.

References are appended and there are photomicrographs of the tumor which replaced the right ovary and of a tumor nodule on the left ovary.


An ovarian tumor removed from a fifty-nine-year-old woman was composed of broad bundles of xanthofibromatous tissue with focal masses of granulosa cells of diffuse trabecular type. On staining with Sudan III the granulosa cells exhibited pseudoluteinization of slight to moderate degree. The fibromatoid tissue for the greater part showed intensive cytoplasmic accumulation of fine lipid droplets. Where the fibromatoid tissue surrounded focal masses of granulosa cells, the peri-epithelial sudanophilic reaction was greatest. This process is strikingly analogous to the maturing normal follicle prior to rupture, when only feeble luteinization of the granulosa cells is present in contrast to the abundant lipid deposition of the theca interna.

The authors believe that this case lends support to the theory that both the theca and granulosa cells have a common origin in the ovarian mesenchyme and that it bridges the gap between the so-called thecoma, or fibroma thecocellulare xanthomatodes ovarii, and the granulosa-cell or lipid folliculoma of Lecène, linking those tumors which exhibit similar biologic properties into one group originating from a common type cell of the ovarian mesenchyme, the progranulosa cell.

Photomicrographs are reproduced and references are appended.


Twenty-two cases of theca-cell tumor of the ovary were found in the literature and an additional example is reported here. A woman forty-seven years of age, who com-
plained of pelvic pressure, was found to have a firm tumor of the right lower abdomen. This was removed at operation and grossly resembled a fibroma of the right ovary. There was no ascites. Microscopic examination showed a tumor of the theca interna of the ovary, corresponding to the tumors described in 1932 by Löffler and Priesel and called by them "fibroma thecocellulare xanthomatodes ovarii" (Beitr. z. path. Anat. u. z. allg. Path. 90: 199, 1932. Abst. in Am. J. Cancer 27: 623, 1936). It contained no estrogenic hormone on analysis, but the uterine endometrium was not examined. The patient had undergone an early menopause, at the age of forty-one. There are no illustrations.

EDWARD HERBERT, JR.


A woman sixty-eight years of age complained of metrorrhagia of three years' duration and of increasing severity. The menopause had occurred uneventfully at the age of fifty-four. The uterus was enlarged and curettage showed cystic and glandular hyperplasia. Tumors were felt in both fornices. At operation a serous cyst of the right ovary was removed as well as a solid tumor of the left ovary measuring 3.5 × 2.5 × 2.5 cm. Microscopically this solid tumor was a theca-cell tumor, extremely vascular and containing many lipoid granules. The excretion of folliculin by the tumor is attested to by the extreme hyperplasia of the endometrium. This is considered a more reliable criterion by the authors than a quantitative estimation of the folliculin in the urine. Three photomicrographs and one drawing are included.

EDWARD HERBERT, JR.


A case of granulosa-cell tumor of the ovary in a five-year-old girl is reported. As in other recorded cases there was an acceleration of skeletal growth, with development of secondary sex characteristics and vaginal bleeding. Following removal of the ovary the vaginal discharge ceased, the pubic hair disappeared, the hypertrophied breasts regressed, and the childhood type of body configuration was restored.

Up to February 1936, 8 examples of granulosa-cell tumors had been reported in children under ten years of age. The authors saw 5 cases of the tumor in eight years, including the one described here. Their other patients were women of thirty-five to sixty-four.

Photographs of the patient and photomicrographs of the tumor are included. There is no bibliography.


A woman of thirty-six had had periods of amenorrhea for nine years followed by irregular and excessive bleeding. At operation the right ovary was found to be entirely replaced by a granulosa-cell tumor of the folliculoma type. This was removed but bleeding persisted until it was controlled by injections of a luteinizing hormone. Four months after operation the patient married and three months later was pregnant. The author mentions 2 other cases in which pregnancy followed the removal of a granulosa-cell tumor, one in Schulze's series and one recorded by Klaften (see Abst. in Am. J. Cancer 19: 749, 1933; 22: 737, 1934). Two photomicrographs and a number of references are included.


A nineteen-year-old Italian girl complained of a change in menstrual frequency, attacks of abdominal pain associated with the last three periods, and a small mass in the lower abdomen. A masculine distribution of hair and husky voice suggested a virilizing neoplasm, but these appear to have been familial traits and, furthermore, antedated the appearance of the tumor by several years. Adiposity was not present; the breasts were small, and the clitoris was not enlarged.
A cyst of the right ovary was removed and postoperative irradiation was advised but refused. The cyst wall showed endometrial glands and stroma, with islands of tubular growth resembling uterine carcinoma and other areas showing carcinosarcoma such as occurs in the uterine mucosa. Pain and abdominal enlargement brought the patient back to the hospital some four and a half months after her first discharge, and a second operation revealed a recurrent spindle-cell sarcoma. Death occurred a few weeks later but autopsy was not permitted.

Photomicrographs are reproduced and references are given.

Two Cases of Severe Dystocia Caused by Ovarian Tumors, One Solid, the Other Cystic, VERDEUIL. Deux cas de dystocie grave par tumeurs ovariennes, l'une solide, l'autre kystique, Bull. Soc. d'obst. et de gynéc. 26: 171–172, 1937.

Two cases of dystocia are reported in women thirty-six and twenty-six years of age. The first was caused by a cyst which was aspirated and subsequently removed after delivery. In the second case the tumor was a solid carcinoma necessitating a cesarean section with removal of the tumor. This patient died of postoperative shock.

EDWARD HERBERT, JR.


A woman thirty-two years of age was operated on three weeks before term for a supposed appendicitis. At operation there was found a fibroma of the ovary which had undergone torsion. It was removed and on the sixteenth postoperative day the patient went into labor and had a normal delivery. There are no illustrations.

EDWARD HERBERT, JR.


This is a report of bilateral multilocular pseudomucinous ovarian cystadenomas in a patient who had also a pituitary type of obesity. She weighed 409 pounds. Because of her critical condition immediate removal of the cysts was regarded as out of the question and abdominal paracentesis was done, three gallons of fluid being removed; ten days later two and one-half gallons more were withdrawn and sixteen days after this a laparotomy was performed. Two gallons of fluid were withdrawn from the left ovarian cyst and bilateral ovariectomy was done. The patient made a good recovery.

Abdominal Pregnancy Asymptomatic for Twenty-two Years; Removal of Fetal Skeleton during Operation for Ovarian Tumor, LACOUTURE AND DARMAILACQ. Sur un cas de grossesse abdominale, tolérée pendant 22 ans; ablation au cours d'une laparotomie pour tumeur de l'ovaire, Bull. Soc. d'obst. et de gynéc. 26: 56–57, 1937.

A woman thirty-one years of age had a second pregnancy, the first having been normal, which apparently terminated without delivery or symptoms during the seventh month. She remained well until twenty-two years later, when she was operated on for metrorrhagia of two months' duration. Operation revealed a cystic carcinoma of the ovary with ascites, as well as remnants of the skeleton of a fetus in the pouch of Douglas. The fetal soft parts apparently had been absorbed and not calcified in the usual way. In addition the uterus contained fibroids and endometrial polyps. There are no illustrations.

EDWARD HERBERT, JR.


A melanotic tumor of the vulva in a woman of seventy-six was treated by the insertion of radium needles and later by cautery excision, for palliation. Autopsy revealed metastases in the inguinal nodes, lungs, stomach, and pancreas. A photograph of the tumor and a photomicrograph are included.
ABSTRACTS


A cyst of considerable size, of a year's duration, was removed from the region of the clitoris of a woman forty-five years old. The contents were hemorrhagic and the wall was fibrous without an epithelial lining. It is believed that the lesion was the result of an original hematoma and that these rare cysts of the clitoris are not true cysts, but traumatic in origin. One photograph is included.

EDWARD HERBERT, JR.

THE GENITO-URINARY TRACT


A man of seventy-two with a history of hematuria and other urinary symptoms was found on cystoscopic examination to have an incrusted tumor of the urinary bladder with obstruction of the bladder neck and stricture of the urethra. Suprapubic drainage of the bladder gave some relief but death ensued after a short time. At autopsy the bladder tumor was found to be a diffuse infiltrative myoblastic sarcoma with metastases to the periaortic and abdominal lymph nodes, the lungs, liver, right suprarenal gland, and the spinal column. Microscopic examination showed myoblasts of various kinds including spindle-shaped cells, polymorphous cells, and hypertrophied forms, some of great size. Fine longitudinal fibrils were demonstrated in some of the spindle cells and in the hypertrophied myoblasts. No cross-striations were observed.

Photomicrographs of the primary tumor and of the metastases are included. References are furnished.


A sixty-six-year-old man was found to have a large tumor occupying the left acrotal sac. A swelling had been present for the past twenty-five years but more recently it had increased rapidly in size and caused pain. On removal, the tumor weighed 85 gm. and measured 20 × 20 × 10 cm. It proved to be a cystic mass, containing much cellular debris and fluid. Microscopic examination showed it to be a benign testicular adenoma with necrosis of the central portion. Most benign testicular tumors are small and a sudden access of growth usually denotes the development of malignancy. The tumor described here, however, showed no evidence of malignant change.

Photomicrographs are included. There is no bibliography.

WM. MENDELSOHN

THE NERVOUS SYSTEM


This appears to be a study in physiological optics and is a preliminary report of work in progress. Upon the basis of observations of some 50 patients, the writers believe that tests of the refractory periods of eyes to light are of clinical value in the localization of cerebral diseases.

EDWIN M. DEERY


A case history is presented which opens up the question of the relationship between injury and the development of a brain tumor. A twenty-seven-year-old farm hand during childhood had sustained an injury of the left temporal region without fracture of the skull. The large wound of the soft parts healed and a firm scar remained. The present illness followed a fall from a horse in which the left temporal region was again struck. The patient gradually recovered consciousness but continued to be mentally
confused. Meanwhile a small soft tumor was discovered under the old temporal scar. A neurologic examination revealed no unusual findings. An x-ray film showed evidence of a soft part shadow and a rarefaction of the temporal bone. The soft part tumor subsequently increased in size and aspiration demonstrated that it was not a hematoma.

At operation the tumor was found to have penetrated through the skull and involved the dura, encroaching on the speech area of the brain. The tumor was removed. It was soft and friable and proved to be a mesenchymal sarcoma arising in the dura. The postoperative course was satisfactory.

The author can see no causal relationship between the injury and this tumor. The fall probably precipitated a sudden increase in the intracranial pressure which resulted in unconsciousness and thereby directed the physician's interest to an examination of the head.

Wm. Mendelsohn


A case report with carefully presented clinical and necropsy findings. The post-mortem findings were as follows: (1) a large meningioma of the right optic nerve sheath; (2) atrophy of the right optic nerve; (3) areas of calcification within the dura; (4) degeneration of thalamo-cortical nerve fibers; (5) softening of the left thalamus.

Edwin M. Deery


A report of a meningeal tumor in the foramen magnum. Removal of the lesion was followed by satisfactory recovery. The writers record all the clinical signs and symptoms, but believe that a "diagnostic syndrome" for tumors at this location is not yet established.

Edwin M. Deery


Two personal case reports of tumor in the foramen magnum causing unilateral astereognosis are given, together with six others from the literature. The sensory losses in such cases are confined to stereognosis, position sense, and two point discrimination. The tumor probably interferes with the blood supply to the posterior columns and their nuclei.

Edwin M. Deery


Three examples of malignant tumor of the third ventricle are recorded. All three patients showed mild increase in intracranial pressure, hypothalamic signs and symptoms, and variable mental symptoms. In none was it possible to make a correct diagnosis before death. Brain tumor, encephalitis periaxialis, and epidemic encephalitis were considered possibilities. All three tumors were verified at necropsy. They were composed of immature, undifferentiated cells, as shown in the photomicrographs, and in none did the histopathological findings make it possible to classify the tumor definitely among the currently accepted glioma types.

Edwin M. Deery


A forty-one-year-old woman had a hemangioblastoma of the cerebellum removed. The tumor was unusually vascular and the vessels feeding it were greatly dilated. The tumor measured 4 cm. in its longest diameter.
According to Cushing and Olivecrona, the angiomas comprise 3 per cent of all cranial tumors. They occur almost exclusively in the cerebellum and rarely in the spinal cord. Usually they are cystic, due to transudation through the dilated blood vessels. Pure solid angiomas such as the one reported in this paper are extremely rare. Cushing found only 4 solid tumors in his series of 16 cases (Cushing and Bailey: Tumors Arising from the Blood-vessels of the Brain, Springfield, Ill., Thomas, 1928).

In Lindau’s and von Hippel’s syndrome there is an associated angiomatosis in the retina and other organs, but this association of a cerebellar angioma and generalized angiomatosis is rare. The author agrees with Cushing, who states that the angioma of the cerebellum shows the same relationship to Lindau’s disease as the acoustic neurinoma does to von Recklinghausen’s neurofibromatosis.

The prognosis in cases of cerebellar angioma is excellent. Six months after operation the author’s patient was well enough to return to her work as a secretary.

WM. MENDELSOHN


A brief survey is given of 11 cases of tumor of the sellar region. The growths presumably were not of hypophyseal origin and endocrine dysfunction was uniformly absent. Diagnosis was established by clinical and roentgen evidence. There is no record of biopsy or necropsy. No characteristic symptomatology was observed, and not uncommonly the presence of relatively large tumors without localizing signs was revealed radiographically by evidence of abnormalities in the outline or size of the sella turcica and sphenoidal sinuses or of destruction of the clinoid processes. Visual disturbances occurred in 4 cases and were manifested as bitemporal hemianopsia or temporal quadrantanopsia or by loss of temporal vision in one eye and almost total blindness on the opposite side. Unilateral or bilateral exophthalmos may be present. Roentgen therapy was utilized, and it is stated that satisfactory results were obtained, but details are not given.

MILTON J. EISEN


Most observers believe that v. Recklinghausen’s neurofibromatosis and Verocay’s neurinomas are variations of the same constitutional affection. The neurinomas tend to occur as solitary tumors and are usually situated in the central nervous system, as the cerebellopontine angle or acoustic neurinoma. Neurofibromatosis is characterized by a peripheral distribution of multiple tumors originating usually in the extremities. The tumors develop from the cells of the sheath of Schwann. This explains why such tumors are never found in nerves which have no neurolemma, as the olfactory and optic nerves and the central portion of the acoustic nerve. In the neurinomas all the cells are derived from sheath cells; the multiple tumors of neurofibromatosis show variations from pure sheath-cell tumors to fibromas. The neurinomas never become malignant while of the neurofibromatoses 10 to 15 per cent show sarcomatous alteration. This is hastened by injury and sometimes by operative removal.

The author reports 4 cases. The patients were a woman with a large retroperitoneal solitary neurinoma and a mother and two daughters with multiple neurinomas.

WM. MENDELSOHN

Bone Tumors


The author presents abstracts of 4 cases accompanied by x-ray films which illustrate the difficulties in the differential diagnosis of bone tumors. In each case the correct diagnosis was made only after biopsy and microscopic study.  

WM. MENDELSOHN

This is a rather general discussion of giant-cell tumors of bone. The authors are inclined to accept a traumatic origin for these lesions. Malignant transformation may occur but the resulting sarcoma is wholly distinct from osteogenic sarcoma in the usually accepted sense of that term. There is no tendency to form bone, cartilage, or osteoid tissue. (In this connection see Stewart, Coley, and Farrow: Am. J. Path. 14: 515, 1938. Abst. in Am. J. Cancer 38: 315, 1940).

The authors consider surgery the method of choice for accessible tumors, irradiation being reserved for inaccessible lesions and far advanced cases. The results in a series of 124 cases are recorded: 35 were treated by surgery alone, with "excellent results" in 57 per cent; 53 by radiation alone, with "excellent results" in 34 per cent; 34 by surgery and radiation combined, with excellent results in 22 per cent; 2 by Coley's toxins, with excellent results in 1. Seventeen per cent of the cases treated by surgery alone and 17 per cent of those treated by radiation alone later came to amputation, while in the group treated by radiation and surgery combined, this drastic operation was required in 37 per cent.

A long bibliography is appended.


The histories of two patients twenty-six and thirty years of age are recorded. One complained of severe pain in the wrist and the other of pain in the hip. There was no previous history of trauma or tuberculous infection. The x-ray films showed involvement of the unciform bone and of the neck of the femur and a diagnosis of tuberculosis was made.

The lesions were so close to the joints that operation was undertaken in order to prevent further disability. In both cases small brown tumors were completely removed and recognized as giant-cell tumors.

These tumors are believed to have their origin from an embryonic mesenchymal rest. They are benign and do not require postoperative irradiation. In the cases here recorded there was an excellent functional as well as anatomical result.

WM. MENDELSOHN


The introduction of free bone transplants by Lexer makes amputation and disarticulation unnecessary in many cases of bone sarcoma. The author reports 3 of his cases.

A seventeen-year-old girl was found to have a sarcoma of the femur close to the knee. The lower end of the femur and the upper ends of the tibia and fibula were removed together with the sarcoma and surrounding muscle. A free transplant of 23 cm. of tibia was inserted but failed to show union. Another 20 cm. transplant of tibia was successfully inserted and x-ray therapy was given. In spite of marked bowing of the femur a good functional result was obtained. The patient is without recurrence after three and one half years.

The second patient was a fourteen-year-old boy with a periosteal sarcoma of the lower end of the radius. The tumor and a wide margin of healthy bone were resected and a transplant inserted. Although good healing resulted, the ulna was found to be destroyed by a recurrence eighteen months later. This situation is one that demands amputation.

The third patient was a young man who had a myxochondroma of the lateral malleolus. This was resected and a bone graft inserted. Good healing followed and after five years no recurrence has taken place.

[See following abstract.] WM. MENDELSOHN
Remarks on Noetzel's Paper "Treatment of Bone Sarcoma of the Extremities,"


Hellner, who believes that experience dictates the necessity of radical surgery in the treatment of bone sarcoma of the extremities, criticizes Noetzel's conclusions regarding the advisability of attempting conservative treatment (see preceding abstract). The first case outlined by Noetzel, in which no histologic examination is reported, appears clinically to have been a giant-cell sarcoma. Curettement and resection are accepted methods of treatment of this condition. In the second case Noetzel's method was unsuccessful and it was necessary to resort to amputation. The third patient had a benign tumor acknowledged as amenable to conservative measures.

Noetzel's concluding remarks offer no additional proof in support of his original concept.

Milton J. Eisen


In 1930 Bucy and Capp (Am. J. Roentgenol. 23: 1, 1930) collected from the literature 47 examples of primary hemangioma of bone, of which 11 arose in the extremities. The authors have found 16 more recent cases of bone hemangioma, but in none of these was there primary involvement of the extremities. They themselves record 4 cases in patients eight, ten, eleven and twenty years of age: a capillary hemangioma, a cavernous hemangioma, an angioblastoma of the arm, and a malignant angioma of the ankle with death from metastases.

Three of the authors' four patients gave a history of trauma,—two had had pathological fractures and the third had sustained a crushing injury. The roentgen findings resembled those of bone cyst or giant-cell tumor, but the lesions tend to be progressive and may be more extensive than in these other conditions. Locules when present are smaller than those of benign giant-cell tumor or benign bone cyst, and are bordered by a much heavier framework of osseous tissue. The microscopic findings are described and photomicrographs are reproduced. Irradiation is said to be the treatment of choice, though the only one of the authors' patients in which this was tried failed to respond favorably.

A long bibliography is appended.


A twenty-eight-year-old woman complained of a painless and insensitive swelling on the medial aspect of the left knee. It had been present for eight years and had grown rapidly in the last few months. There was no history of trauma.

Examination revealed a soft mass fixed to the underlying tissues. At operation the entire tumor was shelled out intact. It was found to be cystic and to contain old clotted blood. Microscopic sections disclosed what appeared to be a sarcomatous growth with a xanthomatous or lipoid capsule. The presence of numerous blood vessels favored a diagnosis of angiosarcoma or hemangiosarcoma.

At the time of the report the patient was in good health, without local recurrence or inguinal node involvement. She now had a similar but much smaller swelling on the lateral aspect of the left knee, but would not submit to any operative procedure to determine its nature.

The microscopic sections were again studied and the diagnosis altered to conform with the fact that the patient had remained free of recurrence. It was concluded that the tumor arose from a bursa and developed as a result of an abnormal local disturbance of lipoid metabolism. The absence of typical giant cells does not necessarily indicate
malignancy. It is important to be able to recognize this type of tumor because it is benign but is easily confused with a malignant sarcoma.

A photomicrograph is reproduced. Wm. Mendelsohn


During the second year of life, the patient was treated by application of a plaster cast for knock knees, and later a brace was worn. In 1931, at the age of eight years, he was placed under the care of the author. The boy was mentally well developed but there was so pronounced a genu valgum as to interfere with walking. The skull was larger than normal. The blood calcium was between 11.2 and 12.4 mg. per cent. Operation for a possible parathyroid tumor was refused.

Two years later the patient was much worse, having developed a scoliosis. The skull now measured 57 cm. in circumference. Two parathyroid glands on the right side and one on the left side were removed. One of these was slightly enlarged. Microscopic examination failed to demonstrate any adenoma. Symptoms of tetany did not occur postoperatively, but the patient was not improved. A few months later an osteotomy was done and the left femur straightened. However, two years later the deformity had recurred in a more advanced stage and there was a spontaneous fracture of the right femur.

The patient was examined again in 1936. The skull now measured 60 cm. and the blood calcium was 12.5 mg. per cent. Mental development had continued and was better than in the average boy of his age. Another exploration of the neck was undertaken and a slightly enlarged parathyroid was removed and the inferior thyroid arteries were ligated. Biopsy was taken of an enlarged thymus but revealed nothing remarkable. No tetany followed this operation.

In 1937, at the age of fourteen, the patient's condition was neither improved or worse. There was 3 cm. of growth in length of each tibia. The skull measured 68 cm.; blood calcium was 10.8, phosphorus 2.5 mg. per cent. Examination in 1938 showed no change.

The diagnosis of osteitis fibrosa was established by x-rays and the presence of skin pigmentation.

This case is presented to demonstrate that the association of a tumor of the parathyroid and von Recklinghausen's disease is not constant. A disturbance of calcium and phosphorus metabolism is often absent when a tumor of the parathyroid is present. The author believes that the appearance of a tumor of the parathyroid gland is merely another manifestation of a generalized disease of unknown etiology. Sometimes it is absent during the early stage of the disease only to appear later. Wm. Mendelsohn

**Morphogenesis of Extraskeletal Osteogenic Sarcoma and Pseudo-Osteosarcoma, J. S. Binkley and F. W. Stewart.** Arch. Path. 29: 42–56, 1940.

The authors state that they are not interested in adding to the number of recorded cases, but rather wish to determine the mechanism of the morphogenesis of a group of peculiar extra-osseous tumors which morphologically resemble osteogenic sarcoma. They begin with a discussion of a combined carcinoma and osteogenic sarcoma reported by Budd and Breslin (Am. J. Cancer 31: 207, 1937). At the outset they confess that Ewing, Mallory, and Masson, all of whom saw the material, reached different conclusions, to which a fourth is now added. The authors agree that bone is present but think that the malignant cells within the bone are of epithelial origin and that the spindle cells represent only metaplastic epithelial cells. They grant that the resemblance to osteogenic sarcoma is striking, but finally conclude that they are dealing with an old, calcified, ossified epithelioma, probably of sweat-gland origin, in which cancer has developed. The authors quote with approval a paper by Tudhope (J. Path. & Bact. 48: 499, 1939. Abst. in Am. J. Cancer 37: 472, 1939), describing a similar tumor resembling osteogenic sarcoma of the breast but differing from the case of Budd and Breslin in that it was originally a fibro-adenoma.

A resemblance to osteogenic sarcoma was also seen in a vascular mammary tumor containing small invaginations of duct epithelium and calcific psammoma bodies. The
ABSTRACTS

authors regard this tumor as a low-grade comedo carcinoma and assume that the calcium occurs in areas of intraductal hemorrhage. Despite the presence of epulis-like giant cells and loose tumor cells whose derivation from epithelium is no longer recognizable, they hold that the tumor is epithelial in origin.

Turning to a discussion of the cartilage in human breast tumors, the authors find no satisfactory explanation for its appearance. To call these growths mixed tumors or to invoke a teratoid origin evades the question. [The experimental production of tumors containing cartilage and osteoid tissue in the liver of rats and of a large number of similar tumors in the subcutaneous tissues of rats adds another argument in favor of the abandonment of a teratoid origin for such neoplasms.—Ed.]

Finally, a tumor of the pericardium in a boy of nineteen is discussed. Autopsy permitted complete investigation of metastases and the authors argue that the tumor is not a teratoid osteogenic sarcoma, but a growth arising as a metaplasia in fibrous tissue. It surrounded the base of the heart and apparently arose from the pericardium, while the heart, trachea, esophagus and lungs were merely pushed aside. The authors believe that the tumor began as a pure fibrosarcoma. Since the metastases showed pure spindle-cell sarcoma, it is concluded that the osteogenic portion of the growth was due to specific local conditions rather than to cell potencies. [This is rather a weak argument because some of the true osteogenic sarcomas do not show osteogenic structures in their metastases. On the other hand, there are cases of breast tumor made up of tissue resembling osteogenic sarcoma which have metastasized and the metastases have carried with them all the potencies and formed, morphologically, osteogenic sarcoma. It is probably true, as the authors say, that some of the tumors resembling osteogenic sarcoma may have an epithelial origin, but in the opinion of the editor any general application of this notion is unjustifiable. The test of all these matters will not be derived from laborious study of sections of human tumors, with or without autopsy control, but will lie in investigation of the osteogenic types of tumor produced on a large scale by the administration of carcinogenic substances in animals. A more thorough study of the bone and cartilage carrying tumors of the dog's breast might offer some help, if early stage growths could be obtained. For such a study time and money are necessary, as dogs live for ten or fifteen years and tumors are apt to appear only after a number of years have elapsed following injection of the irritant. The whole question, however, is somewhat academic, as these extra-osseous complex tumors are infrequent.—Ed.]

The paper is well illustrated by photomicrographs from some of the more striking areas of the neoplasms which resemble osteogenic sarcoma.

LEUKEMIA


A case of monocytic leukemia is recorded in which both the fixed film and the supravital method of diagnosis were employed. The blood findings are recorded in detail and illustrations are included.


Report of a case of so-called erythroblastosis fetalis. The pathological findings corresponded to those of myelogenous leukemia. Two blood smears are reproduced and references are appended.