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

- Experimental Studies; Cancer in Animals
- General Clinical Observations
- Diagnosis and Treatment
- The Skin
- The Eye
- The Oral Cavity and Upper Respiratory Tract
- The Carotid Body
- The Salivary Glands
- The Thyroid Gland
- The Breast

- Intrathoracic Tumors
- The Digestive Tract
- The Pancreas and Biliary Tract
- Retroperitoneal Tumors
- The Suprarenal Glands
- The Female Genital Tract
- The Genito-Urinary Tract
- The Nervous System
- The Bones and Joints
- The Leukemias; Hodgkin's Disease
- Statistics and Education

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; CANCER IN ANIMALS


The author reviews a portion of the literature on the accidental production of carcinoma and sarcoma in man by roentgen rays and radium, and records 5 personal cases of skin cancer observed four, eleven, fourteen, eighteen, and nineteen years after roentgen irradiation of eczema, parasitic dermatitis, or tuberculous affections of the lymph nodes. In the German literature 16 cases of roentgen sarcoma of the joints have been described following intensive roentgen therapy of joint or bone tuberculosis. In some instances the tumors were osteogenic sarcomata, in others bone formation did not occur or the growths arose in the soft tissues. An additional case of polymorphous-cell sarcoma is described developing in an ulcer in the region of the wrist of a forty-year-old man eleven years after irradiation of the wrist joint for tuberculosis. The arm was amputated, metastases were removed from the axilla, and the patient was tumor-free four and one half years later.

The author succeeded in producing a sarcoma in the region of the knee-joint of a rabbit with radium. The tumor appeared two years after repeated radium irradiation—45 to 90 mg. hr. per month giving a total exposure of 2,480 mg. hr. Platinum-iridium needles 0.2 mm. in thickness containing 20 to 45 mg. radium sulphate (filtration 0.5 mm. Al) were applied externally in the region of the internal and external condyles. Radiographic examination after the onset of neoplasia showed a destructive type of bone tumor in the lower portion of the shaft of the femur and in the head of the tibia, and a sclerosing osteogenic sarcoma of the femoral condyles. Histologically osteogenic sarcoma corresponded with the areas of bone production, while a polymorphous-cell sarcoma occupied the area of bone destruction. The surface of the knee-joint was uninvolved. The animal died with lung metastases.

Photographs of the radiation tumors in man and of the experimental radium sarcoma in the rabbit, photomicrographs, and a bibliography are included.


An abstract of this paper, without illustrations, appears in Arch. f. klin. Chir. 189: 705–706, 1937.

Milton J. Eisen


A nematode parasite seen in association with a gastric tumor occasionally found in Javanese monkeys devoted to experimental purposes was identified as Nochtia nocti, a typical representative of the family Trichostrongylidae. In order to determine the relationship of this parasite to the stomach lesions a series of 68 monkeys was examined, usually within three minutes of the animal's death. Six out of the 68 monkeys were found to present the gastric tumor, and in each case from eleven to twenty-three worms were found in the hypertrophied tissue mass. No parasites were ever found either in the gastric contents or in the wall of the stomach in animals showing no papillomatous lesions. Furthermore, the worms were never encountered elsewhere in the alimentary tract. In two monkeys found at preliminary examination to be free of both tumor
and worms, tumors developed two and three months respectively after worms had been introduced into the stomach.

The tumors are sharply localized adenopapillomatous growths, invading the submucosa. In one case evidence of aggressive potentialities was obtained, the tumor producing endothelial proliferation and thrombosis of a submucosal vein with incipient epithelial invasion of the vessel wall.

Photomicrographs and references are included.

**Does Vitamin B<sub>1</sub> Inhibit the Experimental Production of Liver Cancer? (Second Preliminary Note on the Effect of Diet on the Experimental Production of Liver Cancer), W. NAKAHARA, K. MORI, AND T. FUJIWARA. Gann 33: 13-17, 1939.**

Two groups of 50 albino rats were given dimethylaminoazobenzol, or butter yellow, with which Kinosita produced liver tumors (Tr. Jap. Soc. Path. 27: 665, 1937). The first group was maintained on polished rice and the second group on polished rice supplemented with synthetic crystalline vitamin B<sub>1</sub> at the rate of 5 mg. per 1 kg. of rice. Allowing 10 gm. of rice to a rat per day, the dosage of crystalline vitamin B<sub>1</sub> may be estimated as 50 gamma per rat per day, corresponding to 25 times the amount required for the maintenance of body weight on an otherwise vitamin B<sub>1</sub>-free diet. No difference in the rate of liver cancer production was found between the two groups. [See following abstract.]

W. NAKAHARA

**Inhibiting Effect of Yeast Feeding on the Experimental Production of Liver Cancer, W. NAKAHARA, T. FUJIWARA, AND K. MORI. Gann 33: 57-65, 1939.**

Taking advantage of Kinosita's method of producing liver cancer in rats, namely by feeding dimethylaminoazobenzol (butter yellow), the authors attempted to modify the rate of cancer production by variations in diet. In view of the fact that there is a certain geographical similarity in the occurrence of beri-beri and hepatoma in man, the possible effect of vitamin B<sub>1</sub>, the determining factor in the cause of beri-beri, was investigated by the addition to the diet of yeast, a well known source of that vitamin.

By injecting an olive oil solution of dimethylaminoazobenzol intraperitoneally, liver cancer was induced in 3 of 6 rats that survived 255-279 days on an unpolished rice diet; the remaining 3 rats showed cirrhosis of the liver. In a parallel experiment carried out at the same time and under identical conditions except for the diet, which was composed of 85 per cent unpolished rice and 15 per cent dried baker's yeast, none of the 9 rats surviving 257-279 days showed liver cancer. In another experiment dimethylaminoazobenzol was fed to rats maintained on polished rice supplemented with 10 per cent by weight of "oryzanin" powder, a crude vitamin B<sub>1</sub> preparation, which represents yeast fortified with the vitamin B<sub>1</sub> fraction of rice polishings. Among 14 rats surviving 140-162 days, 8 had liver cancer and 3 cirrhosis only, while in the remaining 3 the liver was macroscopically normal.

In a control series fed on polished rice alone 8 rats survived 140-162 days and all had liver cancer.

The yeast feeding thus caused some inhibition of liver cancer development, but the effect was slight compared with the effect of liver feeding previously reported by the same authors (Gann 32: 465, 1938. Abst. in Am. J. Cancer 36: 616, 1939).


The experimental investigation of the effect of buckwheat as a diet was suggested by the prevalence of cirrhosis of the liver among Koreans. Mice receiving buckwheat with the food showed cirrhosis of the liver "accompanied almost always by multiple liver-cell tumors. Histologically, however, these showed no malignancy." The original paper, which is rendered rather confusing by the undefined use of the word "tumor," must be consulted for: (a) details of the preparations of buckwheat used; (b) the effects
upon rats, rabbits, and dogs; (c) other interesting changes observed, namely enlarge-
ment of the spleen, persistence of the thymus, and osteoporosis.

A subsequent paper (p. 394), in Japanese, deals with the prevalence of cirrhosis of
the liver in Korea.

E. L. KENNAWAY

Influence of Ultra-short Waves on Malignant Tumors: Histologic Studies on the Effect
of Repeated Application of Large Doses on Rabbit Sarcoma, N. NOBUOKA. Ein-
flüsse der Ultrakurzwellen auf den malignen Tumor. Histologische Untersuchungen
über den Einfluss der wiederholten Durchflutungen mit einer grossen Dosis auf das

When the growth of transplanted rabbit sarcoma is inhibited by the application of
ultra-short waves, the tumors show various degrees of histologic change leading to
complete destruction of the tumor tissue. The destructive effect does not extend to
normal organs and tissues, which show no notable histologic change. Voluminous
descriptions are offered to support these conclusions. Nine photomicrographs are
included.

W. NAKAHARA

On the Influence of Ultra-Short Waves on the Growth of Rabbit Sarcoma: Influence of
Local Application on the Entire Body, N. NOBUOKA. Über den Einfluss der Ultra-
kurzwellendurchflutung auf des Wachstum des Kaninchensarkoms. Einfluss der
lokalen Durchflutung auf den ganzen Körper eines Individuums, Gann 33: 294–315,
1939.

In this paper the author discusses the effect of ultra-short wave irradiation on the
blood count and physical and chemical properties of the serum of rabbits bearing the
Kato sarcoma, as well as the metabolic effect on the animals. Following irradiation
there was a temporary decrease in the total leukocyte count and in the lymphocytes,
while the pseudo-eosinophiles increased. After repeated irradiation a slight leukocyto-
sis was observed involving especially the pseudo-eosinophiles. The surface tension of
the serum was increased by irradiation. The blood calcium rose a little while the
potassium fell. The basal metabolic rate was increased. These effects on the organism
as a whole were confined to the experiments in which tumor development was also
influenced.

The paper concludes with a summing up of the author’s various observations on
short-wave irradiation, most of which have been published in Scripta Soc. Radiol. Jap.,
vols. 6 and 7, 1938 and 1939, which is unavailable for abstracting. The following points
are made:

(1) Ultra-short waves inhibit not only the development of the exposed tumor
(Kato’s rabbit sarcoma) but also the growth and metastasis of unexposed tumors in the
same animal. (2) Excised tumor tissues are killed by large doses but smaller doses
appear to exert a stimulating effect. (3 and 4) Irradiated tumors show a reduction of
metabolic activity, especially glycolysis, and histologic signs of degeneration are ob-
served. (5) Tumor grafts implanted into previously exposed areas of the body are
suppressed. (6) These effects cannot be ascribed to the action of heat.

The author found that the maximum effect was produced at a wavelength of 4.5 m.

W. NAKAHARA

Susceptibility to Transmitted Leukemia Occurring in Pure Bred and Hybrid Mice,

Spontaneous mouse leukemias originating in the highly leukemic stock Ak, in
stock Rf in which the incidence of the disease is low, and in first-generation and other
hybrids were inoculated into mice of each of the pure stocks and of various hybrid
combinations. The leukemias in the hybrid animals behaved in transmission experi-
ments like the Ak leukemias and with the latter are designated as Ak-type leukemias.
Members of the Ak stock and the F1 hybrids obtained by the mating of Ak and Rf
animals were almost universally susceptible to leukemias of this type, while the other
hybrids showed a substantial proportion of takes, indicating dominance of inheritance.
No takes were obtained in the Rf mice, though the latter were susceptible to the disease arising in the same stock.

It was found further that the duration of illness and anatomical characteristics of leukemia are not modified by the genotype of the host and that the susceptibility factors of Ak and Rf leukemias are not allelomorphic.


The author has already shown by the complement-fixation test that the Brown-Pearce rabbit tumor and Murray’s liposarcoma of the guinea-pig elicit, in the rabbit and the guinea-pig respectively, antibodies directed against these neoplasms. The present paper inquires whether benzpyrene tumors in the rat, consisting as they do of cells native to the animals in which they arise, similarly possess specific antigenic properties. The conclusion drawn is that none were demonstrable by the methods employed.


The authors criticize the statistical studies of Bullock, Curtis, and Dunning (Am. J. Cancer 17: 894, 1933; 28: 681, 1936), based on experimental studies on rats, which led those investigators to the conclusion that the average time of the occurrence of malignant change does not depend on the age, sex or genetic constitution of the animal, but essentially on duration and amount of irritation.

Reanalyzing the data, with the aid of an “additional plausible assumption” pertaining to missing evidence, the present writers undertake to show that cancer does, on the contrary, depend materially on the age of the animal.

**Malignancy Induced by Cysticercus Fasciolaris: Its Independence of the Age of the Host when Infested, W. F. DUNNING AND M. R. CURTIS. Am. J. Cancer 37: 312–328, 1939.**

A statistical study is presented confirming the authors' earlier conclusions (see, for example, Am. J. Cancer 17: 894, 1933) that the induction of Cysticercus tumors in rats is independent of the age of the host at infestation. The monthly fatalities from Cysticercus sarcoma in each of four age groups studied corresponded with an increase in either the duration or extent of the irritation. References are appended.


The authors studied the effects of repeated applications of 3:4-benzpyrene to normal skin and to various cutaneous lesions, as pemphigus, mycosis, xeroderma, etc., in man. Daily applications of a 1 per cent solution of benzpyrene in benzol for variable periods, not exceeding four months, resulted in definite manifestations localized to the treated areas. Erythema, pigmentation, desquamation, the formation of verrucae and infiltration developed in chronological order. Following suspension of treatment after a maximum of 120 applications or when evidence of infiltration appeared, the manifestations regressed completely within two to three months.

Although reversible and apparently benign, the changes are believed to represent early stages of a process which would have ultimately gone on to neoplastic proliferation. In a broad sense they may be designated as prototypes of a precancerous process. The alterations were more pronounced in older than in younger individuals, and on the unprotected skin surfaces.

Photomicrographs are reproduced and references are appended.

Investigations are recorded which lead the authors to the following conclusions.

1. A certain quantity (approximately $10^{-4}$) of methylcholanthrene will dissolve in physiological salt solution.

2. Near-ultraviolet radiation may have, if given in high enough intensity and over long periods of time, a slightly toxic effect on yeast.

3. Methylcholanthrene in the presence of near-ultraviolet radiation has a toxic effect on yeast.

The chemical method will detect dilution of methylcholanthrene down to $10^{-4}$, the fluorescence method down to $10^{-7}$, and this biological method down to $10^{-8}$.


Attempts were made to induce malignant transformation of tissues in vitro by the action of a carcinogenic azo-compound, dimethylaminoazobenzol. Chicken fibroblasts were cultivated for several generations in a medium containing this compound in a proportion of 1:10,000. Certain morphological changes simulating sarcomatous transformation were observed, but implantation of the cultivated tissues into normal chickens produced no tumor.

W. Nakahara


In the first place the total cholesterol was determined gravimetrically, principally by the method of Windaus, and the values were compared with those obtained by colorimetric determinations. Cholesterol crystals were then isolated and their physical and chemical properties were investigated. Of special interest was the spectrographic study, which disclosed the presence of an exceptionally large amount of provitamin D (ergosterin or 7-dehydrocholesterol) in the crystals isolated from hepatoma tissue. Provitamin D was estimated to constitute about one-fifteenth of the total cholesterol crystals. Since cholesterol crystals isolated from normal rat liver did not show provitamin D, it would appear that as normal liver cells acquire malignant properties they somehow become capable of accumulating or synthesizing this substance.

The iodine number of phosphatide was distinctly different in hepatoma and normal liver, the figure for the former amounting to about half that for the latter. This was ascribed to the difference in the grade of unsaturation of fatty acids composing phosphatide, hepatoma fatty acids being of lower grade of unsaturation than normal liver fatty acids.

Fatty acids derived from neutral fat and ester cholesterol were combined and determined by titration, hepatoma yielding a slightly lower figure than normal liver. Total fatty acids were actually separated from hepatoma and normal liver, the amount obtained from the former being barely one-third of that from the latter. The direct separation of fatty acids adopted in this study is considered by the authors as “an independent method for the quantitative determination of fatty acids.”

W. Nakahara


The elements chlorine and iodine were found to be, to a large extent, interchangeable in a culture medium for human thyroid fibroblasts. References are appended and the
results obtained by other investigators of the effect of iodine on tissue cultures are tabulated.


Serum and urine from cancer patients were found in the majority of cases to contain a principle causing abortion in pregnant rabbits, but the same effect was obtained with blood or urine from 3 of 6 non-cancer patients.


A German shepherd dog with acanthosis nigricans was found at autopsy to have multiple carcinomatous nodules in the liver. The authors believe that canine acanthosis nigricans is identical with the disease in man, in which cancer frequently occurs. This further observation of the association of the two diseases is at least consonant with the hypothesis that there is a common genetic factor for acanthosis nigricans and the cancer. Photographs and photomicrographs of both lesions are included. References are appended.

GENERAL CLINICAL OBSERVATIONS


Studies of the basal metabolic rate and the specific dynamic action of a test meal consisting essentially of 100 grams meat are recorded in cases of gastritis, gastric ulcer or cancer, and hyperthyroidism. No changes were observed in cases of gastritis or achyia. The basal rate was normal. The increase produced by the meal was greatest after one hour and was followed by a return to normal after two hours. In 10 cases of peptic ulcer the basal metabolism was increased 15 to 60 per cent. Protein produced no specific dynamic action. The metabolic rate decreased gradually during the three-hour period following ingestion of the test meal to a lower value than was observed at the onset. Two types of reaction were observed in 21 cases of gastric cancer. In the first (usually associated with stenosing tumors) the basal metabolic rate was increased 15 to 40 per cent and protein produced a minimal increase lasting several hours. In the second type the basal rate was increased 23 to 46 per cent. Following the test meal there was a pronounced increase varying from 79 to 118 per cent after one hour, after which the value decreased slowly to its initial level. In hyperthyroidism a fall in the metabolic rate occurred in the first hour after protein ingestion. This was followed by a gradual rise in the second and third hours and a slow return to the basic value during the fourth and fifth hours. Milton J. Eisen


Dürck's paper is one of a series of lectures on the relationship of trauma to disease and deals with the problem of tumors. While admitting that chronic irritation is frequently a basic factor in the etiology of neoplasia, Dürck denies that single injuries are capable of eliciting tumors. The assumption of Beneke that a considerable percentage of gliomata are a result of injury (see Ergeb. d. allg. Path. u. path. Anat. 26: 893, 1932. Abst. in Am. J. Cancer 21: 942, 1934) does not appear to be founded upon adequate clinical or experimental evidence. Finally no conclusive proof exists that trauma increases the growth rate of existing tumors. The alleged occurrence of metastases following biopsy probably is a result of fortuitous inoculation of tumor cells in the blood or lymph channels.
Beneke maintains his hypothesis that 40 per cent of all gliomata follow trauma. According to this author malignant degeneration may develop after forty-eight or seventy-five days in areas of ischemic necrosis of brain tissue resulting from reflex arterial spasm. [Experimental observations on tumor production in animals by the potent carcinogenic hydrocarbons make it unlikely that trauma is capable of eliciting malignant alteration in as short an interval as Beneke surmises.] Milton J. Eisen


This is a theoretical discussion without experimental evidence, alleging the importance of hyperemia in the etiology of cancer. Milton J. Eisen


In 36 cases the author confirmed a diagnosis of malignant disease by the identification of neoplastic cells in paraffin sections prepared from fixed centrifuged cancerous exudates in the pleural or peritoneal cavity or, in the case of lung cancer, from the sputum. The lack of arrangement of the endothelial lining cells of non-tumorous effusions as organized tissue masses is of aid in distinguishing the non-malignant from the malignant cells. Individual cells of the serosa, especially those undergoing degeneration, are not infrequently confused with tumor cells. In one case of cancer of the bladder tumor cells were found in the urinary sediment. A diagnosis of cellular fibroma of the lung, verified at necropsy, was established by the finding of specific tumor formations in a punch biopsy specimen from the pulmonary mass. Illustrative case histories, a roentgenogram of the chest and photograph of the gross specimen in the last case, and photomicrographs are included. Milton J. Eisen


Fogliani states that he found the Citelli-Piazza hemoclastic reaction (a fall of 500 or more in the number of circulating white blood cells following the injection of an extract of neoplastic tissue) of value in the diagnosis of cancer. This is not evident, however, from the tabulated results. The reaction was positive in 31 (62 per cent) of 50 patients with malignant epithelial tumors and, according to the text of the paper, in 35 per cent of 15 non-cancerous patients. There is, however, a discrepancy here, since the accompanying table appears to indicate a positive reaction in 12 of the 15 control subjects. Milton J. Eisen


The Klein test proved valueless in the diagnosis of cancer. The reaction was positive in only 5 of 25 patients with malignant disease. Milton J. Eisen


This is a review of an extensive series of publications based on the investigations of Freund and Kaminer and their co-workers (see previous abstracts in this Journal, for example 21: 682, 683, 1934). A bibliography is included. Milton J. Eisen

The author's annual review of serological methods proposed for the diagnosis of cancer and of pregnancy. Milton J. Eisen


It is urged that in suspected cases of skeletal metastasis punch biopsies be done in the same way as sternal marrow biopsies. Results of this method are vaguely described but no statistics are given. The article is not illustrated. Edward Herbert, Jr.


In this series of papers the authors discuss certain tumors which frequently raise difficulties in histologic diagnosis, basing their discussion on records, sections, and paraffin blocks of over 13,000 tumors available in the Royal College of Physicians Laboratory, and records and pathological material from the Royal Infirmary, Edinburgh, and the Institute of Animal Pathology, Cambridge. The individual papers are brief, including a definition of the tumor, a histologic description, a discussion of the nature of the growth and its diagnosis, a bibliography of "directional literature," and numerous photomicrographs with notes on the cases from which these were obtained.


This is a general lecture on the historical aspects of cancer therapy and the results of modern methods of surgery and irradiation. Milton J. Eisen


Cramer claims that treatment with J. B. 5 Bellas (apparently a proprietary medication containing intestinal juice, pancreas, liver, and spleen) was followed by a symptomatic improvement in 8 of 16 patients with hopeless cancer; 5 patients died, and 2 were unaffected.

Druckrey denies the existence of adequate experimental evidence to prove the value of hormonal or reticulo-endothelial extracts in the treatment of cancer. Feeding of spleen to rats, or injection of extracts of the organ, apparently increased the growth rate of the Jensen sarcoma. Tumor immunity produced by the inoculation of tumor filtrates is not abolished by extirpation of the spleen, nor does splenectomy preclude successful immunization. [That tumor extracts are capable of producing tumor immunity is highly problematic.]
Cramer's reply merely reiterates his belief that resistance to cancer is a function of the reticulo-endothelial system. Milton J. Eisen


The author analyzed the factors delaying the institution of adequate treatment of cancer of the internal or external female genital tract. Among 520 patients therapy was begun early (within the first few months of the onset of symptoms) in 110 (21 per cent). An operable tumor was present in 61 per cent of the patients examined in the early stages, whereas the growth was operable in only 24 per cent of the delayed cases. In 63 per cent of the cases with delay this was primarily attributable to the patient's failure to seek medical advice for definite symptoms. In 34 per cent of the cases, however, the examining physician was responsible (incomplete examination, improper diagnosis, or treatment). Finally administrative details, social motives, or inadequate biopsies accounted for a small number of unavoidable delays. Since the possibility of cancer in younger age groups is frequently discounted, a false diagnosis is more common in the younger than in older patients. Following the correct diagnosis of cancer treatment was begun immediately in 45 per cent of the patients, while in 55 per cent an additional delay of one month or longer occurred. Milton J. Eisen


The results of radiotherapy in 517 cases of malignant tumors of the mouth, pharynx, and larynx treated between 1929 and 1935 in the Zurich Roentgen Institute are recorded. The average age of the patients was fifty-eight years and 90 per cent were males. Histologically 389 (80 per cent) of the tumors were squamous-cell cancers, 66 (14 per cent) non-keratinizing epitheliomata, and 27 (6 per cent) sarcomata. A majority of the patients had advanced growths or regional metastases when treatment was instituted. Roentgen therapy was administered by the continuous fractional method in all cases with the exception of small oral cancers, in which radium was employed. Regional metastases were treated surgically. Electrocoagulation or radium needles were used in the eradication of small tumor remnants not destroyed by roentgen irradiation.

Although treatment was completed in only 384 cases, radiotherapy exerted an immediate favorable influence on the tumor in 339 (77 per cent) patients, while complete primary disappearance of the growth occurred in 274 (53 per cent). The average time of survival in fatal cases was 9.1 months. Of a series of 300 patients followed for three years, 66 (22 per cent) were cured, while of the 127 patients followed for five years 17 (13 per cent) were cured. If the number of cures is computed on a basis of patients receiving satisfactory treatment, there were 66 (31 per cent) of 220 cured after three years and 17 (22 per cent) of 76 cured after five years. Milton J. Eisen


The results of radiotherapy in 11 cases of round-cell sarcoma are tabulated. With a single exception the continuous fractional method was employed and the total dose varied from 3,600 to 5,600 r. Four patients were cured for periods of two to seven years. Two had tonsillar tumors, one a sarcoma in the neck, and the fourth a recurrent growth in the maxillary sinus following excision. Thoracic metastases developed in the latter patient after several months, but complete regression followed the administration of 8,960 r. Therapy was also successful in one case each of tumor of the maxillary sinus and face and the patients were symptom-free after six and seven months. In five cases therapy was unsuccessful. Photographs, roentgenograms, and photomicrographs are included. Milton J. Eisen

Some general remarks on the applicability of electrosurgery and irradiation to the treatment of accessible cancer, particularly of the face, oral cavity, paranasal sinuses, breast, and cervix. Illustrations showing the results of treatment are included.


In order to determine their tolerance for x-rays the vascular connective tissues were studied in patients who since 1928–1929 had received fractional protracted treatments with single doses of 280 to 300 r. The only evidences of permanent alterations observed were slight changes in the skin, as dryness, discoloration, and telangiectases. These last were often extensive, but induration, chronic edema, and atrophy of the skin did not occur. In a few cases beginning induration was seen after the administration of approximately 4500 r. If the treatments were fractionated but not protracted, indurations were observed after administration of 4000 r.

The dose necessary for the production of severe lesions varies in different persons from 4500 to 11000 r. As about the same variation exists between the radiosensitivity of tumors and the dose requisite for their destruction, and as the doses offering possible tumor cure and endangering healthy tissue overlap each other, statistical analyses of an adequate number of treated patients rather than single case reports are necessary for determination of the proper dosage.

The muscles, particularly the heart muscle, and glands are often affected. Diminished resistance to trauma and infections, increased fragility of the bones, and the great radiosensitivity of juvenile tissues are discussed.

The paper includes three tables and six graphs.


The effect of gamma and beta rays on the rate of cleavage in unfertilized eggs and sperm of the sea-urchin, Pseudocentrotus depressus, has been studied chiefly in this investigation. Irradiation by roentgen rays was tried merely for comparison with the work of others. Roentgen, gamma, and beta rays in comparable doses produced a similar delay in cleavage time, in essential agreement with the results of previous investigators with ultraviolet light and roentgen rays. It is of interest that the irradiation effect which manifested itself as a delay in the first cleavage time was not so marked at the second cleavage. In the case of eggs the effect was less pronounced, i.e. there was recovery from the effect, when an interval was allowed between the time of exposure and the moment of insemination. No such recovery was observed in irradiated sperm.

Quantitative studies were also carried out to determine the effect of roentgen, gamma, and beta rays upon fertilized eggs of the sea-urchin. The eggs were found to react to each type of irradiation with delay in cleavage time when the nucleus was in early prophase. This delay in the course of the first cleavage did not, however, markedly affect the second cleavage time.

The recovery phenomenon mentioned above was investigated in two species of sea-urchins (Pseudocentrotus depressus and Strongylocentrotus purpuratus). The occurrence of this phenomenon in eggs and its absence in sperm were found to be due to
the essential difference between the eggs and sperm, and not to any variation in experimental conditions. With eggs prolongation of cleavage time after a certain dose of beta rays became less with the length of exposure, but in the case of sperm it was practically constant. The authors suggest that the discordant results recorded by previous investigators regarding the "time factor" in the biological effect of ionizing rays may be reconciled when reconsidered in the light of potential recovery.

The effect of alpha ray irradiation on unfertilized sea-urchin eggs (Strongylocentrotus purcherrimus) was also investigated. It was found that moderate doses injure severely some of the eggs and greatly delay their first cleavage, while other eggs similarly irradiated are but little affected. With larger doses of alpha rays proportionally larger numbers of injured eggs were produced, and doses exceeding a certain limit killed the eggs immediately, disintegration taking place about one hour after irradiation.

The nucleus seemed to be more sensitive to alpha rays than the cytoplasm. This was made clear by bombarding the eggs at varying ranges. Cytoplasm, however, also plays a rôle in the effect of irradiation, since some eggs were severely injured when the cytoplasm only was irradiated.

W. NAKAHARA


In this paper the author sets forth a theory of the action of x-rays upon biological elements, taking into account the fact that in certain cases all the hits may not be effective and thus leading to the introduction of a correction term into Crowther's classical formula (Proc. Roy. Soc. London, ser. B 100: 390, 1926). The calculations introduce a new factor $\beta$, which is characteristic of the radioresistance of a given element, in the same way as the classical factor $\alpha$ introduced in Crowther's calculations may be considered as characteristic of the radiosensitivity of an element.

The action of x-rays upon a growing population was studied from the standpoint of mathematics. The general formula found, which contains Crowther's classical formula as a very particular case, leads to the conception of a threshold of action of x-rays upon a growing population.

A new working-line is briefly indicated in the conclusions, aiming to consider the $\alpha$ factor as a variable.

References are appended.


Survival curves of Dunaliella populations after roentgen irradiation were found to change in form as the interval following irradiation increased. This is attributed to two separate processes, one causing immediate death and affecting the cytoplasm of the cell, and the other acting indirectly by way of the nucleus, inhibiting reproduction and thus representing death after some time has elapsed.

The analysis of survival curves as exemplified by the work of previous investigators is discussed and criticized. References are appended.

This is a report of an extensive hemangioma situated posterior to the external ear in a man of fifty years, cured by electrocoagulation. Therapy was divided into 20 fractional doses administered each second or third day. Photographs of the patient before and after treatment are reproduced.

Milton J. Eisen

THE EYE


This paper contains a detailed description of 7 cases of cylindroma of the lacrimal gland without unusual histologic features. The growths were all removed surgically. This sufficed for a cure in 5 cases. In one case there were recurrences after twenty and twenty-three years and the patient died of endocranial metastases. In a second, recurrences were excised after three and five years. Roentgen therapy was employed following the third surgical intervention and the patient was tumor-free eight years later. Photographs, photomicrographs, and a bibliography are included.

Milton J. Eisen


The right eye of a four-year-old child was enucleated for glioma of the retina, verified histologically. Irradiation therapy was instituted promptly for less advanced neoplastic disease in the left eye observed ophthalmoscopically. Treatment was given in 14 divided fractions during a period of four years. The total tumor dose in the eye was 600 per cent of a skin erythema dose (90 kv., 0.5 mm. Cu + 1 mm. Al, 3 ma.). A cataract was extracted from the eye nine years later. In the following year, after removal of a secondary membrane, ophthalmoscopic examination disclosed healed retinal remnants of tumor tissue. The vision was moderately impaired. Drawings of the fundus before and after therapy are included.

Milton J. Eisen


Report of a case interesting chiefly for the long period—thirteen years—between enucleation of the involved eye and the appearance of the secondary lesion. Exenteration of the orbit was performed but no mention is made of the outcome.

Milton J. Eisen


There are said to be recorded in the literature 17 proved cases of metastatic carcinoma of the iris, in only 3 of which was the lesion limited to that structure. A fourth case without other uveal involvement is reported. The diagnosis was based on the histologic features, which suggested an origin in the breast or bronchus. The primary site was undetermined clinically and autopsy was not permitted.

THE ORAL CAVITY AND UPPER RESPIRATORY TRACT


A general discussion.

Milton J. Eisen


True salivary gland metastases were not observed in 50 cases of oral cancer. In 3 instances involvement occurred by contiguity.

A man sixty-four years of age had a symmetrical lipomatosis of the neck, arms, abdomen, back, and legs. He had, also, six lipomas of the tongue symmetrically placed, three on each lateral border. The diagnosis was proved by biopsy. In the literature 37 cases of lingual lipoma were found, of which only one was similar to the case reported. Two photographs and several references are included. EDWARD HERBERT, JR.


Histologic examination of two small excised nasal polyps disclosed areas of hemangioendothelioma in the first and cavernous angioma in the second. Photomicrographs are included. MILTON J. EISEN


The results obtained in lateral radiography of the pharynx may be considerably enhanced by previous instillation of lipiodol in the upper respiratory tract. The contrast medium is permitted to flow downward from the posterior nares following preliminary cocaineization of the larynx. The outlines of the larynx and hypopharynx are then clearly delimited. Tumors appear as filling defects or ulcerations. Roentgenograms are reproduced. MILTON J. EISEN


The material is similar to that appearing in a paper by Canuyt and Gunsett, Bull. Assoc. franç. p. l'étude du cancer 26: 398, 1937 (Abst. in Am. J. Cancer 33: 595, 1938). It appears also in Arch. d'éllectric. méd. 45: 241, 1937. MILTON J. EISEN


Two examples of endolaryngeal growths removed surgically are described. The first patient had a lipoma, 0.25 cm. in diameter, and the second a congenital cyst lined internally by ciliated cells and externally by squamous epithelium. Photomicrographs are included. MILTON J. EISEN


The author describes localized hemorrhagic lesions on the vocal cords of a thirty-five-year-old woman. The patient had a hemorrhagic diathesis manifested by epistaxis, profuse vaginal bleeding, and petechiae. The nature of the laryngeal condition does not appear to have been confirmed histologically and therapy is not mentioned. MILTON J. EISEN


A report of 2 cases of mixed tumor of characteristic histology excised from the submaxillary gland in patients aged forty and fifty-four. Photographs and photomicrographs are included. MILTON J. EISEN
THE CAROTID BODY


The literature on carotid body tumors is reviewed and four cases are recorded. The patients were a boy of fifteen, men of fifty-two and forty, and a woman of thirty-six. In one of the men a tumor had been present below the angle of the jaw for twenty years. Two of the tumors were encapsulated and two had infiltrated the surrounding tissues. All were treated surgically. The carotids were ligated once and resected twice. In one case the tumor was removed without injury to the vessels.

The youngest patient was untraced. The others were without recurrence forty, twenty-nine, and fifteen months after operation. Illustrations and references are included.

THE THYROID GLAND


A case is recorded of thyroid carcinoma, histologic examination of which showed conspicuous intranuclear inclusions in the tumor cells. Thirty-eight other carcinomata of the thyroid were examined for the presence of inclusion bodies, and these were found in 10. In one instance they were very numerous and conspicuous and resembled those in the case described. In 9 others they were rare and somewhat less distinct.

On the assumption that these inclusion bodies indicate the presence of a virus, the author raises the question of the relation of the latter to the tumor.

Photomicrographs and drawings show the inclusion bodies. References are appended.

THE BREAST


Daily injections of small doses of estrogenic or corpus luteum hormone for periods up to eight months in mice of unstated genetic constitution gave rise to mammary changes resembling chronic cystic mastitis in man. With estrogen, dilatation of ducts and proliferation of acini were most prominent; after corpus luteum treatment diffuse glandular hypertrophy, secretory activity, dilatation of ducts, hyperemia and edema of the stroma were observed. In both instances the changes regressed completely two months after suspension of the treatments. Neoplasia did not occur. Four photomicrographs and a bibliography are included.


This paper, a large part of which is devoted to an open discussion, adds very little to a clarification of the treatment of mammary cancer. The pros and cons of surgery vs. radiotherapy as well as of combinations of treatments are freely expressed, but unfortunately without any more valid backing than the particular speaker's opinion. No statistics are cited and no authorities are quoted. The one rather amazing unanimity of opinion seems to be an unshakable faith in the efficacy of protein therapy, which Rubens-Duval has long advocated (see for example Absts. in Am. J. Cancer 15: 2893, 1931; 16: abst. p. 795, 1932; 30: 794, 1937), either with or without the aid of the more universally accepted therapeutic methods. The protein apparently is derived from the specific type of tumor and is administered orally or intracutaneously. It is credited with changing the tissues from a state of predisposition to cancer back to a normal cancer-resistant condition. Unfortunately the reasons for this concept seem to be as elusive as the concept itself.

Edward Herbert, Jr.

Klose considers breast cancer preeminently a surgical problem. Seventy to 75 per cent of the patients in early stages of the disease are cured for five years or longer by radical mastectomy alone. A radical amputation was performed in 81 of the author’s cases, including all stages, with 36 per cent cures. Postoperative radiotherapy is indicated in more advanced lesions, but small doses appear to be without effect. Roentgen therapy, therefore, should be administered by the continuous fractional method. Irradiation may be employed exclusively in early cancer when operation is contraindicated by the general condition of the patient, in patients with inoperable tumors, and for postoperative metastases.

[In the light of more recent observations several of the author’s conclusions are questionable, as, for example, that cancer in 20 to 35 per cent of all patients follows or bears an intimate relationship to a previous puerperal mastitis, that chronic cystic mastitis is without doubt a precancerous condition for which unilateral or bilateral mastectomy is indicated, that carcinomatous alteration in fibroadenoma is a usual complication, and that pregnancy and lactation invariably give rise to fulminating growth of a preexistent cancer or predispose to postoperative recurrences.]

Milton J. Eisen

Large Mammary Tumor Cured by X-rays Filtered through Only 3 mm. of Aluminum, T. Nogier. Énorme tumeur du sein traitée et guéri par les rayons X filtrés sur 3 millimètres d'aluminium seulement, Bull. et mém. Soc. de radiol. méd. de France 25: 91–93, 1937.

A woman seventy-eight years of age had a large ulcerated tumor of the left breast. Six roentgen treatments were given, the dosage each time being 1100 r. The tumor disappeared but recurred three years and a half later, when axillary metastases were present. Roentgen therapy was again given and the patient was well after two and a half years. There are no illustrations.

Edward Herbert, Jr.


In advanced cases of skeletal metastases radium therapy can often bring about relief of pain, a gain in weight, and a return to normal activity for a period of two to three years. Two cases of this type are briefly reported. There are no illustrations.

Edward Herbert, Jr.


A woman fifty years of age had a large tumor of the right breast of twelve years’ duration and complained of skeletal pain. Roentgenograms showed widespread metastases. Although the disease appeared to be in a terminal stage, total roentgen therapy was given, 1418 r being administered in all. Marked subjective improvement followed, the metastatic lesions showed recalcification roentgenographically, and the breast tumor was reduced to a small size. It was excised and found to be a carcinoma. One year after treatment the patient was symptomatically well, which demonstrates the results that can be obtained even in apparently hopeless cases. A transient secondary anemia was the only complication of treatment. There are no illustrations.

Edward Herbert, Jr.

Pleural and bronchial neoplasms are likely to produce comparable shadows in simple roentgenograms of the chest, whereas bronchographic examination after the instillation of an appropriate opaque medium frequently proves of value in their differential diagnosis. In cases of tumors of the pleura the integrity of the bronchial tree is maintained while the normal alveolar markings in the peripheral lung fields in the area involved by tumor are absent. Bronchial cancer with pleural extension or peritumoral atelectasis is identified by the presence of irregular narrowing or complete closure in the bronchial system. More extensive pleural or bronchial growths, especially in association with metastatic deposits, are not infrequently indistinguishable. Mediastinal metastases of a pleural tumor, advanced growths in the pleura, or massive pleural effusions can produce bronchial stenosis mechanically from without. Pleural tumors secondary to cancer in other portions of the body resemble primary neoplasms in their roentgen characteristics. Interlobar pleural neoplasms frequently give rise to compression and distortion of the regional bronchial passages.

Illustrative cases are described and the roentgenograms reproduced.

Milton J. Eisen


Two cases of sarcoma of the trachea are reported with the necropsy findings: (1) a myxosarcoma, possibly arising in a mixed tumor of the salivary gland type; (2) a spindle-cell sarcoma. These are said to bring the total recorded cases of tracheal sarcoma to 34. Photographs and photomicrographs are reproduced and references are appended.


This is a general discussion illustrated by two brief case reports. The presence of atelectasis due to bronchial obstruction is stressed. No new material is presented and there are no illustrations.

Edward Herbert, Jr.


A woman sixty-six years of age had a paraplegia of three days' duration with complete spinal fluid block, but no other symptoms. A vertebral roentgenogram showed metastatic tumor nodules and a search for the primary focus revealed a small tumor in the left upper lobe of the lung. The diagnosis was confirmed at autopsy. There are no illustrations.

Edward Herbert, Jr.

Diffuse Lung Cancer Simulating Gangrenous Pneumonia, Y. Watanabe. Über einen Fall von diffusen Lungenkrebs, aussehend wie gangränöse Pneumonie, Gann 33: 286-293, 1939.

A case report with detailed anatomical and microscopical descriptions. Photomicrographs and a bibliography are included.

W. Nakahara


In a man sixty-seven years of age a clinically typical carcinoma of the lung, a cavity in the tumor was demonstrated by lipiodol injection. The diagnosis was verified by autopsy. There are no illustrations.

Edward Herbert, Jr.

A man twenty-four years of age in perfect subjective health was found during a routine roentgen examination of the chest to have a large cyst of the right lung. Subsequent roentgenograms over the course of a year showed the development of a circumscribed round solid tumor in the lower portion of the cyst, which grew progressively without symptoms. It seemed to be a benign tumor, either adenoma or a dermoid, but no operation or biopsy was performed.

One roentgenogram and several drawings are included. Edward Herbert, Jr.


A man thirty-three years of age complained of skeletal and articular pains of a month's duration. They were believed to be arthritic in origin and three intravenous injections of thorium X were given at weekly intervals, the doses being respectively 75, 100, and 125 micrograms. A week after the third injection weakness and pallor developed and a hyperchromic anemia was found, which was rapidly progressive. Death occurred two weeks later. Autopsy showed a primary small-cell carcinoma of the lung with widespread metastases, particularly skeletal. It is maintained, but not too convincingly, that the presumably rapid terminal growth of the tumor and the increasingly severe hyperchromic anemia were brought about or at least accelerated by the injections of thorium X. Six photomicrographs are included. Edward Herbert, Jr.


This is the report of a case in a man fifty years of age, as described in the title. The symptoms were all due to skeletal metastases, and there were no clinical findings to indicate that the lung was the primary site except for a right hydrothorax which might have been secondary. The presumptive diagnosis, made from the biopsy, was confirmed at autopsy. Four roentgenograms and 4 photomicrographs are included. Edward Herbert, Jr.


A man forty-seven years of age with a six months' history of pulmonary symptoms was believed on clinical and radiologic grounds to be suffering with a pneumonic type of tuberculosis of the right upper lobe, though tubercle bacilli could not be demonstrated. Three months later cerebellar symptoms appeared, and death occurred one year after the onset of the symptoms. Autopsy showed a tumor of the right upper lobe which was grossly similar to tuberculosis in its type of growth. There were metastases in the cerebellum and other organs. Microscopically the tumor was a carcinoma of polymorphous type. There are no illustrations. Edward Herbert, Jr.


A single case is reported in great detail. A man fifty-six years of age had a primary carcinoma of the lung, the first symptoms of which were due to widespread metastases. Otherwise there is nothing unusual in the case. There are no illustrations. Edward Herbert, Jr.
Reticulo-endothelial Sarcoma of the Pleura with Rapid Course. Radiologic Studies.


A man forty-two years of age gave a five weeks' history of cough, hemoptysis, weakness, and loss of weight. Radiographic examination of the chest showed three large rounded tumors, the largest of which pulsed and was believed to be an aneurysm. The patient died a few weeks later with profound cachexia. At autopsy three solid intrapleural tumors were found, one of which was situated in the arch of the aorta, thus accounting for the pulsation. The lung was not invaded and there were no metastases. Histologically the diagnosis was reticulo-endothelial sarcoma. Two roentgenograms and three photomicrographs are included.


This is a case report amply described in the title. The nature of the mediastinal tumor was not determined. Four roentgenograms are included.

THE DIGESTIVE TRACT


Five cases of cancer of the esophagus in elderly patients are briefly reported. In 3 of these biopsy showed carcinoma and in one lymphogranuloma; the fifth case was diagnosed only by esophagoscope. In all the disease was advanced, with complete or almost complete dysphagia, and all were treated with radium. In every instance symptoms disappeared, the general condition improved, and the tumor was no longer demonstrable by esophagoscope. At the time of writing all five patients were symptom-free and in good health from fourteen to twenty-four months after treatment. There are no illustrations.


A description is given of certain roentgen findings that are highly suggestive of malignancy, such as the large triangular niche and the niches in filling defects. No new material is included. Ten roentgenograms are reproduced.


Gutmann designates as "molded" the radiographically demonstrable filling defects in certain cases of gastric cancer in which the sides are straight, converging, and rigid, while the base is also straight and rigid, with or without ulceration. This type of image indicates infiltration, usually by tumor, sometimes by fibrous tissue in chronic ulcers. A case is reported which was clinically typical of ulcer but which showed this molded filling-defect. At operation an early carcinoma was found. Four roentgenograms and a photograph are reproduced.

A man sixty-five years of age with a six months' history typical of peptic ulcer was found, on radiographic examination of the stomach following barium ingestion, to have a small prepyloric lesion. By magnification of the plates a small filling defect was seen about 15 cm. in diameter. This was interpreted as suspicious of cancer. A therapeutic test was made, an ulcer régime being carried out for three weeks. At the end of this time there was complete subjective recovery, but the roentgen picture remained unchanged. A subtotal gastrectomy was performed, although grossly the stomach appeared normal. The diagnosis was confirmed microscopically by the discovery of a very early adenocarcinoma. No follow-up is given. Four roentgenograms and 4 photomicrographs are included.

Edward Herbert, Jr.


Metastases in the supraclavicular lymph nodes, generally on the left side (Virchow's node), are a late manifestation in cases of gastric cancer and preclude operative intervention. Histologic diagnosis of metastatic cancer is, however, necessary, as demonstrated by biopsy evidence of tuberculosis in a node of this type in a sixty-year-old woman with a pyloric cancer. A gastric resection was subsequently performed.

Milton J. Eisen


The erythrocyte sedimentation rate was increased in 53 cases of gastric cancer and normal in 7. In 120 cases of gastric or duodenal ulcer the rate was increased in 12 cases and normal in 108.

Milton J. Eisen


Gutmann briefly reports 5 cases of far-advanced, apparently inoperable carcinoma of the stomach, treated surgically. One patient died of recurrence after two years, two were symptom-free after two and five years respectively, and two were free of recurrences but died of intercurrent disease eight and twelve years after operation. The author believes that, unless there is definite evidence of metastasis outside the regional lymph nodes, no case should be considered inoperable in spite of severe anemia and cachexia, if the patient can be temporarily improved enough to stand operation. Five illustrations are included.

Lion endorses these views, but adds that if a case is inoperable according to the above criteria irradiation should be tried. He briefly mentions two cases treated by deep radiotherapy. One patient was symptom-free fourteen years later, the other was lost sight of after ten years, at which time he was apparently well.

Edward Herbert, Jr.


A general discussion.

Six cases are briefly presented in which round filling-defects were seen in the stomach on radiographic examination. One proved to be a myoma with malignant degeneration, three were carcinomas, and two were not proved histologically. There are no illustrations.

Edward Herbert, Jr.


Two cases of scirrhous cancer of the stomach in the form of linitis plastica in patients aged forty-four and fifty are recorded. Necropsy revealed diffuse metastases in the abdomen in association with circumscribed nodular growths, and diffuse infiltrations resembling the primary growths in the walls of the small and large bowel in the first patient and in the large intestine alone in the second. Photomicrographs are included.

Milton J. Eisen


A woman sixty years of age was found to have a macrocytic anemia, gastric achylia even after histamine, neurological signs of combined sclerosis of the spinal cord, and pyloric stenosis. Liver therapy improved the blood picture and the neurological symptoms, and a gastric resection was then performed. A very small carcinoma was found at the pylorus, probably on the basis of an old ulcer with previous partial stenosis. The patient made an uneventful recovery.

Two roentgenograms, two photographs, and a photomicrograph are included.

Edward Herbert, Jr.


A man thirty-five years of age gave a typical history and roentgen picture of a small peptic ulcer on the lesser curvature. Ten months later, when he had failed to respond to medical treatment, roentgen examination showed an increase in the size of the ulcer. An operation was performed and an early cancer was resected. The regional lymph nodes were not involved. There is no follow-up. Seven illustrations are included.

Edward Herbert, Jr.


A fifty-four-year-old woman had vague epigastric pains of seventeen years' duration. Roentgen examination of the stomach ten years previously had failed to reveal evidence of any abnormality. For five years, however, the patient had been conscious of a slowly growing mass in the epigastrium. At operation, a pedunculated tumor, approximately 15 cm. in diameter, was found attached to the serosa of the anterior surface of the stomach. This was removed with 3 cm. of the surrounding gastric tissue. There were no metastases. Histologically the growth was a spindle-cell sarcoma containing areas suggestive of reticulum-cell sarcoma. The intragastric portion extended to the submucosa. Mitotic figures were uncommon. Four years later the patient was well and without evidence of recurrence. A photograph of the gross specimen and 2 photomicrographs are reproduced.

Milton J. Eisen


A man of seventy-five complained of attacks of abdominal pain, anorexia, and loss of weight. Laparotomy revealed a hard nodular growth almost completely encircling
the jejunum in its midportion, resulting in obstruction and consequent great hypertrophy and dilatation of the bowel above that point. A resection was followed by lateral anastomosis. At the time of operation a nodule was palpable in the liver but after two years the patient was still alive. Photographs of the tumor are included.


These three papers are in the form of a general discussion in answer to a questionnaire. They stress the value of early diagnosis and surgical treatment in cancer of the large intestine.

**Milton J. Eisen**

**Carcinoma of the Ileo-Caecal Valve. A Report of Three Cases and Statistical Survey, H. Wapshaw.** In a series of 455 carcinomas of the colon seen at the Western Infirmary, Glasgow, in a period of ten years, there were 6 at the ileocecal valve, or 1.32 per cent of the total. The proportion to cecal carcinoma was about 1 to 6. In a second series of 60 cases coming to autopsy the findings were practically the same. It would appear, therefore, that the incidence of carcinoma at the ileocecal valve is lower than at other physiological narrowings of the alimentary tract, such as the pylorus and the pelvi-rectal junction. This is probably attributable to the non-irritating nature of the fluid alkaline chyme, which contrasts strongly with the more solid acid contents of the stomach and the sigmoid colon.

Three cases are recorded here. One of these arose at the valve proper, one implicated the distal portion of the ileum as well as the valve, and one is described as a cecocolonic carcinoma, involving the contiguous wall of the cecum and colon. One patient died postoperatively; two were alive and well at the time of the report, one less than three years, the other less than a year after operation.

Photographs of the gross specimens and a photomicrograph are included.


Two cases are recorded: a lipoma of the ileocecal valve in a woman of fifty-two and a mesenteric fibroma of the terminal ileum in a colored laborer of forty-two. Both patients died postoperatively and necropsies were done. The literature on each type of tumor is reviewed and references are furnished. Photographs of the gross specimens are included.


This is a general discussion of carcinoma of the cecum, largely from the point of view of surgical technic. Le Gac believes that for any cancer of the large bowel a hemicolecetomy should be performed. With carcinoma of the cecum a two-stage operation should always be done: an ileotransversostomy, followed a month later by resection of the right half of the colon. Four drawings are included. Edward Herbert, Jr.


Two general lectures on clinical material. The results of radical surgery for cancer of the large intestine have been reported elsewhere (Finsterer: Wien. klin. Wehnschr. 50: 236, 1019, 1059, 1937. Abst. in Am. J. Cancer 37: 146, 1939).


A case of papillary adenocarcinoma of the sigmoid is recorded in a woman aged fifty-five. The colostomy opening reopened after closure and a nodule was discovered.
at the site. This was excised and the patient lived five years. Death was due to
generalized metastases. It is suggested that it might be well to maintain an open
colostomy for some time following the Mikulicz operation in order to detect recurrences
in the intestinal wall.

Cancer of the Transverse Colon with Pelvic Dolichocolon and Krukenberg Tumors,
P. Halbron, J. Lenormand, and M. Jais. Cancer du cölón transverse avec
dolichocolon pélvien et tumeur de Krukenberg, Bull. et mém. Soc. méd. d. hôp. de

A woman sixty-eight years of age had a carcinoma of the transverse colon which
cause death six months after the first symptoms. The unusual feature was the pres-
ence of a pelvic or sigmoid dolichocolon and megacolon which obscured the visualization
fluoroscopically following a barium enema, and so greatly delayed the diagnosis. These
findings were verified at autopsy, and the presence of Krukenberg tumors was also
discovered. There are no illustrations.

Rationale of the Surgical Technique in Carcinoma of the Rectum and Sigmoid, J. M.

The authors discuss the various factors which enter into the surgical treatment of
rectal carcinoma. They prefer a simple perineal resection, for which Lynch has devised
a special technic (Am. J. Surg. 36: 618, 1937), or a one-stage perineo-abdominal opera-
tion, with either an abdominal or a perineal stoma. The latter they regard as
preferable both functionally and psychologically. There are no illustrations and no
references.

Electrosurgery in Benign Tumors and Precancerous Conditions of the Anorectal Region,

The author advocates electrosurgery for anorectal adenoma and papilloma and
describes his technic. Under the heading precancerous conditions he mentions es-
specially squamous epithelial excrescences and granulomata arising in the margins or
craters of chronic ulcers, fissures, keloids, and perineal fistulous openings particularly if
they involve the anal canal proper. These lesions may be advantageously removed with
the cutting current, followed by free and deep coagulation.

Chromargentaffine Tumors of the Appendix, A. M. Gnassi. Am. J. Surg. 40: 470–474,
1938.

Five cases of appendiceal carcinoid are recorded and photomicrographs of the tumors
are reproduced.

Ulcerating Carcinoid Tumor of Meckel's Diverticulum: Case Report, D. C. Collins,

A case is recorded of a carcinoid tumor of Meckel's diverticulum in a man of fifty-
six with symptoms suggestive of a chronic peptic ulcer. Four other cases have been
recorded in the literature and data on these are briefly presented. The literature of
tumors of Meckel's diverticulum and of gastro-intestinal carcinoids is reviewed and a
bibliography of forty-three references is appended. A photograph of the operative
specimen from the authors' patient and three photomicrographs are reproduced.

Topographic Alterations in the Digestive Tract Associated with Extrinsic Tumors, L.
Guardabassi and R. Camerini. Alterazioni topografiche dei segmenti del tubo

A general discussion accompanied by roentgenograms. Milton J. Eisen

In a period of twelve years there were seen in the University Hospital (University of Michigan) 158 examples of carcinoma of the pancreas or of the extrahepatic bile ducts. Of these, 109 were verified by operation or necropsy and upon this group the present report is based. The pancreas was involved in 83 cases, the common duct in 9, the ampulla of Vater in 9, the hepatic duct in 4, and the cystic duct in 4. The ratio of male to female patients was approximately 2 to 1.

Loss of weight, usually rapid and producing extreme emaciation, was an almost constant finding. The next most frequent symptom was jaundice, which was a definite complaint in 83 cases, or 76 per cent. Abdominal pain occurred in two-thirds of the patients. In the non-icteric patients, notably those with lesions in the body or tail of the pancreas, it was almost always the chief complaint as well as the initial symptom (see Ransom: Arch. Surg. 30: 584, 1935. Abst. in Am. J. Cancer 25: 472, 1935). It occurred most frequently in the right upper quadrant and mid-epigastrium. Other symptoms of more or less frequent occurrence were loss of strength, constipation, diarrhea, nausea, and vomiting. The course is usually rapid and most of the cases were far advanced when the patient was first seen.

Laboratory studies were of little value for diagnosis, most of the findings being within normal limits. Roentgen studies were made in 93 cases and in one fourth of these were suggestive of a pancreatic tumor. The difficulties of diagnosis are greater in the absence of jaundice than in its presence. Thus among 72 cases with jaundice a correct preoperative diagnosis was made in over two-thirds, but of 17 cases without jaundice only 41 per cent were correctly diagnosed.

Eighty-nine of the 109 patients were operated upon and in about 83 per cent of these Courvoisier's law, namely that distention of the gallbladder is the rule in common duct obstruction due to other causes than stone, was found to hold true. This law the author found to be of greater value to the surgeon at laparotomy, as indicating the type of obstruction present, than to the diagnostician, since a distended gallbladder may easily escape the examiner's notice when the abdominal wall is thick and the right lobe of the liver is enlarged.

Evidence of antecedent biliary tract infection, as indicated by contraction of the gallbladder or thickening of its wall, was noted in approximately one-eighth of the operative cases, while calculi were present in the gallbladder in one-sixth.

Except for 3 cases in which resection of the lower end of the common duct was done for carcinoma of the ampulla of Vater, only palliative measures were undertaken. Cholecystogastrostomy was the measure of choice. The total hospital mortality for the 89 cases was 27 per cent, one-third of the operative deaths being due to hemorrhage.

Post-mortem examination showed the most common site of metastases to be the regional lymph nodes, while metastases to the liver and lungs occurred next in frequency. In the group of 30 cases examined post mortem, there were four instances of multiple malignancy.

A bibliography is appended. There are no illustrations.

Acute Transverse Myelitis Secondary to Primary Sarcoma of the Head of the Pancreas, L. Jacchia. Sindrome acuta di completa sezione transversa del midollo spinale in giovane con sarcoma primitivo della testa del pancreas, Policlinico (sez. med.) 44: 240-262, 1937.

A youth of twenty years died sixteen days after the sudden development of a flaccid paralysis of the lower extremities. The symptoms were preceded by increasingly intense back pain of one month's duration. A transverse myelitis at the eighth dorsal segment was evident clinically, and a partial block was verified radiographically after cisternal injection of lipiodol. There were no conclusive gastro-intestinal symptoms. Necropsy disclosed a large round-cell sarcoma of the head of the pancreas with metastases in the liver, kidneys, heart, and retroperitoneal lymph nodes. The prevertebral
tumor infiltrated the lower dorsal vertebrae and extended into the dura, leptomeninges, and roots of the spinal nerves. Focal areas of softening were present in the spinal cord in the region of meningeal infiltration. Roentgenograms, photographs of the gross specimens, and photomicrographs are reproduced. **Milton J. Eisen**


This is a report of a carcinoma of the body of the pancreas with radiographic studies and confirmation of the diagnosis at operation. It showed no unusual features. Illustrations are not included. **Edward Herbert, Jr.**


A detailed pathological report of a case of liver cirrhosis in a fifty-seven-year-old man, complicated by the development of early liver cancer. **W. Nakahara**


A single case is reported in which the radiologic sign described in the title was observed. There are no illustrations. **Edward Herbert, Jr.**

**RETROPERITONEAL TUMORS**


The author quotes Steele (Am. J. M. Sc. 119: 311, 1900), to the effect that about 57 per cent of retroperitoneal tumors occur in the lumbar region and in practically all of these the kidney is affected. A case is recorded in a man of thirty-nine. The tumor had caused distortion of the right renal pelvis and displacement of the upper portion of the right ureter, demonstrable roentgenographically. It was found at operation to lie along the mesial border of the kidney, and to extend from the pelvis downward below the lower pole. It had not invaded the kidney and was easily removed. It proved to be a fibroma. Four roentgenograms and two photomicrographs are included. References are appended. **Edward Herbert, Jr.**

**Autopsy Case of Retroperitoneal Teratoblastoma in a Thirty-five-year-old Man, S. Tsuruoka.** Ein Sektionsfall von Retroperitonealteratoblastom bei einem 35 jährigen Mann, Gann 33: 18–30, 1939.

A pathological description of a large teratoblastoma the size of a human head is given. The tumor originated from the retroperitoneum and showed metastases in the liver, lung, and retroperitoneal lymph nodes. Photomicrographs are included. **W. Nakahara**


A man thirty-five years of age with a unilateral painful edema of the right leg was found to have a large tumor in the right lumbar fossa. This was retroperitoneal and encapsulated. It was removed surgically and weighed two kilograms. Microscopically it was a benign schwannoma. The patient died postoperatively of an empyema. A photograph and two photomicrographs are included. **Edward Herbert, Jr.**

A man forty-nine years of age suffered from lumbar pain, progressive anemia, loss of weight, and a regular intermittent fever. At autopsy bilateral primary tumors of the adrenal cortex were found, with extensive metastases throughout the body. There are no illustrations.

THE FEMALE GENITAL TRACT


No adequate explanation exists to account for the great variation in the growth rate of uterine cancer. It is at times fallacious to judge the age of a tumor by its size. Some cancers of the cervix remain stationary, for periods as long as one to two years; others, after first producing symptoms, grow rapidly and kill the patient within several weeks. According to the author pregnancy exerts an inhibiting influence on the growth of uterine tumors.


General remarks stressing the obvious importance of a meticulous history for an approximation of the age of a tumor based on the length of time symptoms have existed.


This is a general paper containing a restatement of Hinselmann's views on the value of colposcopic examination in the diagnosis of early cancers of the cervix. (See, for example, Absts. in Am. J. Cancer 23: 188, 414, 424, 1935; 28: 206, 1936.) Several illustrations are included.


The author discusses the following measures as important for the prevention of uterine cancer: recognition and correction antenatally of complicating conditions that may lead to uterine damage during labor; avoidance of intracervical maneuvers, both manual and instrumental, as for example forceful dilatation during the second stage of labor; prevention or prompt correction of all injuries of the cervix sustained during labor; early recognition and surgical correction of all lesions of the cervix, puerperal or otherwise, that favor the development of cervical cancer; immediate determination of the source and cause of leukorrhea or bleeding, especially in patients approaching or in the menopausal years; the realization that usually it is the first move of the doctor in these circumstances that determines the fate of the patient; absolute abstinence from all forms of local treatment in patients presenting abnormal symptoms until the site and cause of the symptoms are definitely ascertained; more extensive and immediate practice of biopsy, either by test excision or test curettage, in all patients presenting (a) suggestive symptoms or (b) suspicious lesions; periodic examination of all women who have borne children and, particularly, those in the menopausal years.

The results of radiotherapy in 126 cases of cervical cancer are tabulated. The author attempted to administer large doses quickly (2,400 mg. hr. radium element or 110 to 120 per cent of the skin unit roentgen irradiation). Of the 126 patients, 36 (38.5 per cent) were well after five years. There were 24 (40 per cent) tumor-free patients in the group of 60 with operable tumors, but only 12 (18.2 per cent) of 66 patients with inoperable tumors were cured.


Blood counts were done in 110 cases of carcinoma of the uterus before radiotherapy was instituted and two months after the last irradiation, i.e. four months after the first count. These investigations did not reveal any essential difference between carcinoma of the cervix and of the fundus. The carcinomas were classified according to the four groups of the League of Nations. The author points out the importance of recording patients in this way and of comparing only those belonging to the same group, since blood changes may be due not only to irradiation but also to the tumor.

Before treatment the hemoglobin and the number of red blood cells were reduced proportionately to the extent of the cancer. There was a slight leukocytosis in early cancer, and a very marked leukocytosis with a shift to the left in advanced cases.

Two months after radiotherapy consisting of three radium and one roentgen irradiation [no further details are mentioned] no noteworthy changes in the erythrocytes were observed, though there were various changes in the white count. The alterations are difficult to explain and classify. Only in those cases where well known post-irradiation changes, as decrease of leukocytes and lymphocytes, with increase of eosinophiles, were found, may an exclusive x-ray effect be considered. The blood count, therefore, seems to be of greater significance for prognosis than for evaluation of a possible radiation effect. If hemoglobin and erythrocytes increase after the irradiation, while the leukocytes decrease, the shift to the left diminishes, and the lymphocytes remain high, the prognosis is favorable. It becomes unfavorable if a decrease of hemoglobin and erythrocytes remains unchanged or becomes more evident after radiotherapy. A leukocytosis with a shift to the left and decrease of lymphocytes and eosinophiles is also an unfavorable sign. Four tables and a few references are included.


Froboese believes the case described by Vosskühler (Zentralbl. f. allg. Path. u. path. Anat. 68: 116, 1937. Abst. in Am. J. Cancer 37: 150, 1939) as myoblastic myoma of the uterus to be a typical example of deciduoma resulting from a decidual reaction in endometrial tissue situated in the uterine musculature.


Report of a case.


The author offers a general discussion of chorionepithelioma and reports 3 cases, all associated with hydatidiform mole. In two cases positive Friedman tests were obtained before operation but these became negative following panhysterectomy. The remaining case was seen before the development of the urine test for pregnancy and was
diagnosed by biopsy. This patient was alive and well after twenty-two years. The other cases were more recent. Photomicrographs and references are included.


A girl of fourteen years died of extensive generalized metastases of a teratomatous chorionepithelioma of the right ovary six weeks following extirpation of the primary tumor. The urine contained large quantities of gonadotropic hormone (200,000 mouse units per liter). The presence of the hormone in the tumor tissue was ascertained by a positive Ascheim-Zondek reaction in infantile mice following the implantation of fragments of a liver metastasis. Photomicrographs are included. Milton J. Eisen


Three cases are described. The first patient, aged twenty-five, with a history of amenorrhea of five months' duration following irregular uterine bleeding over a period of eight months, was cured by excision of the tumor. The growths in the second and third patients, aged sixty-five and seventy-one, gave rise to sudden post-menopausal bleeding. In these cases the tumor and uterus were removed and histologic evidence was obtained of glandular cystic hyperplasia of the uterus. The second patient was cured while the third died postoperatively of peritonitis. The tumor stroma in the latter case showed evidence of sarcomatous alteration. Photomicrographs are included. Milton J. Eisen

**Case of Giant Ovarian Cyst Undergoing Carcinomatous Change While Remaining Untreated for Forty Years**, H. Arimitu. Ein Fall von 40 Jahre lang unbehandelt gelassenen, karzinomatösen (Psammokarzinom) entarteten riesigen Ovarialzysten, Gann 33: 45–56, 1939.

A woman who had had an abdominal tumor since the age of thirty-four, without treatment, died from carcinoma at the age of seventy-five. Histologic investigation established the fact that the carcinoma was derived from an ovarian cyst, and the conclusion was drawn that the cyst had undergone cancerous change while remaining untreated for forty years. A detailed description of the tumor is given. W. Nakahara


The literature on ovarian hypernephroma is reviewed and a case is recorded. The patient was well nineteen months after removal of the tumor. A photomicrograph is reproduced and forty-five references are appended.


Five cases of so-called precancerous lesions of the vulva are recorded, in three of which carcinoma developed.


In the opinion of the author carcinoma of the vulva is best treated by radium therapy of the primary tumor, preferably by the insertion of radium needles, combined with surgical dissection of the regional lymph nodes even when these appear to be free of metastases. Regardless of the size or site of the primary tumor, the nodes on both
sides should be removed. By following this scheme of treatment the best results obtainable at the present time can be achieved. The technic of radium application and surgical dissection is described in detail, but no new cases are reported, and there are no illustrations.

Edward Herbert, Jr.


A review of the current literature.

Milton J. Eisen


General remarks.

Milton J. Eisen

THE GENITO-URINARY TRACT


Clinically neoplasms of the renal pelvis are indistinguishable from growths in the parenchyma of the kidney. Characteristic signs of the former, however, are frequently disclosed by retrograde pyelography. These include a constant filling defect in the pelvis, complete outline of the calyces, absence of destruction of the calyces, and hydronephrotic enlargement of the urinary passages secondary to obstruction. In some instances displacement of one or more calyces may render them invisible. Tumors of the pelvis complicated by rupture into the renal parenchyma and renal growths associated with extension into the pelvis may yield similar roentgen signs. Case histories, photographs of gross specimens, and pyelograms are reproduced.

Milton J. Eisen


This is a short description of the pyelographic findings in the case of a large renal tumor in an infant. No follow-up is given. One roentgenogram is shown.

Edward Herbert, Jr.


Following a year of intermittent hematuria a forty-eight-year-old woman complained of a mass in the right lower quadrant with abdominal pain. A diagnosis of tumor in a ptosed kidney was made by pyelography, nephrectomy was performed, and the tumor was found to be a carcinoma. Two months later the patient was in good health. There are no illustrations.

Edward Herbert, Jr.


A woman of unstated age had an enormous tumor which extended obliquely downward from the left iliac fossa to the right. A pyelogram showed the left kidney to be normal, with the deformed pelvis of the right kidney directly under it on the left side. Thus the large tumor had pushed the kidney down and across the mid-line. No operation or autopsy was performed, and there are no illustrations.

Edward Herbert, Jr.


A report of a renal carcinoma in a man of sixty-six.
Two Cases of Embryonal Mixed Tumor of the Kidney, T. EMI. Zwei Fälle von embryonaler Mischgeschwulst der Niere, Gann 33: 66–82, 1939.

Report of two cases with detailed pathological descriptions, one in a five-year-old and the other in a thirteen-month-old boy. Both tumors were remarkable in showing hornification of the pavement epithelium, a rare finding in embryonal mixed tumors of the kidney.

W. NAKAHARA


Five years ago the author with Pauchet and others reported a case of advanced carcinoma of the right kidney in a young girl (Pauchet et al.: Bull. et mém. Soc. d. chirurgiens de Paris 24: 70, 1932. Abst. in Am. J. Cancer 16: abst. p. 1467, 1932). At the time of the present writing the patient, whose prognosis was thought to be poor, is symptom-free and leading an active life six years after nephrectomy.

EDWARD HERBERT, JR.


Sixty-seven cases of carcinoma of the bladder were treated by deep radiotherapy from 1921 to 1935, but in only 14 of these was biopsy done. Eighteen patients, or 27 per cent, were symptom-free at the time of writing, two to thirteen years after treatment. There are no illustrations.

EDWARD HERBERT, JR.


A man forty-three years of age had gynecomastia with masses of enlarged supraclavicular, mediastinal, and abdominal lymph nodes. Biopsy showed a tumor resembling a seminoma, but both testes were clinically normal. Radiotherapy brought about improvement and the patient returned to work, but one year later the condition recurred and at this time a small firm nodule was discovered in the right testicle. Death occurred a month later. Hormonal studies on the patient’s second admission showed a constant increase of the gonadotropic hormone, prolain, in the blood, exceeding the amount found during pregnancy, while the blood folliculin or follicular hormone was low. At autopsy the testicular tumor was seen to consist entirely of seminoma tissue, while the metastases showed in addition ectodermal tissues of true chorionepithelioma. The enlarged breasts had a fibroadenomatous structure, but with no tendency to lactation. This last finding was believed to be secondary to changes in the hypophysis, which were typical of those of pregnancy. Three photomicrographs are included.

EDWARD HERBERT, JR.


A hernial sac, 2 cm. in thickness, was removed from a man of fifty-six years on whom operation for reduction of an inguinal hernia was performed. Histologic examination of the sac wall suggested fibromyxomatous alteration. [The neoplastic nature of the changes, however, appears questionable.] The sac consisted of fibrous tissue, which in some zones was relatively acellular and in others exhibited myxomatous degeneration, numerous blood vessels with thickened walls, and areas of hemorrhage with associated cellular reaction. Photographs and photomicrographs are reproduced.

MILTON J. EISEN

The findings in the cerebrospinal fluid in 300 cases of brain tumor are described. Diagnosis of tumor was confirmed by autopsy, operation, clinical and roentgen studies, puncture of brain tissue, or ventriculography. The most common tumor was glioma, found in 153 cases.

The spinal fluid was normal in 87 cases. Normal fluid is generally found with deeply situated tumors in the medulla and with glioma of the quadrigeminal region or pons, since no changes occur prior to infiltration of the brain surface. In some instances, however, of growths in intimate contact with the ventricles or subarachnoid space the fluid was unchanged. Basal tumors almost always give rise to spinal fluid alterations.

**Protein:** Increase in protein content is directly proportional to the relationship of tumors to the ventricles, their extension to the superficial cortical layers or, in the case of meningioma, to the relation of the tumor to the subarachnoid space. The greatest increase is produced by basal tumors. Necrosis and hemorrhage into tumors, in addition to causing xanthochromia, increase the protein in the spinal fluid. Changes in the spinal fluid are absent if degenerative changes occur in a tumor that has ruptured into a blocked ventricle.

The increase involves the albumin more than the globulin fraction. The total protein rarely exceeds 3 per cent. Rapid spontaneous coagulation of the spinal fluid was observed in one case of cerebellar glioma in which growth extended to the leptomeninges of the spinal fluid.

**Colloidal Gold Reaction:** Abnormal curves are found less frequently than changes in protein. With a moderate increase in protein, decolorization may occur at the middle dilutions, thus simulating a luetic or tabetic type of curve. In other cases decolorization of the colloidal gold at the highest dilutions results in a meningitic curve, while not infrequently a positive reaction occurring at the lowest dilutions imitates a paretic curve. The latter type is most commonly associated with acoustic nerve neurinoma.

**Cells:** An increase in the cell count occurred in one-third of the cases. The rise is rarely greater than 20 per cu. mm. In 14 cases a cell count of 100 or higher was observed. The maximum number of cells in this series was 444, occurring in a case of carcinoma of the sphenoid region with secondary infiltration of the brain. A sudden increase in cells generally signifies rupture of a tumor into the cerebrospinal system. The cells are chiefly lymphocytes, mononuclears, and plasma cells. Neoplastic cells were identified in the fluid in 4 cases—2 of glioma, 1 of secondary carcinoma, and 1 of diffuse melanoma of the meninges.

**Xanthochromia:** A moderate to pronounced yellow color was observed in 60 cases. This change is frequently a result of bleeding, but it may also denote transudation of blood plasma through the meningeal blood vessels in cases of compression by tumor and interruption to the flow of the cerebrospinal fluid. Pigment occasionally arises in the neoplasm. In cases of meningeal melanoma the fluid may be tinged with melanin pigments.

**Chlorides:** No changes were found.

**Sugar:** Blood sugar estimations in 86 cases gave values of 70 to 75 mg. per cent, or the upper limit of normal, in 17, and a content of 75 to 86.9 mg. per cent occurred in an additional 17. Moderate decrease in sugar occurred in 3 cases.

Examination of the ventricular fluid in 51 cases revealed changes only after infiltration of the walls of the ventricles or direct rupture in the cavities.

Photographs of gross specimens, photomicrographs and a bibliography are included.

Milton J. Eisen

**Spinal Fluid Wassermann Reaction in Paresis and Tumors of the Nervous System,** F. Cardona. Considerazioni e dati sulla constatazione di casi di paralitici progressivi con Wassermann negativa sul liquor e di casi di tumori del sistema nervoso con Wassermann positiva sul liquor, Riv. d. pat. nerv. 49: 77-84, 1937.

In this author's experience the spinal fluid Wassermann reaction is consistently positive in paresis and negative in the presence of tumor of the central nervous system.
Tumor may, however, be associated with a positive Pandy and Nonne test and a colloidal gold reaction of the paretic type.

**Monoplegias as Early and Prolonged Symptoms in the Course of Intracranial Tumors,**


Four cases are briefly recorded, illustrating the fact that a monoplegia may be the only symptom of a brain tumor over a long period. The monoplegia may be flaccid, spastic, or first flaccid and later spastic. In the four cases reported it persisted for periods varying from two to nine years, at the end of which time other symptoms or signs developed which led to a diagnosis. In such cases, where there is any doubt, ventriculography is indicated, since it may demonstrate an easily operable tumor. There are no illustrations.


This is a more detailed description of the surgical technic employed in the cure of 6 cases of brain tumor in children (see Monatschr. f. Kinderh. 68: 66, 1937. Abst. in Am. J. Cancer 36: 512, 1939). The tumors are listed here as 3 cases each of cerebellar astrocytoma, and ependymoma of the parietal or frontal lobe. Roentgenograms and photographs are reproduced.


The regressive changes in 15 cerebral gliomata are described. Classified histologically the tumor in 10 of these cases was a glioblastoma multiforme and in 1 case each medulloblastoma, astroblastoma, astrocytoma, ependymoma, and neurinoma. Slowly progressive focal regressive changes are first manifested by lipoid accumulation in the neoplastic cells. With advancing degeneration giant-cell formation is common. This is followed by an infiltration of phagocytic cells, among which may be identified macroglia, oligodendroglia, microglia, and fibroblast-like cells. The peripheral reaction in uninvolved tumor tissue is chiefly macroglial in origin. Glioma cells possess no phagocytosing power, and the lipoid products of degeneration are taken up by the reactive glial cells and leukocytes. The fat is not transported to the perivascular spaces, but tends to remain in the peripheral phagocytic cells. Later connective-tissue fibers penetrate the necrotic zones and undergo organization and hyalinization. Giall organization is uncommon. Secondary cyst formation, hemorrhage, and acute degenerative processes are frequent complications. Photomicrographs are included.


Following surgical removal of brain tumors pressing on the third ventricle there develops in some cases a marked fall in blood pressure with circulatory collapse, which is usually fatal. This may occur either with or without significant blood loss during the operation. When it follows the loss of a considerable quantity of blood, its severity is much greater than can be accounted for by the hemorrhage alone. Three cases are reported in which repeated transfusions caused only transient improvement; all three terminated fatally. Three other cases are described in which transfusions and ordinary supportive measures were of no avail, but in which intravenous injections of from 0.05 to 0.1 mg. of adrenalin repeated at intervals of one to three hours for a period of one to four days brought about a prompt and sustained improvement, with eventual recovery. The course of the reported cases is thought to give weight to the theory of the existence of a center regulating blood pressure situated higher than the medulla, possibly in the hypothalamus. There are no illustrations.
ABSTRACTS

Epilepsy and Psychic Disturbances in a Case of Erdheim Tumor Involving the Di-
encephalon, F. Cardona. Epilessia e disturbi psichici nei tumori di Erdheim

Craniofaryngioma or Erdheim's tumor is a rare neoplasm in the region of the
pituitary gland originating in remnants of the hypophyseal duct. Histologically one
type consists of solid nests of flattened epithelial cells, commonly showing evidence of
squamous metaplasia, and a peripheral layer of cylindrical cells. These formations
are not unlike adamantinoma. A second type is papillary in nature, the projections
being lined by squamous epithelium or cylindrical cells. Secondary degenerative
changes in the stroma are frequent.

The tumor in Cardona's patient was found at necropsy in a woman aged thirty-seven
who gave a history of epileptiform seizures and psychic disturbances of the manic type
over a period of three years. Evidence of mental deterioration, decrease in vision with
signs of optic nerve atrophy and choreiform movements were more recent in origin.
A suprasellar tumor, approximately 4 cm. in diameter, situated between the cerebral
peduncles, protruded upwards into the floor of the third ventricle. The growth origin-
inated in the infundibulum. The pituitary gland was not involved.

Microscopically the tumor consisted of isolated masses of epithelial cells in single
or double layers, embedded in a dense stroma in which hemorrhage, cystic spaces, and
zones of calcification were prominent. The tumor lacked the characteristic epithelial
elements described above. Degenerative changes and glial proliferation in the cerebral
cortex occurred secondarily at a distance as a result of an increase in intracranial pres-
sure. A photograph of the brain and two photomicrographs are reproduced.

Milton J. Eisen

Malignant Osteoblastic Dural Endothelioma, J. Erdheim. Über das maligne osteo-
1937.

Malignant osteoblastic dural endothelioma is an unusual tumor characterized by
neoplastic invasion of the skull and secondary reactive bone changes. The condition is
comparable to osteoblastic metastatic carcinoma. Clinically and radiographically the
dominant signs are those of bone tumor. Symptoms indicative of primary intracranial
disease are not prominent, as the dural tumor is generally a diffuse, flat, non-nodular
growth. The skull changes are readily confused with such primary bone lesions as
osteoma or hyperostosis. Operative intervention, if limited to the skull, is of no avail.
The osseous lesions, however, develop slowly and may involve large areas of the skull,
making radical intervention impossible. Two cases described by Erdheim are of this
type.

The first patient, a woman aged fifty-three, had a slowly growing mass in the left
frontal region of eleven years' duration. Evidence of cerebral involvement was limited
initially to weakness of the right lower extremity. Roentgen examination of the skull
revealed osteoma-like hyperostosis, the bony thickening attaining 2 cm. in certain zones.
The involved portions of the skull were resected, but there is no account of histologic
examination. One and a half years later the weakness of the left leg was more pro-
nounced and the left arm was paretic. Changes identical with those previously found
were again present in the skull. Microscopic examination of newly excised bone frag-
ments disclosed marked osseous proliferation with areas of eburnation secondary to
infiltration of a dural endothelioma. No attempt was made to resect the primary growth
in the dura.

The second patient, a forty-nine-year-old man, had a diffuse swelling of the left
side of the head. The peripheral zone was bony, the central portion soft. The mass
was first observed four years previously. Growth in recent years appeared to be more
rapid than at the onset. Except for loss of consciousness on a single occasion there
were no indications of brain disease. Diffuse thickening of the skull was observed
radiographically. The tabula externa appeared to be covered with innumerable pro-
lerations resembling osteophytes. In the central portion the underlying dural endo-
thelioma extended into the soft tissues of the scalp. The involved bone and soft tissues
were removed surgically but it was not possible to excise the primary tumor in the dura. The histologic findings were comparable to those of the previous case.

The third patient, a woman of fifty-six years, gave a three-year history of cerebral neoplasm with signs of increased intracranial pressure, visual disturbances, secondary optic nerve atrophy, and anosmia. Post-mortem examination disclosed a nodular endothelioma of the dura in the region of the lamina cribrosa. The mass compressed the frontal lobes and destroyed the olfactory nerves. It penetrated into the ethmoid and sphenoid sinuses but gave rise to no reactive changes in bone.

In the fourth patient, a man aged seventy-five, death resulted from cancer of the gallbladder. In addition, an osteoma and infiltrating dural endothelioma were found in adjacent portions of the falx cerebri.

Photographs of the patients, roentgenograms, and photomicrographs are included.

**Milton J. Eisen**


Two cases which the author surmises to be abortive or early Cushing's disease are described. Both patients were males aged twenty-seven years. In the first the condition was manifested by adiposity limited to the face and trunk, bluish striae on the hips and in the axillae, and hypertonia; in the second hypertension was absent. A severe head injury antedated the appearance of symptoms in each instance. There was no roentgen evidence of changes in the sella region, and osteoporosis, genital disturbances, diabetic manifestations, and abnormal excretion of gonadotropic hormone were absent in both cases. The treatment and course are not indicated.

**Milton J. Eisen**


A case of Cushing's disease in a ten-year-old girl is described with characteristic clinical features. The syndrome was manifested by obesity localized especially to the trunk and face and first observed in the second year of life (present weight 101 kg.), increased blood sugar (168 mg. per cent), moderate hypertonia, early osteoporotic changes in the skeleton, and enlargement of the sella turcica. Mental development was excellent. On the basis of the precocious aging of the patient and the acknowledged presence of libido, the author surmises a decrease in function of the pineal gland associated with the hypophyseal lesion. A photograph of the patient and a roentgenogram of the sella turcica are reproduced.

**Milton J. Eisen**


Horizontal nystagmus occurring in three patients with tumors in the dorsal region of the spinal cord disappeared following resection of the growths. The histologic diagnosis in two cases was neurinoma, and in the third is not recorded.

**Milton J. Eisen**


A man forty-nine years of age, who had been treated seven years for a recurring squamous-cell epithelioma of the right temporal region, developed neurological signs indicative of a partial paralysis of the left cranial nerves from the first through the sixth, and also the eighth. It was assumed that these findings were caused by metastases. Irradiation of the medulla (970 r) brought about improvement in the symptoms refer-
able to the third, fourth, fifth and sixth nerves, but no change in those derived from the first, second, and eighth nerves. There are no illustrations. **Edward Herbert, Jr.**

**Case of Neurinoma of the Trigeminal Nerve, A. Auersperg.** Ein Fall von Neurinom des N. trigeminus, Nervenarzt 10: 341–347, 1937.

A neurinoma of the intracranial portion of the trigeminal nerve in a man of twenty-four years was successfully removed surgically. The growth was situated extradurally at the base of the brain on the left side. Symptoms began two years previously and gradually increased in intensity. The patient first noticed deviation of the mandible to the left, followed by paresis of the left leg and alternating retention of urine and incontinence. Later he observed decreased sensibility on the left side of the face, weakness of the left arm, and difficulty in deglutition. Examination disclosed atrophy of the masticating muscles, disturbances in the region of the three sensory branches of the fifth nerve, massive paralysis of the peroneal muscles of the leg, slight muscular weakness of the arm, and a positive Babinski sign. The paretic signs in the extremities and the bladder disturbances were probably a result of collateral central effects of the tumor. Nine months after operation the gait appeared improved, but neurological examination showed a stationary condition. The tumor did not recur. There are no illustrations. **Milton J. Eisen**


A rare neurinoma, a subdural extramedullary growth originating from the anterior root of the spinal cord, is described in detail both clinically and pathologically. A photograph of the gross specimen, a photomicrograph, and a roentgenogram are reproduced. References are appended. **W. Nakahara**


Two cases of subcutaneous neurinoma are described. In the first patient an isolated growth was removed from the supravacicular region, and in the second four discrete nodules were excised from the leg. Photomicrographs are reproduced. **Milton J. Eisen**

**THE BONES AND JOINTS**


Eight cases of bone sarcoma developing several months following injury are described. The series included 1 case each of sarcoma of the femur, sacrum, rib, and humerus, and 2 cases each of sarcoma of the pelvis and tibia. Histologically 2 were centrally situated osteogenic sarcomata, 2 peripheral osteogenic tumors, and 4 periosteal fibrosarcomata. Amputation was resorted to in cases of tumor of the femur or tibia. In others resection was performed. The patients were symptom-free one to five years postoperatively. Operative treatment was declined in the single case of sarcoma of the humerus. Three photomicrographs are included. **Milton J. Eisen**


A woman thirty-three years of age with an osteosarcoma of the sacrum, which was diagnosed on roentgen evidence alone, was given deep radiotherapy over a long period. Four years later she was symptom-free, and a roentgenogram showed increasing calcification of the tumor. There are no illustrations. **Edward Herbert, Jr.**

A boy fifteen years of age had a large osteosarcoma of the pubic bone. Following radiotherapy he was symptom-free for a year, at the end of which time the tumor recurred and a hemopneumothorax suddenly developed secondary to radiographically demonstrable pulmonary metastases. Death occurred six months later. Apparently no autopsy was performed. Two roentgenograms are included.

Edward Herbert, Jr.


A boy sixteen years of age had a painful tumor of the right leg just below the knee. Radiotherapy produced local improvement, but numerous skeletal metastases developed and the patient died eight months after the appearance of symptoms. Microscopic studies carried out by Oberling on a biopsy specimen of the original tumor, material obtained by sternal puncture, and the metastases found at autopsy, led to a diagnosis of Ewing's sarcoma, or reticulo-endothelioma of bone. There were no unusual features in the case. Four photomicrographs and several references are included.

Edward Herbert, Jr.


This is a single case report of a tumor removed surgically from a man twenty-eight years of age. There were no unusual features. Two roentgenograms are included.

Edward Herbert, Jr.


An isolated giant-cell tumor of the spinous process of the sixth cervical vertebra was extirpated surgically in a man of twenty-three years. Postoperative radiation was administered and the patient was symptom-free after four years. Roentgenograms and a photomicrograph are reproduced.

Milton J. Eisen


An osteoma of the frontal sinus projecting into the orbit, which developed seven years after an injury in a man aged thirty-two years, was successfully removed. Roentgenograms, photographs, and photomicrographs are reproduced.

Milton J. Eisen


A girl thirteen years of age with congenital fragilitas ossium developed a swelling of the right thigh. A roentgenogram showed a large tumor of the femur which biopsy proved to be an osteochondroma. No follow-up is given. Four roentgenograms are included.

Edward Herbert, Jr.


Only three cases of intra-articular osteochondromatosis of the ankle are found in the literature. A fourth case is here reported in a man twenty-five years of age who devel-
oped a painful swelling of the ankle following trauma. Radiographically numerous small calcified bodies were seen in the ankle joint. The patient refused operation and no follow-up is given. Two drawings are included. Edward Herbert, Jr.


A man thirty-three years of age gave a thirteen-year history of progressive pain in both elbows. Roentgenograms showed articular chondromatosis with numerous deformities of the bones in the form of bony spurs. No follow-up is given. Two roentgenograms are reproduced. Edward Herbert, Jr.


A man thirty-seven years of age, eight months after a partial gastrectomy for carcinoma, developed an acute hemolytic anemia with jaundice, urobilinuria, increased fragility of the red cells, microcytosis, nucleated red cells, and fever. He died two months later and at autopsy widespread bone marrow metastases were found, as well as metastases in the abdominal and thoracic lymph nodes and a diffuse carcinomatous alveolitis in the lungs grossly resembling a bronchopneumonia. There was a splenomegaly with congestion and a large amount of blood pigment, but no splenic tumor, nor was there any growth in the liver. No isohemolysins could be demonstrated in the blood and the hemolysis was believed to be due to dyshematopoiesis caused by the metastases and resulting in the production of red cells with increased fragility. Two photomicrographs are included. Edward Herbert, Jr.


Two examples of osteitis fibrosa cystica are described. No unusual features were present in the first case. Diagnosis was substantiated by biopsy. In the second patient, in addition to the characteristic roentgen findings of the disease in the vertebral column, extremities, ribs, and portions of the skull, there was evidence of acromegalic changes in the lower jaw and extremities. The sella turcica was enlarged. A biopsy was not available. Specific surgical measures were not attempted in either patient. Roentgenograms are reproduced.

Kienböck in a comment (Fortschr. a. d. Geb. d. Röntgenstrahlen 56: 450, 1937) on this paper is inclined to consider the cases reported as Paget’s disease, while Šváb (p. 451) on the basis of the characteristic cystic changes in the skeleton observed radiographically (a confirmatory biopsy is recorded in the first case) maintains his original diagnosis of osteitis fibrosa cystica. Milton J. Eisen


A single typical case of multiple myeloma is reported in a man fifty-nine years of age. A study of the protein metabolism in this case showed, in addition to the classical Bence-Jones albumosuria, a hyperglobulinemia and an amyloidosis. It is suggested that the Bence-Jones protein is produced in the bone marrow by the action of the myeloma, that it passes from there into the circulation, eventually causing a hyperglobulinemia and an albumosuria. The hyperglobulinemia is considered as the link between the myeloma and the amyloid degeneration. Edward Herbert, Jr.
Diagnosis of Multiple Myeloma by Sternal Puncture, A. Ferrata and E. Storti.

A diagnosis of plasma-cell myeloma was established by sternal puncture in a woman of thirty-eight years with severe anemia unaccompanied by changes in the leukocytes of the peripheral blood. The bone marrow contained approximately 50 per cent plasma cells. Mitotic figures and abnormalities in the size and shape of the cells were common. Radiographic examination disclosed myelomatous lesions in the skull, ribs, vertebrae, and pelvis. Two illustrations of the bone marrow smears are included.

Milton J. Eisen


A single case is reported of plasma-cell myeloma proved by autopsy. It presented no unusual features. Two roentgenograms are reproduced. Edward Herbert, Jr.

THE LEUKEMIAS; HODGKIN'S DISEASE


Loss of weight, severe anemia, an increase up to 95,000 cu. mm. in the number of circulating white blood cells unaccompanied by characteristic qualitative alterations in the blood, and lymphocytic infiltrations in the liver were observed in 5 chickens five to twenty days after a single intramedullary injection of sternal marrow of four patients with acute or subacute leukemia. Cultures of the blood or tissues of the affected animals were negative. Bone marrow of a patient with chronic leukemia had little effect. Normal marrow produced no changes. Four photomicrographs are included.

Milton J. Eisen

Acute Leukemia in Childhood. An Analysis of Sixteen Cases, L. M. Simonson.

This is a brief review of 16 cases of acute leukemia in children. The most frequent complaints were weakness and pallor or anemia. Seven of the patients gave a history of bone or joint pain, swelling, or tenderness. A heart murmur was found in all but 4. The total white cell count showed considerable variation. In all but 3 cases it fell below 10,000 at some time during hospitalization; the highest figure was 725,000. Adenopathy, splenomegaly, and enlargement of the liver were present in almost every case, but in widely varying degrees. All the patients but one had died at the time of the report. The total duration of the illness in the shortest case was two months, in the longest 8.5 months, the average 4.2 months. References are appended.

Leukemic Infiltration of the Retina and Choroid in an Infant Treated by X-ray, B. Y. Alvis.

A fifteen-months-old infant known to have had leukemia since the age of three months had been blind for two weeks as a result of massive infiltration of the posterior segments of both eyes. Under local roentgen irradiation the retinal infiltrations disappeared and some improvement of vision occurred. The child died two months later.


A case is described of subacute lymphatic leukemia in a youth of nineteen years with leukemic infiltration of the dura mater and of the oculomotor, trochlear, trigeminal, abducens and hypoglossal nerves. In addition to the common symptoms of leukemia the cranial nerve involvement gave rise to paralysis of the ocular muscles, trigeminal...
neuralgia, paralysis of the motor root of the fifth nerve on the right side, and dysphagia. Photomicrographs are included.  

Milton J. Eisen


A general discussion on the specific skin manifestations occurring in the course of leukemia.  

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Transient edema of two to four days’ duration localized to the extremities is described in a twenty-nine-year-old man with chronic myeloid leukemia.  

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A man twenty-one years of age with acute lymphatic leukemia had a severe terminal hemorrhagic diathesis. A hemolytic streptococcus was found on blood culture. Autopsy revealed, in addition to the typical findings of an acute leukemia and septicemia, a marked irritative reaction and hyperplasia of the reticulo-endothelial system.  

Edward Herbert, Jr.


Five cases of acute myeloblastic leukemia are described in which the symptoms and hematologic findings of agranulocytosis, aplastic anemia, and thrombocytopenia predominated. In each case, however, immature leukocytes were observed in the blood smears, and examination of the sternal marrow in two instances corroborated the clinical diagnosis of leukemia. Necropsy verified the leukemia nature of the condition in all cases, as evidenced by complete replacement of the bone marrow by myeloblasts and leukemic infiltrations in the organs. The total circulating white cells varied from 700 to 3,900, with two exceptions: in one patient a terminal rise to 10,000 occurred, whereas in a second there was an early total count of 10,000, subsequently reduced to 1,600. Four patients had pronounced thrombocytopenia and one a normal platelet count.

Milton J. Eisen


Malarial therapy was administered to a woman aged fifty-five for progressive paralysis. Despite enlargement of the spleen a hematologic examination was not made. After one month further enlargement of the spleen was observed and examination of the blood revealed 3,326 white cells, of which 58 per cent were myelocytes. The patient died three and one-half months later. Necropsy disclosed evidence of syphilis of the brain and aorta, in addition to a generalized infiltration of the tissues with myeloblasts. [The probability is that the leukemia was independent of the malaria, since splenomegaly antedated the malarial treatment.]  

Milton J. Eisen


A man twenty-seven years of age presented a clinical picture of aleukemic leukemia. Sternal and splenic puncture and biopsy of a cutaneous nodule all showed an overwhelm-
ing preponderance of immature white cells, leukoblasts. No similar cells, however, were obtained in repeated blood counts, the only abnormal elements present being from 3 to 10 per cent myelocytes, and nucleated red cells up to 4 per cent. The total white cell counts ranged from 1500 to 4500. Marked improvement was brought about by radiotherapy, but late results are not given.

This variety of acute leukemia, with typical clinical manifestations, groups of primitive white cells throughout the body, and an aleukemic blood picture with complete absence of immature cells, comes under the heading of aleukemic leukoblastosis or acute cryptic leukemia. There are no illustrations. Edward Herbert, Jr.


The principles of roentgen therapy of chronic myeloid and lymphatic leukemia are enumerated. No new ideas are furnished. Milton J. Eisen


Gordon in 1932 demonstrated that the intracerebral inoculation of rabbits with an emulsion of lymphadenomatous lymphatic tissue was followed by the appearance of an encephalitic syndrome and this observation has become the basis of the so-called Gordon’s test, which has been shown to be positive in 69 to 85 per cent of cases of Hodgkin’s disease. It has been shown, however, that normal leukocytes, bone marrow and spleen may exhibit a similar encephalitogenic property. [See in this connection Turner et al.: Am. J. M. Sc. 195: 27, 1938, and McNaught: J. A. M. A. 111: 1280, 1938. Abst. in Am. J. Cancer 36: 338–339, 1939.]

In the present study of 100 cases of suspected Hodgkin’s disease special attention was paid to the variability of the reaction and an attempt was made to correlate this with the cellular composition of the glandular tissue. It was found that tissue which contained numerous Hodgkin’s giant cells was no more active in the production of the syndrome than specimens which did not. Nor was the result apparently affected by the relative incidence of neutrophilic and eosinophilic polymorphonuclear leukocytes or lymphocytes. On the other hand, it was repeatedly observed that large numbers of reticulum cells were encountered in those glands giving a positive reaction, which would suggest that these cells contain the encephalitogenic agent, having this characteristic in common with the normal polymorphonuclear leukocyte.

The author concludes his paper with the statement that the strongest evidence exists that lymphadenoma is essentially a neoplastic process. A bibliography is appended.


A case is described, with necropsy record, of Hogkin’s disease with involvement of the upper respiratory and gastro-intestinal tracts in a youth of eighteen years. An acute febrile syndrome developed terminally. Hodgkin’s lesions were present in the spleen, cervical lymph nodes, and mucosa of the pharynx, nose and accessory nasal sinuses. Photographs and photomicrographs are reproduced. Milton J. Eisen


A clinical diagnosis of Hodgkin’s disease was made in a girl twenty years of age. Radiotherapy was instituted and the huge shadows which had been present in roentgenograms of the chest disappeared. Death occurred two years later, of pulmonary tuberculosis. Two roentgenograms are included. Edward Herbert, Jr.

This chapter on "Health" by the Senior Medical Inspector of Factories, Dr. John C. Bridge, includes the following data for Great Britain.

Epitheliomatous Ulceration: The distribution of cases in relation to the causative agent and industry is as follows:

<table>
<thead>
<tr>
<th>Causative Agent and Industry</th>
<th>1934</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
<th>1938</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitch and tar</td>
<td>251</td>
<td>272</td>
<td>31</td>
<td>311</td>
<td>232</td>
</tr>
<tr>
<td>Patent fuel works</td>
<td>501</td>
<td>482</td>
<td>421</td>
<td>592</td>
<td>572</td>
</tr>
<tr>
<td>Tar distilling</td>
<td>2244</td>
<td>1917</td>
<td>132</td>
<td>1532</td>
<td>1132</td>
</tr>
<tr>
<td>Gas works</td>
<td>51</td>
<td>73</td>
<td>75</td>
<td>9</td>
<td>121</td>
</tr>
<tr>
<td>Other industries</td>
<td>31</td>
<td>3</td>
<td>9</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Pitch and tar</td>
<td>32</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>121</td>
</tr>
<tr>
<td>Shale oil works</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Mineral oil</td>
<td>6134</td>
<td>6220</td>
<td>4112</td>
<td>6325</td>
<td>5832</td>
</tr>
<tr>
<td>Cotton mule spinning</td>
<td>71</td>
<td>51</td>
<td>51</td>
<td>61</td>
<td>41</td>
</tr>
<tr>
<td>Other industries</td>
<td>17044</td>
<td>17138</td>
<td>14227</td>
<td>18331</td>
<td>16531</td>
</tr>
</tbody>
</table>

(The principal figures relate to cases; the superior figures to deaths.)

A new method which may assist in the prevention of mule spinners' cancer has been adopted by one large firm. This is "a simple anti-splash device whereby the spindle is lubricated by contact with a pad to which oil has been applied. The device is simple and combines several advantages. It makes for greater uniformity of lubrication, effects a considerable saving of oil, and reduces 'splashing' to such an extent that the workers' overalls after a full week's work are practically free of oil. Further progress in this direction will be watched with much interest."

Cancer in Nickel Workers: Four cases, two of the nose and two of the lung, have occurred during the year. The actual causal agent remains unknown.

Papilloma of the Bladder: "Five further cases of papilloma of the bladder in workers engaged in synthetic dye manufacture came to the knowledge of the Department. In each case the papilloma became malignant. The age at death varied from 38 to 75 years and the duration of employment in the works from 8 to over 40 years before recognition of the disease."

"As usual, the majority had come into contact with more than one dyestuff intermediate, but three were known to have had substantial contact with beta-naphthylamine. In two cases no contact with this chemical could be elicited, both men being employed mainly, if not solely, in the manufacture of Auramines which involved contact with various intermediates derived from dimethylaniline. One of the men was a Swiss who had been concerned only with the manufacture of Auramine for 21 years in England and previously for many years in Switzerland."

A scheme of careful medical supervision of the workers has been adopted by the employers.

Silicosis, Asbestosis and Cancer of the Lung: All the data considered are derived from cases in which an autopsy was performed. Cancer of the lung was found in 23 cases (2.4 per cent) out of 943 fatal cases in which silicosis or silicosis with tuberculosis was present. Among 347 deaths investigated during the same period, where silicosis might have occurred, autopsy showed no silicosis, but cancer of the lung was found in 17 cases (4.9 per cent). Cancer of the lung was present in 12 cases (11.6 per cent) out of 103 fatal cases in which asbestosis, or asbestosis with tuberculosis, was present.

"The importance of the most careful post-mortem examination is emphasized by a recent case in which naked-eye examination revealed only advanced asbestosis, but what appeared to be a small blood clot in a bronchus turned out on microscopical examination to be a carcinoma, and also another case in which silicosis, tuberculosis and primary carcinoma were all present in the lungs."

Statistical analyses are presented of 1643 autopsy cases from the pathological department of the Keio-Gijuku University Medical School, Tokyo, the autopsies having been carried out between March 1921 and February 1938. Nothing unusual is noted in these analyses.

W. Nakahara


Following the application of lay educational measures the percentage of operable cases of cancer accepted for hospital treatment varied as follows: uterine cancer, 21.9 per cent in 1930, 16.58 per cent in 1931, 35.5 per cent in 1932; breast cancer, 58.33 per cent in 1930, 56.57 per cent in 1931, 74.9 per cent in 1932. Since a greater number of institutions were included in the survey in each succeeding year the actual number of cases analyzed also increased (274, 386, and 555 operable cases of uterine cancer and 96, 111, and 338 operable cases of breast cancer respectively for the above years).

Delay in treatment resulted from failure to seek advice for definite symptoms, incorrect diagnosis, and administrative or economic difficulties. Factors mitigating against compulsory examination of all women older than thirty years for early cancer are: the cost of mass examinations, the lack of cooperation by healthy individuals, and the inability to recognize very early stages of neoplastic disease. The experience of Hinselmann is cited. Suspicious incipient cancer was diagnosed with the aid of the colposcope in 500 of 18,000 apparently healthy women, following which an amputation of the cervix was performed. Serial sections of the excised tissue disclosed malignant alteration in less than 10 per cent of the cases (see Lönnw: München. med. Wchnschr. 81: 1964, 1934. Abst. in Am. J. Cancer 24: 462, 1935).

Milton J. Eisen


A plea for the establishment of specialized institutes for the diagnosis and treatment of cancer and the training of an adequate personnel.

Milton J. Eisen


A survey of the present status of the cancer problem including clinical, experimental, and educational aspects.