
Thirty-five rats were kept on a diet of rice to which o-amidoazotolulol was added: 1 gm. in 150 c.c. of peanut oil to 500 gm. of rice. Five carcinomas of the liver were obtained, an incidence of 14.3 per cent for the series and of 100 per cent for all animals kept alive over 230 days. The first changes in the liver were observed after one month, when circumscribed groups of cells around the central vein became separated and polyhedral, presenting a mosaic-like appearance. Later a benign adenoma appeared in these areas, with subsequent malignant change. Metastases were found only in the lungs. Apparently no attempt was made to transplant these tumors.


Twelve illustrations and several references are included. Edward Herbert, Jr.

Production of Primary Bone Tumors (Fibrosarcoma of Bone) by Intramedullary Injection of Methylcholanthrene, A. Brunschwig. Am. J. Cancer 34: 540–542, 1938.

The author obtained fibrosarcomas of bone in 4 of 33 adult white rats given intramedullary injections of methylcholanthrene. Roentgenograms and photomicrographs are reproduced.


The authors have investigated the effect of oestrone on the incidence of bone tumors in a strain of mice in which 77.3 per cent of the females and only 29.6 per cent of the males normally develop these tumors. The detailed behavior of this strain has recently been described (Am. J. Cancer 33: 98, 1938). The mean tumor age for females is 15.3 months and for males, 17.7 months; the earliest tumors appear in the females after five months and in the males after six months.

A 5 mg. tablet of a commercial preparation of oestrone was implanted subcutaneously into each of a number of male mice when they were from three to four weeks old. About two and a half months later, when the animals were from three to five months old, they began to show symptoms of retention of urine. Two mice died and 5 others were killed before the symptoms became too pronounced. Both the dead mice had enlarged pituitary glands but the others appeared normal in this respect. All the animals were undersized and showed atrophy of the genital glands; retention of urine seemed to be due to prostatic enlargement. One animal had bilateral hydronephrosis. Of the 5 animals that were killed, 3 had bone tumors; one had osteomata of the right femur and right tibia; another had an osteoma of the right femur and two osteomata on the ribs; the third had an osteoma on a rib and early neoplastic changes in the right femur. Another animal showed early signs of neoplastic change in the femora, and the fifth mouse, only two months old and implanted with an oestrone tablet one month previously, had definite alterations in the right femur. By weighing the recovered tablets of oestrone it was found that each mouse had adsorbed from 20,000 to 30,000 international units of the hormone.

A. F. Watson

This is a short general discussion of the production of mammary carcinoma in mice by estrogenic hormones. For an account of the author's experiments and a bibliography, see the paper by Suntzeff, Burns, Moskop and Loeb (Am. J. Cancer 27: 229, 1936), to which reference is made. EDWARD HERBERT, JR.


Weekly injections of the synthetic estrogen, triphenyl ethylene, in oil have been shown to induce mammary carcinomas in male mice of the R.111 strain (Dobrovolskaia-Zavadskaja). Spontaneous tumors normally develop in the females but not in the males of this strain. The injections were given subcutaneously in amounts of 5 mg. (later reduced to 3 mg.) for periods of twenty-eight weeks or more. Of 53 mice injected, 26 were alive after seven months and at that time 10 had mammary carcinomas histologically similar in type to those produced by the injection of a natural estrogen in this strain. The earliest tumor appeared after eighteen weeks of treatment.

Several tumors were also produced in females of the same strain ovariectomized before puberty and afterwards injected with triphenyl ethylene. On the other hand, efforts to produce tumors by injections of this substance into males and females of a strain which does not spontaneously develop mammary carcinomas (black agouti) have so far been unsuccessful. A. F. WATSON

Comparative Study of the Ovaries and Other Endocrine Glands in Rats with Benign Transplanted Breast Tumors and in Normal Rats Injected with Sex Hormones, J. HEIMAN. Am. J. Cancer 34: 586-588, 1938.

Ovarian cysts were found in 29.8 per cent of 57 rats bearing transplanted mammary tumors. They occurred in 83 per cent of the rats with transplanted cystadenomata or adenomata of the breast, in 26.9 per cent of those with fibro-adenomata, and in 10 per cent of those with fibromata. None was discovered in rats with transplanted sarcoma. Of immune and control rats, only 10 per cent had ovarian cysts. Of 78 normal rats injected with estrogenic and gonadotropic hormones, 47.9 per cent showed ovarian cysts, and 37 per cent marked breast hyperplasia.

Some of the rats with transplanted fibro-adenomata or adenomata had, in addition to cystic ovaries, cysts in the adrenal, thyroid, and pituitary glands. Similar cystic changes appeared in the adrenals and thyroids of normal rats which were injected with combined estrogenic and gonadotropic hormones.

Among tumor-bearing animals which received hormone injections the incidence of cysts in the ovary and in the other endocrine glands was higher than among non-injected animals.


Among 28 normal rats receiving endometrial implants of Flexner-Jobling carcinoma during estrus or diestrus, only one take was obtained, indicating that the normal cyclic uterus of the rat is refractory to cancer implantation. A similar result was obtained in rats rendered anestrus by castration or a toxic state. The endometrium of pseudo-pregnant or lactating rats, on the other hand, was highly receptive to cancer implants. Of 20 pseudo-pregnant animals 17 gave a positive result, and of 2 lactating rats both developed tumors. The endometrial implants, however, never attained the size of control subcutaneous implants, due in great part to the extraordinary lack of stroma in the former. In the pseudo-pregnant rats reestablishment of the sex cycle was followed by a variable degree of inhibition of growth of the established implant, due apparently to the unfavorable nutritive capabilities of the normally cyclic endometrium.

In 15 of 17 rats bearing endometrial implants there was evidence of a decidual reaction, though this was usually less than that elicited by a developing embryo.
Transcervical inoculation of cancer suspensions gave no positive implants, though a decidual reaction was produced. Pseudo-pregnant rats of a strain resistant to implants of Flexner-Jobling carcinoma were susceptible to endometrial transplantation, but with the termination of pseudo-pregnancy the implant was extruded.

The excellent growth of implanted cancer in decidual tissue observed by the authors suggests to them that cancer-inhibiting agents obtained from placental tissue (Murphy and Sturm: J. Exper. Med. 60: 293, 1934. Abst. in Am. J. Cancer 23: 357, 1935) may come from the fetal part of the placenta rather than the maternal part.

References are appended.


In the course of an investigation of the repair of radial defects, 14 immature rabbits had a segment measuring approximately 20 mm. removed from the shaft of the radius on either side, the gap on the right side being bridged by an autogenous transplant of costal cartilage and that on the other left to fill with blood. No dressings were applied and immediate weight-bearing was permitted. In 12 of the 28 legs operated upon, partial or complete epiphyseal separation took place, and in 7 of these disturbances of longitudinal growth occurred, associated with the development of cartilaginous exostosis. In 2 of the animals there developed tumors bearing a close resemblance to the giant-cell tumors of man. Since these tumors are incidental to operative trauma, the author regards them as adding confirmation to the traumatic and inflammatory theory of the etiology of giant-cell tumors.

Roentgenograms, photomicrographs, and references are included.


During the last few years Strong at Yale has obtained the inhibition of spontaneous tumors in mice by feeding natural oil of gaultheria. Synthetic methyl salicylate he has found to be inactive, but the effective substance is present in the low-boiling fraction of the oil and is probably heptaldehyde (Science 87: 184, 1938).

Stimulated by these results, Boyland and Mawson in England have investigated the effect of a considerable number of aldehydes and ketones, as well as of some glucosides, on the progress of sarcoma 180 and in a few instances on spontaneous tumors. Citral produced some inhibition of both grafted and spontaneous tumors. Heptaldehyde inhibited spontaneous tumors but not grafted tumors.

Aldehydes are known to form peroxides on exposure to air and it is possible that different samples may contain varying amounts of organic peroxide. An anticarcinogenic action has been ascribed to formaldehyde peroxides by Maisin and his colleagues (Maisin, Pourbaix and Caeymaex: Compt. rend. Soc. de biol. 127: 1479, 1938), and it is considered that the effect of heptaldehyde may possibly be due to similar products, though no evidence for this is offered.

A. F. Watson


In a previous in vitro study of Walker rat carcinoma 256 there were observed in the earlier explants degeneration of the epithelial cells and predominance of fibroblasts, followed in the later generations by a gradual overgrowth of the fibroblasts by the epithelial cells (Am. J. Cancer 24: 566, 1935). In the hope of ascertaining the cause of this phenomenon and determining the conditions governing the growth of epithelial cells in such cultures, the study here recorded was undertaken.

Variations in the hydrogen-ion concentration of the culture medium were found to be without effect on the relative ratio of fibroblasts and epithelial cells. It was further shown that, while fibroblast cultures would rapidly outgrow cultures of the tumor epithelium, nevertheless when the two were placed in close juxtaposition the epithelial cells infiltrated and destroyed the fibroblasts, so slowly, however, that the effect was apparent only in long-term cultures. The addition of small quantities of a saline extract
of the Walker tumor to the medium accelerated the growth of the epithelial cells and inhibited growth of the fibroblasts, though this same extract exerted no growth-promoting action on normal mammary epithelium. In cultures of fibroblasts from the mammary region, however, it brought about striking changes in the nuclei, which assumed an appearance very similar to the nuclei of the tumor epithelium, but injection of these transformed fibroblasts into normal rats yielded no growth. Photomicrographs show the change in the character of the fibroblasts.

References are appended.


Cultures of Jensen rat sarcoma were grown in Carrel flasks and the rate of glycolysis was changed by substituting fructose or galactose for glucose. The aerobic lactic acid fermentation then fell 40 to 70 per cent, but, despite this drop in lactic acid fermentation, the cultures spread and grew at the same rate. References are appended.


This is the fourth of a series of papers on the production of melanosis in fishes by selective matings. The authors' observations are presented in detail, with numerous illustrations, and must be consulted in the original. They add further evidence for the heritability of melanotic neoplasms in fishes and indicate the special importance of hybridization as a prime factor in tumor development. An interesting finding was that the intensity of melanosis within interspecific hybrids varies directly with the distance between the habitats of the species. References are included.


A descriptive account of a carcinoma of the thyroid with extensive secondary growths in all lobes of the lungs, in a gray wolf (Canis nubilis). The animal was originally captured in the Colorado mountains as an adult and had been in the New York Zoological Garden since 1929. The paper includes a survey of the literature relevant to the occurrence of malignant tumors in the thyroid gland of mammals.

A. F. Watson


A fuller account of these observations appeared in the Am. J. Cancer 33: 98–111, 1938.

L. Foulds


The authors previously reported that four carcinogenic agents sensitized the skin of mice to light and also had a photodynamic action on infusoria (Nature 140: 588, 933, 1937. Abst. in Am. J. Cancer 32: 136, 291, 1938). They now describe experiments in which various cyclic hydrocarbons were tested on the infusorian, Coleps. With few exceptions there was a correlation between the photodynamic and carcinogenic activities. The photodynamic action was apparently due to water-soluble impurities formed from the hydrocarbons under the action of light.

L. Foulds

A statistical study was made of 201 cancer patients and 1977 controls to evaluate the relative incidence in the two groups of four endogenous factors: (1) the survival of the parents to the age of seventy or over; (2) at least four older siblings; (3) a history of cancer in other members of the family; (4) the absence of previous acute infectious disease. The two groups showed no difference as regards any one of these factors, but the conjunction of two, three, or all four of them was much more frequent in the cancer group than in the controls. It is admitted that the series is too small to allow of definite conclusions, and is urged that similar studies be carried out where there is more material.

Edward Herbert, Jr.


In a series of 4258 necropsies thrombosis of the heart, veins, or arteries was found in 617, though this was not necessarily the cause of death. In 17 of the cases of cardiac thrombosis there was an associated carcinoma. Carcinoma was found to be the most common cause of venous thrombosis in the neck, abdomen, pelvis and extremities. It played a minor rôle in arterial thrombosis except for the pulmonary arteries.

Multiple thrombosis was of especially frequent occurrence in carcinoma of the pancreas. In 56.2 per cent of the cases of carcinomata in the body or tail of the pancreas at least a single thrombus was present; in 31.3 per cent of these cases widely disseminated venous thrombosis occurred. Carcinoma arising in the head of the pancreas was associated with multiple thrombosis in 9.7 per cent of the cases. The authors suggest that the frequent occurrence of thrombosis in pancreatic cancer may possibly be due to an increase in lipase in the intestine, which may influence the coagulability of the blood by a more efficient digestion of fats and absorption of the fat-soluble vitamin K.

A bibliography of sixty-eight references is appended.


Studies on the vitamin A and C content of patients suffering from carcinoma were undertaken to determine the relation to cachectic states and tumor growth. Patients with early carcinomas with only local growth and with no necrosis, no metastases, and no cachexia showed no disturbance of vitamin A metabolism. Nor was this disturbed by widespread metastases or even by liver metastasis, unless there was extensive liver destruction. Early carcinomas showed a normal carotin and vitamin A content of the blood serum with no excretion in the urine. In more advanced stages of the disease, with secondary complications, as bleeding, infection, and the like, hypovitaminosis occurred.

Vitamin A disturbances are not characteristic of carcinoma but, like cachexia, constitute a secondary symptom.

Reduction of vitamin A and its pathological excretion in the urine indicate a simultaneous marked reduction in vitamin C. Toxic products liberated by a carcinoma or its metastasis are not responsible for hypovitaminosis. The more marked an accompanying infection is in a carcinomatous patient, the more marked is the combined hypovitaminosis.

Oral administration of vitamin C had no effect in increasing the firmness of the tissue in a carcinoma.

Seaton Sailer
ABSTRACTS


From the point of view of oncology the perivisceral, perineural, and intermuscular fat tissues and the bone marrow may be regarded as a single organ, the deep adipose tissue. This can give rise to regional or generalized tumors, both differentiated and undifferentiated, which may represent any stage in the evolution of the fat cell. These tumors the authors prefer to call lipocytomas in the isolated form, or lipocytoses in the generalized form.

Four examples are described in detail. Two of them, in women fifty-two and forty-six years of age, were large single retroperitoneal tumors, apparently benign, which were successfully removed. In the third the tumor occupied the left popliteal space in a woman twenty-five years of age. It was removed, and later a growth appeared just below the site of operation, but whether or not this was a recurrence had not been determined at the time of writing. The fourth case represented the highly malignant generalized form of the disease and was rapidly fatal. The patient, a fifty-nine-year-old man, was found at autopsy to have 219 tumors. Most of them arose in the abdomen; many were pedunculated, hanging in rows from the surface of the abdominal viscera. One large tumor weighing 750 gm. was attached by a pedicle to the apex of the heart, and there were true metastases in the kidney.

From a study of these cases and a review of the literature it is claimed that these deep lipocytomas, regardless of their histology, have a tendency to recur; they are microscopically malignant, though clinically they show a much less aggressive growth than other tumors. They tend to be perineural in distribution and thus are analogous to the multiple neurofibromatosis of von Recklinghausen.

Three photographs, 14 photomicrographs, and a long bibliography are included.

Edward Herbert, Jr.


The authors summarize the clinical and pathological features of glomus tumors and describe three new cases. One tumor, an inch in diameter, was situated in the skin over the upper and outer part of the left patella. In the other two patients the tumor was in the common position under a nail. Each tumor was excised with complete relief of symptoms. Since the three tumors were seen within two years at one hospital it is suggested that the rarity of the condition has been overestimated. [For an excellent review of this subject, see Stout: Am. J. Cancer 24: 255-272, 1935.]

L. Foulds


This case of glomus tumor beneath the nail of the great toe is of interest because of its occurrence in a patient suffering from senile arteriosclerotic peripheral circulatory disease and because of the absence of symptoms until improvement of the circulation was brought about by treatments with alternating positive and negative pressure. As the circulation improved under treatment the capillaries in the tumor became engorged and excruciating pain occurred. At the same time there was observed a drop in the peripheral temperature, which had risen in response to treatment. Excision of the tumor relieved the pain and brought about improvement in the temperature readings. Though subsequent return of intermittent claudication required further treatment with alternating positive and negative pressure, there was no recurrence of the pain due to the glomus tumor. Photomicrographs and references are included.


A fibroblastic tumor is a neoplasm of mesodermal origin, composed of cells, the ultimate function of which is the production of fibrous connective tissue. Benign tumors of this type are designated fibroma; for the malignant tumors the author prefers the term fibrosarcoma.
In the diagnostic files of the Hospital for Joint Diseases (New York) covering a period of six years, records were found of 84 fibroblastic tumors of the extremities, i.e. 22 per cent of all tumors of the extremities and 41 per cent of the soft tissue tumors of the extremities, seen in that time. Fifty-nine of the series were benign and 25 malignant.

Fibroma of the extremities occurs with almost equal frequency in each age group up to fifty years. The malignant form is most common during the fourth and fifth decades. Sixty-four per cent of the fibromas in the series recorded occurred in the upper extremity and 36 per cent in the lower. In both instances, about 80 per cent were found in the distal portions of the limbs, that is, on the hands and fingers or on the feet and toes. In these areas the most frequent host tissue was the tendon sheath.

Of the fibrosarcomas, about 50 per cent occurred in the thigh, chiefly in the lower two-thirds. In the upper extremity the forearm was the site of predilection. Pain is seldom severe, even when the tumor has reached considerable proportions. The size varies but is no indication of the degree of malignancy. The tumor tends to grow by expansion, with early invasion of the vascular system and metastases to the lungs and abdominal viscera. Regional lymph node involvement does not occur unless by direct extension from neighboring structures.

The question of treatment is one requiring further study, as the widely varying results recorded by different writers indicate. Since the malignancy of the primary tumors cannot be determined by histologic study and since few, if any, such tumors metastasize before at least one recurrence, the author considers excision with or without roentgen therapy the treatment of choice. Recurrence is an indication for amputation.

A bibliography is included. There are no illustrations.


A man, then aged twenty-five, had a tumor in the left calf in 1908. It was removed in 1911. Another tumor appeared in the same position in 1913, grew slowly and was removed in 1916. No histologic reports on these tumors were available. The patient was well until 1935, when still another tumor, at the same site, was removed. During the next eight months local recurrences were removed on three occasions and finally the leg was amputated. The patient died fifteen months later with secondary deposits in the left lung. The tumor was a fibroblastic sarcoma which became more cellular in the later recurrences. The authors consider that the tumor of 1908 was the parent of the subsequent ones.

L. Foulds


A thirty-four-year-old Negro woman had a large xanthosarcoma of the right forearm arising probably in the tendon sheaths following an injury to the arm. Amputation was done. The more peripheral, presumably advancing parts of the tumor showed characteristics of fibrosarcoma; the xanthomatous changes appeared in the older, more central regions. As transitions from spindle and polygonal cells into xanthomatous cells could be traced, it appeared that the tumor was essentially a fibrosarcoma and that the xanthomatous changes had been superadded. Five months later the patient was again seen with nodules in the oral mucosa and deep tissues of the cheek. While the possibility of metastasis from the earlier tumor is not ruled out, the author is inclined to believe that this is an example of two foci developing independently as the result of separate trauma or as tumors of multiple origin.

A full discussion of malignancy in xanthosarcoma is included and reports of cases of xanthomatous tumors collected from the literature are listed with references. The pathology is discussed and a photographic method, employing polarized light and different filters, is described for distinguishing between anisotropic and isotropic fatty substances.

Photomicrographs are included.

Fifteen instances of macroscopically recognizable secondary xanthomatous changes were encountered over a period of nine years in association with such conditions as pyonephrosis, renal tuberculosis, chronic cholecystitis, chronic mastitis, non-specific perinephritis, supphrenic abscess, upper abdominal abscess, osteitis fibrosa, post-traumatic knee-joint synovitis, and endothelial sarcoma. In the 2 cases of synovitis the changes were not those of true xanthoma but pseudo-xanthomatous or phagocytic. That this type of change may give rise to a true xanthomatous synovitis, a chronic villous synovitis, and finally a true xanthoma of the joint capsule can perhaps be affirmed in part but is disproved in certain cases. In the latter group fall the highly differentiated intra-articular xanthomas which are to be included under giant-cell xanthomas and sarcomas.

A newer concept of the genesis of xanthomatous giant-cell tumors and sarcomas is that these are to be regarded as true benign mesenchymal dysontogenetic blastomas with an especially active abnormal adjustment to general and especially to lipid and cholesterol metabolism. They may therefore be designated metabolic xanthoblastomas. The metabolic xanthoblastoma is independent or at least not necessarily dependent on general lipid or cholesterol disturbances. The term warrants the assumption of an automatic humoral change of the surrounding tissues in the sense of a local disturbance of general as well as of special lipid and cholesterol metabolism. These in turn may cause secondary changes in the stroma of the metabolic blastomas. Xanthomatous tumor cells and typical foam or xanthoma cells are genetically in metabolic blastoma somewhat fundamentally different. Transitions from one cell type to another do not occur.

The occasionally observed xanthomatous changes in benign and malignant tumors are briefly considered. The stroma or the tumor cells may be involved. In the latter case the lipid infiltration can often be regarded as an active metabolic disturbance of the tumor cells themselves.

The question of whether a metabolic xanthogranuloma can subsequently develop into a metabolic xanthoblastoma is briefly discussed, as well as the possibility of benign metabolic blastomas or granulomas developing into malignant sarcomas.

Five illustrations and an extensive bibliography are included. Seaton Sailer


Determination of the hydrogen-ion concentration of the blood by Oszacki and Kurzweil's method (Biochem. Ztschr. 289: 234, 1937. Abstr. in Am. J. Cancer 35: 122, 1939) in 220 patients with tumors showed only slightly altered pH readings in 15 cases, and in all these the lesions were either histologically benign or inflammatory. Of the 205 malignant cases, 199 or 97 per cent showed a pH above 7.36.

Following surgical removal or radiation of the tumor a decrease in the blood alkalinity was noted in three to four weeks, but in patients not operated upon or unsuccessfully irradiated there was an increase. Cases observed over long periods without recurrence gave normal readings of the blood pH. With recurrence and metastasis the alkalinity increased, rising to a higher degree than before treatment.

A bibliography is appended. Seaton Sailer


The authors previously found that certain extracts of the anterior lobe of the pituitary stimulated the activity of the reticulo-endothelial system as estimated by the rate of disappearance of congo red from the blood stream (Endocrinology 22: 693, 1938. Abst. in Am. J. Cancer 34: 456, 1938). The active substance is termed the positive "restropic " (R.E.S.-tropic) factor. It is now reported that positive restropic factor
was present in extracts of blood from rabbits and horses and from human beings who were normal or suffering from disease other than cancer; extracts of blood from patients with malignant disease depressed the activity of the reticulo-endothelial system. Positive extracts were obtained from 18 out of 23 people who were normal or who had disease other than malignant disease. Negative extracts were obtained from 19 out of 22 cases of malignant disease. Inactive extracts were obtained from 8 cases, including 3 of malignant disease. As yet no case of untreated cancer has given a positive extract, and a negative extract was not obtained from any case in which this diagnosis was clinically excluded.

L. Foulds

Influence of Protein Intoxication on the Exudation and Composition of Blood Serum,


The technic is described for obtaining fractional samples of blood serum during the process of clot retraction. The pH of successive samples showed a constant and marked rise in patients who had a focus of tissue lysis, while for individuals without such a focus the curve was variable. There was no difference between patients with malignant tumors and those with tissue destruction due to non-malignant conditions, as chronic ulcers, coronary thrombosis, and postoperative states. Protein intoxication, therefore, does cause changes in the body fluids. Determination of the glucose, total nitrogen, chlorides, and cholesterol content also showed changes in the presence of tissue lysis, but these were not as striking as the variations in the pH. Several tables and graphs are included and there is one illustration.

Edward Herbert, Jr.


A woman fifty-eight years of age who had had a tumor of the left side of the neck for twenty-four years developed a tumor of the petrous portion of the right temporal bone, which caused a paralysis of the seventh, tenth, eleventh and twelfth cranial nerves. At autopsy a malignant tumor of the left carotid body was found; the tumor involving the bone on the right was of similar structure. It is believed that this represents a bilateral carotid body tumor, the carotid body being situated in an abnormally high position on the right side. There are no illustrations.

Edward Herbert, Jr.


A fifty-four-year-old Negro complained of urgency of urination and frequency of a year's duration. Recently he had noticed a swelling, which he described as about the rectum, and the urinary symptoms had increased. Examination revealed a perineal mass extending posteriorly to the anus and anteriorly to the scrotum, which was involved in its posterior third. A biopsy showed this to be a chordoma. The x-ray picture of the skeletal system was indistinguishable from Paget's disease or osteitis fibrosa cystica. The urethra was markedly narrowed. A suprapubic cystotomy was done, and following institution of bladder drainage the tumor regressed without other treatment than occasional irrigations. After four months it was about the size of a walnut. At the time of the report, presumably more than a year later, the patient appeared well and had gained weight.

The subject of chordomas is briefly reviewed, and references are furnished. Photomicrographs and roentgenograms illustrate the report.


A female child was apparently normal until the age of seven months, when a tumor was discovered accidentally in the right hypochondrium. At the age of eight months
there was a palpebral nodule and soon afterwards a supra-orbital nodule; these dis-
appeared. At two and one-half years a small nodule developed on the right knee; this
was removed for histologic examination. A similar nodule was present on the back of
the chest. At the age of three years there were extensive cutaneous lesions resembling
bullous urticaria with pruritus and suppuration. At eight, the tumor in the right
hypochondrium seemed to have changed slightly in shape but to be stationary in size;
no new nodules had developed and the general condition of the child was excellent.
The father was then examined. He had two subcutaneous nodules on the right elbow,
two small nevi, and a molluscum on the chest and had suffered from pityriasis since the
age of twelve.

From their examination of the biopsy specimen the authors conclude that the tumor
was a sympathoblastoma, much less malignant than the sympathogoniomas but more
dangerous than the ganglioneuromas.

There are three photomicrographs and a short bibliography.

L. FOULDS

Benign Congenital Tumor of Connective Tissue Origin in the Inguinocrural Region,
PERRIGNON DE TROYES, DU BOURGUET AND PAPONNET. Tumeur bénigne con-
génitale d'origine strictement conjonctive développée au niveau de la région in-

A male native of Tunis, aged twenty, had a tumor the size of a newborn baby's
head, dating from infancy; it had lately grown progressively. The tumor was removed
and examined histologically. It contained dense fibrous tissue with few blood vessels
but many lymphatics, numerous zones of ossification and of calcification without ossifica-
tion, and lymphoid follicles situated always along the course of blood-vessels and
lymphatics. The absence of cartilage and epithelial tissue precluded a diagnosis of
embryoma and the origin of the tumor and the cause of the ossification and calcification
were not determined.

L. FOULDS

Neurinoma of the Thenar Eminence, P. DELINOTTE, DES MENSARDS, ADLE AND DE-

A small tumor was removed from the thenar eminence of a woman aged forty-one.
It had been noticed three years previously. Histologically it was a neurinoma.

L. FOULDS

DIAGNOSIS AND TREATMENT

Changes in the Sedimentation Rate of Stored Citrated Blood in the Diagnosis of
Malignant Tumors and Lymphogranuloma, L. KOSTER. Veranderingen van den
besinkingssnelheid in bewaard citraalbloed als diagnosticum bij kwaardaardige
gezewellen en lymphogranuloom, Nederl. tijdschr. v. geneesk. 81: 3668-3674, 1937.

Tests of sedimentation rate were made hourly for six hours and then at the end of
twenty-four hours on citrated blood kept at room temperature (20° C.). The blood
of 100 normal persons and of 460 suffering from various conditions other than malignant
tumors or Hodgkin's disease showed, without exception, a progressive decrease in
sedimentation rate. In 106 of 112 cases of malignant tumors, including carcinoma,
sarcoma, seminoma, lymphosarcoma, and chorionepithelioma, on the other hand, the
sedimentation rate either remained constant or increased, or showed a very slight
decrease. Similar reactions were obtained in 14 cases of Hodgkin's disease which were
examined. This same result can be obtained at times in non-malignant disease, follow-
ing administration of certain drugs or when the blood is heated, and occasionally
just before death. The difference in behavior of the sedimentation in the two groups
is probably to be explained on the basis of a shift of ions between red cells and plasma.
If used with the proper precautions, this test is a valuable aid in differentiating malignant
conditions. Several tables and a few references are included.

EDWARD HERBERT, JR.

Material obtained by sternal puncture in two patients, aged sixty-five and seventy-eight, with clinical Gaucher's disease contained the characteristic large Gaucher's cells, while tumor cells were observed in sternal material from patients with skeletal metastases of sarcoma of the nose, hypernephroma, and cancer of the prostate, bronchi, and breast. Smears from cancer patients may, however, resemble those observed in primary blood diseases, as illustrated by one recalling pernicious anemia in a man with inoperable carcinoma of the stomach, and another comparable to the picture of hemolytic icterus in a patient with gastric cancer metastasizing to bone. Photomicrographs of the smears are reproduced.


The author has tested the urine of 100 patients with cancer and other diseases for (1) indole derivatives, (2) the monosubstituted guanidine grouping (H2N – C(=NH) – NH.R.), and (3) lactic acid and the sulphydryl group, using respectively the iodine test, the arginine test, and the nitro-chromic acid test. No significant difference was observed between the cancer and non-cancer cases.


The author presents a classification of malignant growths based upon the type of granulation and so-called inclusion bodies present in the tumor tissue. The abundance of granulation and its type are to be correlated with the blood-cell reactions (Gruner: Canad. M. A. J. 31: 623, 1934. Abst. in Am. J. Cancer 25: 672, 1935) and finally with the clinical behavior.


Two hundred and ninety patients with advanced or metastatic cancer were treated by teleroentgentherapy, receiving daily doses of 25 to 50 r over large areas of the body. The results are not reported statistically but a few cases are briefly described in which favorable results were obtained. These include instances of generalized skeletal metastases, generalized lymph node metastases, pulmonary metastases, mediastinal tumors, widespread uterine carcinomas, and carcinomas of the esophagus. The only undesirable collateral effect was a tendency to leukopenia, which usually improved when treatment was interrupted for two or three weeks. One case terminated fatally with an agranulocytosis. This was the only fatality attributable to the irradiation. The red blood cells showed less tendency to diminish in numbers. No skin changes other than occasional mild pigmentation were noticed, and there was no epilation. The total dosage varied according to the case, but in general was between 1000 and 1200 r per field for each series. The number of treatments was determined by the clinical status and the blood picture. Mallet believes that this type of therapy offers great possibilities but that the technic must be improved and standardized. [See also Absts. in Am. J. Cancer 29: 388, 771, 1937; 31: 177, 1937.]

Edward Herbert, Jr.


The principles of Chaoul's method of contact irradiation (Absts. in Am. J. Cancer 22: 693, 1934; 29: 163, 772, 1937) are outlined and a description is given of a specially constructed Philips tube that is used in this technic. Biological tests showed the rays to have the same effect on Drosophila eggs as hard rays. The distribution was almost identical with that of contact radium therapy. Of 41 patients with skin cancer treated
by this method, 38 were cured, 2 were probably cured, and there was one death in a far-
advanced case.

A warning is given that the indications for this type of therapy should be strictly
adhered to, since it has little penetrating power and must be limited to purely superficial
lesions. [This warning is important, since there seems to be a widespread belief that
there is something new and extremely valuable in this method. On the contrary, there
is nothing novel except in the construction of the tube, which is so arranged that it can
be placed very close to or in contact with the lesion without danger of electric shock.
The therapeutic value is exactly, as den Hoed points out, that of low-voltage x-ray, such
as is generally used in dermatology. The tube has been widely used in treating car-
cinoma of the mouth, cervix, and rectum. The local results have been excellent from
a palliative aspect, but permanent cures cannot be expected unless the soft radiation is
supplemented with some form of Coutard treatment with higher voltages. The two
types of radiation should be synchronously applied if possible.—Ed.]

Several illustrations and graphs are included. Edward Herbert, Jr.

1937.

The author describes a carrier for radon seeds in the form of a silk suture. The radon
seeds with the usual 0.3 mm. gold filtration are placed in the body of the woven silk in
which they are permanently sealed. On one end of the suture is a small metal collar,
the distal end of which is threaded to receive a needle. After the suture is placed, a
glass bead is threaded over either end and brought to rest against the tissue. Above
this bead a lead shot is fixed to hold the material in place until such time as its removal
is desired. This method of introducing radon is especially useful in oral cancer, as it
permits an increase in the intake of fluid and food and does not prevent expectoration.
Several illustrations are included.

Radiosensitization of Inoperable Tumors by Ultra-short Waves Associated with Heavy
Roentgen Therapy Made Possible by Infra-red Radiation, Denier. Essai de
traitement de tumeurs inopérables. Leur radiosensibilisation par les micro-ondes
de 80 centimètres associées au surdosage roentgenthérapique rendu possible par les
infra-rouges, Arch. d'électric. méd. 44: 403–410, 1936.

It was found, as has been previously shown, that irradiation with ultra-short waves,
80 cm. wavelength, increased the radiosensitivity of previously radioresistant tumors.
Subsequent large doses of radiotherapy at 340,000 volts were given, followed by infra-
red radiation, which decreased the cutaneous reaction and made such large doses
possible. Measurements of the pH of the blood in vivo showed it to be generally
increased in the cancer patients; it rose still higher with short-wave therapy, and
decreased with roentgen therapy. Eight cases are briefly described in which a marked
diminution in the size of the tumors was obtained by this technic. Five photographs
and 3 graphs are reproduced. Edward Herbert, Jr.

THE SKIN

Histologic Characteristics of the So-called Precancerous Processes of the Skin, I.

The author describes the histologic picture in three instances of Bowen’s disease
and 3 of keratosis senilis. His study of the lesions in Bowen’s disease revealed no
evidence of the intradermal propagation of a fully developed neoplastic tissue originating
from one cell or from a circumscribed group of tumor cells. Rather every cell of the
prickle layer seemed to undergo a gradual degeneration which would appear to be
brought about by the same factor which causes heterotopic proliferation of the basal-
cell layer. The two processes appear to be quite independent of each other. The
structures and cell forms which have been designated as precarcinomatous are actually
intraepidermal cancer. Precancer is not a state but a process which cannot be deter-
mined morphologically. Photomicrographs and references are appended.
Some Results in the Treatment of Epitheliomas of the Face, J. Martin. Au sujet de quelques résultats dans le traitement des épithéliomas cutanés de la face, Arch. d'électric. méd. 44: 444–460, 1936.

Of 194 cutaneous epitheliomas, 155 were located on the face. Only 48 patients could be followed to allow an evaluation of the results of treatment. Twenty-nine were treated by radiotherapy, and 85 per cent of these were cured, 11 for three years, 8 for four, and 6 for five years. The 4 cases which proved resistant to radiotherapy were cured by diathermy coagulation. Ten patients were treated primarily by diathermy coagulation with 6 cures; 2 showed recurrences, cured by a second treatment, and 2 developed metastases. In 4 cases the primary treatment was surgical and all were cured. The remaining 5 patients received mixed treatment, for which the results are not given. The fact that biopsy was carried out in only a very few cases greatly decreases the value of the report. Several of the case histories are briefly presented.

Twelve illustrations are included. Edward Herbert, Jr.


In a period of nine years biopsies were made in 4600 skin lesions, of which 455 proved to be basal-cell epithelioma. Thirty-two occurred on an extremity; only 4 of these were correctly diagnosed clinically and but one showed the pearly border usually described as typical of the growth. The clinical and histologic findings are tabulated. There are five illustrations of the gross lesions.


The authors saw two examples of the supposedly rare epitheliomas of the lower limb within a few months. One, in a woman aged sixty-eight with long-standing eczema, was apparently a primary cutaneous epithelioma. The other was a typical example of cancer supervening on a varicose ulcer but with extraordinarily extensive osseous lesions, which appeared to be of the nature of chronic osteomyelitis. This patient, a woman aged seventy-six, had for forty-eight years had a varicose ulcer which had never completely healed.

L. Foulds


In 1930 a woman aged forty-eight had a nevus on the thigh and enlarged inguinal nodes on the same side. In 1935 the nevus had disappeared but one of the inguinal nodes began to grow progressively; it had reached the size of a hen's egg when it was removed in 1937. The patient died three months later with secondary deposits in kidneys, mesentery, abdominal lymph nodes, and posterior abdominal wall. The tumors consisted of cells of epithelial type with considerable polymorphism and were considered to be non-pigmented nevocarcinomas secondary to the nevus which had disappeared spontaneously. There are no illustrations.

L. Foulds


A woman aged thirty-four had symptoms of intracranial tumor, enlarged nodes in Scarpa's triangle, and small subcutaneous nodules on the back. Melanin was identified in the urine. She had had multiple nevi from infancy and eighteen months previously had injured one of these, causing hemorrhage. The injury was repeated a few days later and the nevus was then cauterized. There was no recurrence at this site. A growth the size of an orange was removed from Scarpa's triangle and the patient died a fortnight later. There was no autopsy. The excised tumor was a non-pigmented
melanoma predominantly of epitheliomatous type but containing in addition tissues of endocrinoid and, more rarely, sarcomatous type. It seemed to belong to the group of mixed melanomas. There are no illustrations or references.

L. FOULDS


Five cases are recorded of an unusual dermatosis first described by Werther (Arch. f. Dermat. u. Syph. 116: 865, 1913) as naevus syringadenomatosus papilliferus. One of the cases was associated with a mixed tumor containing cartilage and bone. In 2 cases no nevus cells were present. [Fessler, who recorded a case in Dermat. Wchnschr. 96: 680, 1933 (Abst. in Am. J. Cancer 20: 677, 1934) was also unable to find any nevus cells.] It is suggested that the condition may be a combination of intracutaneous epithelial nevus and nevus of the sweat ducts and sweat glands. Photomicrographs and references are included.


Two cases of epithelioma adenoides cysticum are recorded in a mother and son. They correspond closely to the text-book descriptions of the disease.


Carbon dioxide snow, radium, grenz rays, and thorium X have been found to be efficient agents in the treatment of hemangioma of the skin. The paper is a general review with references to the literature.

MILTON J. EISEN


The freezing of hemangiomas with carbon dioxide snow is a method of treatment to be avoided, since the resulting scar is often cosmetically more objectionable than the original lesion. The same applies to the external application of radium. The methods of choice are surgery where the hemangioma is small enough to permit it, and the intramural introduction of radium needles where surgery is not practicable. In this way the best cosmetic result is obtained. Several cases are briefly described which bear out these statements. Seven photographs are included.

EDWARD HERBERT, JR.

THE BREAST


A detailed account is given of breast lesions in five sisters who had been under observation for nineteen years. Their mother died of cancer of the liver at the age of sixty-nine and her mother of abdominal cancer, probably gastric, at the age of thirty-seven. One sister received irradiation for chronic mastitis, which did not recur. Another sister had irradiation for chronic mastitis; three years later a left simple mastectomy seemed necessary and after a further three years a right simple mastectomy was performed for incipient carcinoma. The other three sisters had double primary carcinoma of the breast. Two sisters died of breast cancer, eleven and nine years respectively after operation; three are alive and well. In all, 5 radical mastectomies were performed for breast cancer and two simple mastectomies, one for incipient cancer and one for precancerous mastitis. These results in a family with an intense predisposition to bilateral breast cancer support the belief that routine mastectomy for chronic mastitis is unnecessary and can be replaced by x-ray treatment followed by periodic examination and mastectomy if required.

The author describes the danger signals which precede the onset of carcinoma and maintains that chronic mastitis amenable to irradiation can be distinguished clinically
from precancerous lesions requiring mastectomy. He summarizes the convictions which guide his practice as follows:

"(a) Chronic mastitis is a precancerous condition.

"(b) Chronic mastitis is often amenable to deep x-ray treatment without operation and consequently deep x-ray or radium treatment may be an effective prophylactic against cancer.

"(c) The protection afforded by x-rays is neither absolute nor permanent, and cases so treated should come every three or six months for re-examination.

"(d) Cases of chronic mastitis in immediate danger of cancer present recognizable clinical peculiarities and should generally be treated by mastectomy.

"(e) Breast cancer should be treated by radical operation, with simultaneous radium to the internal mammary glands and subsequent moderate prophylactic x-radiation. Exceptionally, Keynes' radium method may be preferable."

L. FOULDS


Of 43 patients with breast carcinoma treated by preoperative irradiation and complete operation within the last four years, 71 per cent are alive and free from recurrence, while of 51 who had a complete operation without preoperative irradiation 33 per cent are alive and tumor-free after two to five years. Eight of the irradiated group died of cancer and 4 are alive with recurrences (totalling 28 per cent); 28 of the non-irradiated group are dead of their disease and 3 are alive with recurrence (60 per cent).

However, for the group of 30 patients living and free from recurrence after preoperative irradiation followed by the complete operation, the average length of time since irradiation was begun is only one year and ten months, whereas for the group of 17 patients living and free from recurrence after the complete operation alone the average length of time since operation is three years and four months. For the group of 12 patients dead or living with recurrence after preoperative irradiation plus the complete operation, the average length of time since irradiation was begun in one year and nine months, and for the group of 31 patients dead or living with recurrence after the complete operation only, the average length of time since operation is one year and seven months.

As the author points out, his results are too recent for evaluation of preoperative irradiation as a therapeutic measure, though they would seem to furnish no evidence that it prolongs life in those persons who are to die of the disease. They do indicate that there is apparently no danger in delaying the complete operation for a single course of irradiation provided sufficient time elapses before surgical intervention—from two to three and a half months.

Of the 43 patients given preliminary irradiation, 10 or 24 per cent showed no residual cancer of the breast or axilla. Residual cancer was found in 76 per cent. The cases are further analyzed as to the presence and extent of metastases and the grade of the tumor. Photographs and photomicrographs are included and references are furnished, special attention being called to the paper by Adair and Stewart (Ann. Surg. 102: 254, 1935. Abst. in Am. J. Cancer 26: 822, 1936).


The author discusses his personal experience with roentgen therapy in mammary carcinoma. Its chief field of usefulness is in the inoperable case. Inoperable and borderline tumors may be so reduced in size as to permit local removal, but in no instance should irradiation be followed by a radical mastectomy. Radiation is also useful for control of pain in patients with bone metastases and for local recurrences. As to its value as a postoperative measure the author is still in doubt. Two illustrative cases are given but no statistical results.

A case of spinoceullar epidermoid carcinoma of the female breast, presumably originating in the larger lacteal ducts, with metastases to lung, liver, kidney, spleen, bones, and brain is described. The tumor was radically removed. Though no axillary metastases were demonstrable at the time of operation, recurrence was prompt and metastasis to all parts of the body occurred within a few months. The patient gave a twenty-year history of a "lump in the breast." Photomicrographs and references are included.


Bloodgood in 1924 published a study of 30 cases of Paget's disease of the nipple (Arch. Surg. 8: 461, 1924). Since that time there have been seen in the clinic at Johns Hopkins Hospital 58 patients with lesions of the nipple or areola, of which 49 were diagnosed as benign and 9 as malignant. One of the patients in whom a diagnosis of benign tumor was made died of carcinoma five and a half years after operation, and a restudy of the biopsy specimen showed Paget's disease.

The 9 cases of Paget's cancer of the nipple are recorded in detail. Four were clinically malignant and in 5 biopsy was required for the diagnosis. Such biopsies consist in complete excision of the nipple, areola, and central zone of the underlying breast. When microscopic examination shows Paget's carcinoma, complete mastectomy should follow, though this may be postponed in order to carry out preoperative irradiation of the supraclavicular area, axilla, and breast [a suggestion with which most surgeons will not agree.—Ed.].

When an ulcer of the nipple is present with a palpable mass in the breast or palpable axillary nodes, biopsy is unnecessary. Irradiation of an apparently insignificant nipple lesion without biopsy is dangerous unless a complete operation follows, for the superficial lesion may heal and the cancer remain undiscovered in the breast. The author agrees with most pathologists that Paget's cancer of the nipple is a squamous-cell carcinoma arising in the epidermis, and recognized not only by the loss in the basal-cell layer but by the size of the spine cells and other morphological changes.

Photomicrographs and a few references are included.


Five cases of Paget's disease of the nipple are reported. Three of these showed an underlying mammary carcinoma and 2 did not. From a discussion of the subject and a review of the literature, it is concluded that a carcinoma probably develops in the large milk ducts near the nipple and then involves either the nipple epithelium or the underlying breast tissue, or more commonly both. Two photographs and four photomicrographs are included.

Edward Herbert, Jr.


This is a single case report. A woman thirty-five years of age had a lesion of the left breast diagnosed clinically as Paget's disease. The diagnosis was verified histologically and carcinoma cells were found in the breast below the lesion. There are no illustrations.

Edward Herbert, Jr.


Of 773 patients undergoing breast operations 17 were males. Of these 11 had benign tumors and 6 carcinomas. The etiology of gynecomastia and the influence of hormones on its development are discussed, but no new material is added. There are no illustrations.

Edward Herbert, Jr.

A breast, removed by radical operation from a woman aged fifty-one, contained two adjacent nodules. The smaller, the size of a large pea, showed fibrocystic disease with small adenomatous islets and glandular microcysts. The other nodule contained typical glandular epithelioma and, in addition, tuberculous lesions characterized by an epithelioid infiltration. The epithelioma and tuberculous infiltration were in contact. Seven axillary nodes contained deposits of epithelioma and in five of them there were tuberculous lesions of follicular type. Three photomicrographs illustrate this report.

L. Foulds


The author advocates contrast roentgenography or mammography (See Hicken: Surg., Gynec. & Obst. 64: 593, 1937. Abst. in Am. J. Cancer 32: 301, 1938) in all cases of abnormal discharge from the nipple. Illustrative cases are recorded and mammograms are reproduced.

THE ORAL CAVITY AND UPPER RESPIRATORY TRACT


There has recently appeared a series of papers by Richards (Canad. M. A. J. 35: 299, 381, 385, 490, 593, 599, 1936. Abst in Am. J. Cancer 32: 590, 591, 1938) on oral carcinoma in which the primary lesion was irradiated and the cervical nodes were treated by irradiation or dissection. Wookey’s paper is a critical review of the results of treatment, more especially as concerns the regional nodes, in a series of 609 cases corresponding almost exactly with those already presented by Richards. There were 338 cancers of the lip, 101 of the tongue, and 170 originating elsewhere in the oral cavity. The results are presented in numerous tables.

In cancer of the lip radium was found to be very effective in controlling the primary lesion, only 11 failures being recorded. Surgical measures were successful in controlling the node metastases if the dissection was early and thorough; radiation alone was not satisfactory. Carcinoma of the tongue is less amenable to treatment, and lymph node involvement is more frequent and of earlier occurrence. In 54 per cent of the author’s series the primary disease was controlled by radiologic methods. In most of the cases there was eventual node invasion. Surgical dissection of the nodes is the procedure of choice and should be done early, perhaps even before enlargement can be demonstrated.

Most of the other intra-oral cancers disappeared after radium therapy, and in these cases early radical dissection of involved nodes gave encouraging results.


Two cases of squamous-cell carcinoma of the lower lip are recorded. One was a superficial or early lesion of grade I and was treated by local excision. In the other, a grade II carcinoma with hyperplastic nodes, local excision was supplemented by block dissection of the submental and submaxillary regions including the cheek node on each side. The patients had been followed only a little over a year.

In all cases of carcinoma of the lower lip except small superficial grade I lesions of brief duration, the author recommends a neck dissection. If carcinomatous nodes are believed to be present in the submaxillary or submental region and it is thought that their capsules are not broken through, a block dissection to the omohyoid junction should be done. If, when a submental and submaxillary dissection only has been done, involved nodes are found in either region on histologic examination, a further block
dissection to the omohyoid crossing is indicated. If the lesion occupies the middle third of the lip the node dissection should be bilateral.


There have been treated in the radiological department of the Hospital of the University of Pennsylvania 285 cases of epithelioma of the lip since 1908. Methods of treatment have changed during this period. Radium, which was at first used in the majority of cases, has now been entirely discarded in favor of roentgen irradiation, not on account of any better curative effect but because treatment requires less time and the dosage can be more accurately applied and more evenly distributed. Since 1936 contact therapy has been employed in a few instances.

During the entire period, prophylactic irradiation of the neck has been employed, but this the author considers is unnecessary in the absence of metastases, for the following reasons: (1) many patients never develop palpable cervical nodes; (2) most palpable nodes are benign; (3) metastases seldom occur after cure of the local lesion; (4) prophylactic irradiation in practical amounts is probably [certainly would be a better word] not sufficient to cause the death of any cancer cells which may be present.

A more important question is the treatment of metastases already present. Local discrete metastases which have not perforated the node capsule should be removed surgically following external irradiation (3000 to 5000 r). Small fixed metastases should receive 3000 to 5000 r external irradiation, after which they should be exposed surgically and implanted with radon or radium needles. Extensive metastases should be given palliative irradiation in small daily doses.

Of 258 of the patients in the author's series who were without secondary lesions when first seen, only 8, or 3 per cent, developed metastases after cure of the local lesion, in spite of very conservative treatment. One hundred and fifty-seven patients had palpable nodes, but less than one-fourth contained cancer.

References are appended.

(The fact that biopsy was done in only about half the author's cases impairs the value of the report.)


The author's patient was a man with a carcinoma which involved almost the entire lower lip. It was excised in a wedge-shaped piece and plastic repair was done by cutting flaps diagonally upwards from the angles of the mouth into the cheek and then downwards and inwards towards the chin. The bone incision was made diagonally so that the mucous membrane was everted and sutured to the skin to form a new lip. The lateral incisions were then sutured in place. The result was excellent, as is shown in two photographs.

**Diagnosis and Treatment of Malignant Tumors of the Nasopharynx, P. G. Gerlings and D. Den Hoed. Diagnostiek en therapie der kwaadaardige neuskeelholtegezwellen, Nederl. tijdschr. v. geneesk. 81: 581-589, 1937.**

A general description is given of the symptomatology and diagnosis of malignant nasopharyngeal tumors and a series of 47 cases is reported. The patients ranged in age from the first to the eighth decade; 30 were males, 17 females. Histologically 20 cases were sarcoma (4 lymphosarcoma, 8 round-cell sarcoma, and 8 unspecified) and 27 were carcinoma (10 epidermoid, 1 basal-cell, 3 lympho-epithelioma, 2 cylindroma, 2 carcinoma simplex, 2 adenocarcinoma, and 7 unspecified). The presenting symptoms were as follows: in 9 cases auricular symptoms from involvement of the eustachian tubes; in 10 trigeminal neuralgia; in 8 enlargement of the cervical lymph nodes; in 13 respiratory symptoms of obstruction or hemorrhage; in 7 the first symptoms were unknown.

Radiotherapy was used in all cases, surgery and electrocoagulation being considered inadequate because of the impossibility of effecting a radical removal on account of the
The oral cavity and upper respiratory tract anatomy of the region. In 8 patients, or 17 per cent, a clinical cure was obtained, with survival in one case of eighteen months, in the 7 others of from three to nineteen years, all of these patients being alive at the time of writing. Six now dead survived from two to six years. The small tumors without metastases gave 50 per cent of cures, that is 3 of 6 cases; small tumors with metastases 4 cures in 29 cases; large tumors without metastases 1 cure in 4 cases; large tumors with metastases no cures in 8 cases. This shows the importance of early diagnosis. Recently the Coutard method of radiotherapy has been used for these tumors, but it is still too early to know whether or not an improvement in the results will be obtained.

Edward Herbert, Jr.


Removal by diathermy is suitable for early carcinomas of the oropharynx with no palpable nodes in the neck. More advanced infiltrating growths require extensive mutilating operations and a careful reconstruction is necessary later. Unfortunately it is doubtful whether irradiation is sufficiently successful to supplant surgery. Biopsy provides an important guide to treatment because sarcoma and grade IV carcinoma give uniformly bad results with surgery but are radiosensitive.

Early tumors on the lateral wall of the larynx, the epiglottis, the aryepiglottic fold and the post-cricoid area may be treated by lateral pharyngotomy followed by a plastic operation. More advanced growths in the same positions, as well as tumors in the fossa pyriformis, almost always need pharyngolaryngectomy and a somewhat elaborate plastic operation later. In the author’s series of 39 pharyngotomies, 13 patients were well for more than three years and 5 for more than eight years. Pharyngolaryngectomy was performed on 16 patients; 6 were well for more than three years and 2 for more than eight years. In the past the success of irradiation in this class of cancer has been negligible.

Intrinsic cancers of the larynx require laryngofissure or partial laryngectomy or else total laryngectomy, according to the position and extent of the growth. The author’s results were as follows: among 23 patients who had laryngofissure or partial laryngectomy, 18 were well for more than three years and 9 for more than eight years; among 75 who had total laryngectomy, 45 were well for more than three years, 18 more than eight years, and 3 more than fifteen years. Irradiation has been most successful in this group and is an attractive alternative to mutilating operations, but it has not yet been established that a high percentage of good results can be obtained.

The results for private and hospital patients are given separately in addition to the totals quoted above. The results in private practice were much superior, owing to the better general and dental condition of the patients and to the better circumstances of treatment.

L. Foulds


Operation, if it can be adequately performed, is the treatment of choice for carcinoma in the pharynx and larynx. The suitability of a growth for irradiation depends on its histologic type and on its situation. Large, rapidly growing tumors with immature cells are radiosensitive and the results of operation alone are unsatisfactory. Epitheliomas of more mature type and those previously treated by irradiation or operation have little radiosensitivity and are best treated surgically. Insertion of radium needles, according to the fenestration method, is indicated for carcinoma of the tonsil or soft palate and for intrinsic carcinoma of the larynx; extensive carcinoma of the larynx and other growths involving the pharynx are unsuitable. X-rays provide the best treatment for rapidly growing carcinomas and the only treatment for extensive growths and serious node involvement. It is generally accepted that deep x-ray therapy is more satisfactory than radium beam therapy. Irradiation is useful, also, as an adjunct to surgery. For the best results in radiotherapy patients should be kept in the hospital.

L. Foulds
ABSTRACTS


Ten cases of laryngeal carcinoma are discussed: 9 in men, and 1 in a woman, the ages ranging from forty to seventy-seven years. Eight cases were operable and were treated by laryngotomy and electrocoagulation. The two inoperable cases were given radiotherapy. The patients were observed from one to six years after treatment and an attempt was made to improve the voice, which in general was raucous and limited to one or two tones following operation. The anatomical basis for the voice changes is discussed in detail. Treatment consisted in the use of the galvanic and faradic electric currents in conjunction with psychotherapy to establish confidence. In most cases the range of voice was increased from 1 or 2 tones to 8 or 10 tones, and the ability to sustain tones was increased from a few seconds up to ten or fifteen seconds. In a few cases the patients were even able to sing simple airs. There are no illustrations but several references are included.


A girl aged sixteen had a symptomless swelling of the left tonsil which had been growing slowly for eighteen months; it was covered by normal mucous membrane. There was also a tumor on the left side of the neck, which had been present for a little more than a year and had all the characters of a lymph node tumor. This was removed and when histologic examination had shown that it was a metastatic growth of epithelioma, the tonsil was removed and irradiation was subsequently administered. The patient was well about a year later. The epithelioma was of intermediate malpighian type and characterized by degenerative phenomena, active mitosis, and an intense macrophage reaction. The case is notable on account of the age of the patient and the slow progress of the epithelioma. There are two photomicrographs.


This is a general discussion based on several cases of malignant tumors of the paranasal sinuses in which the diagnosis was made by biopsy. There are no illustrations.


A woman twenty-three years of age who had a right exophthalmos and nasal obstruction was operated upon and an osteosarcoma was found which filled the ethmoid, sphenoid, and frontal sinuses and invaded Tenon's capsule. Four years later another radical operation was required. No follow-up is given and there are no illustrations.


A tumor was removed from the nasal septum of a woman twenty years of age, who gave a history of a fall eight years previously, at which time she had perforated the palate with a sharp piece of bamboo. Microscopic examination showed a tumor composed of spindle cells, giant cells, and bone, both spongy and hard. It was believed to be a fibroma gigantocellulare ossificans but it was explained that it might possibly be due to the previous accident if a small piece of bone was misplaced, since it has been shown in animals that bone fragments introduced subcutaneously give rise to somewhat similar tumors. Two photographs and 7 photomicrographs are included.

Most myxomatous tumors of the oropharynx and nasopharynx have been of mixed type. The author records a pure myxoma involving the palate and pharynx in a girl of fourteen. It was removed under intratracheal anesthesia after ligation of the right external carotid artery. At the time of the report, seven months after operation, there was no evidence of recurrence or metastasis. A photomicrograph is reproduced and references are appended.


A benign nasopharyngeal fibroma in a child six years of age is reported. The first symptom was blindness and later the tumor was seen to grow out of the nostril until it reached the upper lip. Operation was refused and the patient died with meningeal symptoms. The microscopic diagnosis of fibroma was made only after death. One photomicrograph is included.

EDWARD HERBERT, JR.

Demonstration of Several Tumors, P. DE HAAN. Demonstratie van eenige gezwellen, Nederl. tijdschr. v. geneesk. 81: 2572–2573, 1937.

Three cases are briefly described. One was an adenocarcinoma of the maxillary sinus in a man fifty-one years of age. The second was an epithelioma of the tonsil in a woman of twenty-one. The third was an endothelial carcinoma of the nasal septum in a forty-seven-year-old man. All three tumors were removed surgically and there was no recurrence in any case after five years. There are no illustrations.

EDWARD HERBERT, JR.


A review of the literature for 1935 and 1936, with references.

THE EYE


A man aged seventy-five had a small swelling of the lacrimal sac; it was not troublesome and operation was not advised. Five years later the swelling had grown larger and was then excised. There was no sign of recurrence a year afterward. Histologically the growth was a papilloma which seemed on the borderline of malignancy.

In addition to their own case, the authors found records of 64 examples of tumors primary in the lacrimal sac. They summarize the main features of all the recorded cases in a table. The commonest types of tumor are carcinoma (24 cases) and sarcoma (20 cases). There is almost always a long history of epiphora and the condition closely simulates chronic dacrocystitis. Treatment consists of excision of the sac and growth, with cauteterization of the cavity if the tumor extends outside the sac. Irradiation is valuable after operation and for inoperable cases.

A full bibliography is provided.

L. FOULDS

THE THYROID GLAND


Histologic study of a typical fetal adenoma, so-called, shows the following features: small acini composed of normal adult thyroid cells, absence of supporting connective tissue, numerous large endothelium-lined spaces, and an acellular colloid-like matrix. The characteristic picture, however, depends not on the presence of these individual components but rather on their arrangement in what may be termed the fetal pattern.
This the authors believe is brought about by the papilliferous proliferation of epithelium into the colloid which supports the growth, eliminating the necessity of fibrous supporting tissue. In the larger nodules, as the colloid disappears the acini are left without apparent supporting tissue, except for the capillaries, which may become markedly dilated, thus giving rise to the peculiar appearance of the central portion of these growths.

Once the lesion is fully formed, there are four possibilities. (a) The acini may function as normal thyroid epithelium. (b) They may undergo hyperplasia, forming the nodular hyperplastic goiter, or so-called toxic adenoma. (c) They may become carcinomatous. (d) Hemorrhage may occur into the nodule, followed by secondary degenerative changes, as necrosis, cyst formation and fibrosis.

The authors illustrate the process described by numerous photomicrographs. They review the theories held by others for the formation of these tumors and include references.


The authors describe two cases which illustrate the extreme variability in structure of the rare hemangio-endotheliomas of the thyroid.

(1) A man aged forty-one had a goiter for twenty-three years and noticed 3 nodules in it two months before admission to the hospital. The nodules grew rapidly and a wide thyroidectomy was carried out. Ten days later radiography revealed numerous small metastases in the right lung and a larger one at the hilum. A deposit appeared later under the skin of the right arm and the patient died seventy days after the operation. The tumor contained areas of typical angio-endothelioma but sarcoma-like cells predominated and numerous giant cells, resembling myeloplaxes, developed from the endothelioma cells.

(2) A man aged fifty-six had a goiter from youth. Three months before hospital admission he noticed a small nodule in the lower pole. It grew rapidly and thyroidectomy was carried out. The patient left the hospital two months later in a state of extreme cachexia. The tumor was composed of a network of vascular lacunae, hemorrhagic zones, and foci of necrosis; there were no giant cells.

The authors discuss the mode of extension, which seemed different in the two tumors. There are three photomicrographs and a short bibliography.

INTRATHORACIC TUMORS


This is a general discussion of the clinical and diagnostic features of primary carcinoma of the lung illustrated by short clinical histories of 14 typical cases. It contains no new material. Twelve roentgenograms are included.


Two cases of carcinoma of the lung are reported in which neither the clinical findings nor the radiographic examination of the chest gave any indication of the diagnosis. The report is limited to a brief description of the roentgenograms, three of which are included as illustrations.

Cardiac Arrhythmias with Pulmonary Tumors, P. FORMIJNE AND P. J. ZUIDEMA. Rhythmestoornissen vat het hart bij longgezwollen, nederl. tijdschr. v. geneesk. 81: 891–897, 1937.

Nine cases of primary carcinoma of the lung are reported which showed cardiac arrhythmia during the late stages of the disease. In 4 this took the form of auricular...
fibrillation, and in 2 flutter; in 3 the type is not recorded. At autopsy the tumor was found in 3 cases to have invaded the auricle, in 3 others the visceral pericardium was involved; in 2 cases there was no invasion of the heart, while in the remaining case no autopsy was performed. Five electrocardiograms are reproduced.

Edward Herbert, Jr.


A man aged twenty-two had pain in the hip which was attributed to tuberculosis of the trochanter. Nodes in the neck were enlarged and there was a supraclavicular node covered by red infiltrated skin. No abnormality of the lungs was detected roentgenographically. Three months later there was a large supraclavicular ulceration which extended and coalesced with neighboring subcutaneous nodules until after a further seven months, when the patient died, it had a diameter of 30 cm. Hemoptysis occurred for the first time two days before death. Complete autopsy was not allowed, but the lung was explored and was found to be normal except for a nodule at the apex in direct continuity with the cutaneous ulcer. Sections of the nodule showed modified alveolar walls and epithelial masses; exactly similar epithelial cells were present in the ulcer. The authors believe that the patient had a latent primary carcinoma of the lung and subcutaneous metastases resulting from a true cancerous lymphangitis.

There are two photographs of the patient and four photomicrographs. No bibliography is supplied. L. Foulds


Two cases are briefly described. The first patient was a woman twenty-six years of age who had a fibro-angioma arising from the mediastinum, the second a woman thirty-five years of age with a mediastinal dermoid cyst. Both tumors were removed at operation and both patients made uneventful recoveries. Four roentgenograms are included. Edward Herbert, Jr.

The Digestive Tract


Within a few months the authors found three examples of reputedly rare metastasis of esophageal cancer by systematic examination of the liver in the course of gastrostomy. This finding is important in showing the futility of treatment when the gastrostomy is performed with a view to subsequent radiotherapy.

L. Foulds


Hurst believes that gastric carcinoma arises as a result of hereditary predisposition plus an extrinsic irritative factor. Individuals with constitutional hyperacidity tend to develop chronic ulcers which may lead to cancer, and those with a constitutional hypoacidity tend to develop achlorhydric gastritis, also a forerunner of malignant growth. These predisposing factors were found to be present with equal frequency in England and in Holland. Yet in Holland the incidence of gastric carcinoma is much higher than in England, and the explanation must be sought in some extrinsic exciting factor. From an analysis of possible factors it was found that in Holland certain habits and physical states are much more frequent than in England. These include rapid eating, oral sepsis, the consumption of rye bread, alcohol, and spicy foods, eating foods at a high temperature, smoking, tobacco chewing. Any or all of these factors may play a rôle in the origin of gastric cancer, and a reduction in the incidence of the disease may be expected with their correction.

Edward Herbert, Jr.

It is demonstrated that although the incidence of gastric carcinoma is higher in the Netherlands than in other European countries, yet the consumption of alcohol is lower than in any country in Europe. As regards tobacco the statistics are not sufficiently complete to allow any conclusions, but there are none available which would tend to show any relationship between tobacco and gastric carcinoma.

Edward Herbert, Jr.


Four cases are reported of carcinomatous ulcers of the stomach. In each case it seemed evident that the ulcer was primary and the carcinoma secondary, since the carcinoma was confined to the margin of the crater, and the floor of the ulcer was free of tumor tissue; yet the carcinoma seemed to be growing out over the base of the ulcer. In one case there were two different types of carcinoma found in different parts of the periphery, and Deelman believes that the tumor often has a multicentric origin. These 4 cases were found among 100 operations, of which 80 were for clinical ulcer and 20 for carcinoma. Photomicrographs, drawings, and several references are included.

Edward Herbert, Jr.


Roentgen examination of the stomach with the patient in the conventional upright posture may fail to reveal a carcinoma in the upper portion of the fundus of the stomach. If the patient is placed in the recumbent or oblique position, however, or if the pelvis is raised and small amounts of contrast medium are used, a more complete outline of this area is obtained. A diagnosis can often be established with the aid of this technic.

An esophagoscopic examination is indicated in suspicious cases with a negative roentgenogram. Gastroscopy is to be avoided, since a good image of the cardia is difficult to obtain and there is danger of a rupture of the stomach in cases with concealed cancer. The authors have devised an esophagoscope which has proved of great value. The instrument is of small caliber and is equipped with a small rubber bag on its distal extremity. With this in the lower end of the esophagus, when the pressure of air in the instrument is increased the cardiac orifice, if normal, opens and a view of the upper portion of the stomach is obtained. If a tumor is present which does not involve the orifice, this will open readily. The tumor is then visualized. If the growth has invaded the mucosa about the orifice, this area appears thickened, irregular in outline, and relatively immobile.

Milton J. Eisen


The paper is a general review on the roentgen diagnosis of cancer of the stomach.

Milton J. Eisen

Gastric Surgery and Gastroscopy: Differential Diagnosis of Benign and Malignant Lesions; Operability of Tumors as Determined by Gastroscopy; Early Diagnosis of Gastric Carcinoma; the Postoperative Stomach, R. Schindler and N. Giere. Arch. Surg. 35: 712–765, 1937.

This report is based on a series of 41 cases in which 78 gastroscopic examinations were done.

Seven cases are recorded in which a correct gastroscopic differentiation between benign and malignant lesions was made prior to operation, though in every instance the clinical and roentgen findings were doubtful or incorrect. In pyloric obstruction due to a malignant lesion, the protruding carcinomatous tissue can be seen with the gastro-
scope, while in benign obstruction the pylorus is usually drawn backward by adhesions, out of the field of vision. The differentiation between benign and malignant ulceration depends chiefly on the sharpness of the edge of the lesion. If the edge is entirely sharp the lesion may be diagnosed as a benign ulcer; if the edge is not so sharp and the floor is ragged, dirty and irregular, it may safely be called a malignant ulcer.

Nine cases are reported in which opinions as to the operability of a gastric carcinoma based on gastroscopy proved to be correct. In some instances the roentgen examination led to the same opinion as the gastroscopic observations. One lesion was shown by the roentgenogram to be operable, whereas the gastroscopist stated that though the original growth was definitely operable he believed metastases to have taken place. This was found to be true.

The importance of early diagnosis of gastric carcinoma is obvious, since prompt operation may be followed by cures of long duration. Here cooperation between the roentgenologist and gastroscopist is essential. An unfavorable diffusely infiltrating carcinoma of the body of the stomach should be recognized by gastroscopy and excluded from operation. Patients with sharply limited lesions should be advised to undergo operation regardless of the location of the neoplasm, unless it is at the extreme cardiac end. Exploratory laparotomy should be done only in the relatively few cases in which gastroscopy cannot definitely determine the operability.

The paper concludes with a discussion of postoperative gastroscopy. The most frequent finding is a chronic gastritis. No cases of carcinoma at the gastro-enterostomy stoma were observed in this series, though 2 instances are mentioned by the authors.

The illustrations include a color plate, photographs, roentgenograms and photomicrographs.


At present about 50 per cent of the patients with carcinoma of the stomach are inoperable at the time the diagnosis is established and the possibility of a cure can be extended to approximately only 20 per cent. The disease is, however, curable in many instances, and five-year cures have been recorded in from 19 to 39 per cent of selected patients surviving operation. Factors influencing curability are the location of the carcinoma, lesions just proximal to and encroaching on the pylorus being most favorable, and the extent and character of node involvement. Earlier diagnosis, upon which a higher rate of curability is contingent, depends upon a more widespread suspicion of the disease in the presence of digestive symptoms and prompt and thorough roentgen study. The author adds a discussion of the surgical aspects and concludes that the need is not for an extension of the limits of operability or for more radical procedure for extensive disease. Hope lies rather in earlier diagnosis so that the patient may have the advantage of a semi-radical partial gastrectomy, with its alternative methods of reestablishing gastro-intestinal continuity while the disease is still closely confined as an intragastric lesion.


The authors' patient was admitted to the hospital with fever and anemia following an illness believed by him to be influenza. About a month after admission an acute inflammation of one eye developed, associated with glaucoma. Following enucleation of the eye the temperature rose rapidly and death followed, apparently from exhaustion. At no time were there any complaints referable to the digestive tract. Autopsy revealed a large polypoid tumor of the stomach measuring 6 X 3½ inches and containing necrotic areas. Microscopic examination of the growth and of nodules from the lungs showed adenocarcinoma. No tumor growth was demonstrable in the enucleated eye. A photograph of the tumor is included but there are no photomicrographs.
ABSTRACTS


This study is based on 18 duodenal carcinomas in patients ranging in age from eighteen to seventy-eight years. Though most authorities claim a higher incidence in males, females predominated in this series, 2 to 1. In only one of the cases was there a history suggestive of a preceding duodenal ulcer. Metastasis occurred in 6 cases. Three of the tumors were classified as malignant adenoma and 14 as adenocarcinoma.

The symptoms of duodenal carcinoma are chiefly those due to obstruction of the duodenum and neighboring structures. The early stages are characterized by anorexia, gaseous eructations, epigastric distention, and nausea. As obstruction develops, these become more severe, and pain, vomiting, dehydration, and constipation follow. A palpable tumor is found in more than half the patients. The sloughing away of portions of the tumor may temporarily relieve the obstruction or give rise to severe hemorrhage. When the bile passages are obstructed, jaundice of a constant, unremitting type develops. The progress of the disease is swift, and loss of weight may be extreme.

Pain in the epigastrium and right side of the hypochondrium was present in 17 of the authors' 18 cases. Vomiting occurred in 11. Stool examination was done in 13 cases, and tests for occult blood were positive in 3. In 8 cases the stools were clay-colored and ordinary tests for bile were negative. Jaundice was recorded in 8 instances: in 7 associated with a tumor of the peri-ampullary portion of the duodenum and in one with an infra-ampullary growth. Fever is more frequent with lesions of the second portion of the duodenum. It occurred in 7 cases in this series.

The duration of symptoms before diagnosis varies with the location of the tumor. The time elapsing between the appearance of the first symptom and the diagnosis in the 4 cases of cancer of the supra-ampullary portion in this series varied between five weeks and nine months and averaged a little more than four months. The interval in 7 cases of cancer of the infra-ampullary portion ranged from six weeks to two years, with an average of slightly more than eleven months. When the lesion arises close to the ampulla, the severity of symptoms increases rapidly. The average interval in 5 such cases was only eight weeks; in the 2 remaining cases of carcinoma of the peri-ampullary portion symptoms were present for one year before the diagnosis was made.

The average duration of life is about seven months after the onset of symptoms. The shortest duration of life is in cases in which the lesion is around the ampulla; the longest duration in those in which the lesion is in the first portion of the duodenum. The two extremes in this series were six weeks and two years.

In almost every case of duodenal carcinoma which is studied roentgenographically definite pathologic changes can be demonstrated. Such evidence was present on the films in 15 cases in which such studies were made. In 14 of these the pathologic process was recognized and described. In only a single instance, however, was the possibility of a primary carcinoma of the duodenum suggested.

Treatment is preeminently surgical but the operative mortality is high, both because of the magnitude of the procedure and the poor condition of many of the patients. In a large percentage of the cases operation reveals no evidence of metastasis or local extension. Twelve of this series of patients were operated upon, but in only one could an attempt be made to remove the tumor and this resulted fatally. There were 7 post-operative deaths; 1 patient died after fourteen weeks; 2 lived two years, and 2 were not traced.

The various operative procedures are discussed and the case histories are appended. Photomicrographs, roentgenograms, and drawings illustrating the operative technic are included.


Of 104 cases of carcinoma of the suprapapillary portion of the duodenum recorded in the literature, the authors found 35 which could be accepted on the basis of ample
clinical and pathologic data. They report 6 additional examples. Their conclusions are based on this series of 41 cases. Twenty-six of the patients were men and 15 were women; the average age was about fifty-five years. The authors summarize their observations as follows:

"The onset was acute in 53.6 per cent of cases and gradual in 41.4 per cent, an antecedent history of symptoms referable to the upper portion of the abdomen being elicited in approximately half of the cases in which the onset was acute and in several in which it was gradual. The symptoms occurring most frequently in the cases in which the onset was acute were vomiting, epigastric pain, weakness, loss of weight and jaundice, and the average duration of life was three and a half months. The early symptoms occurring most frequently in the cases in which the onset was gradual were abdominal pain, dyspepsia, loss of weight, vomiting and jaundice, and the average length of life after the onset was sixteen months. A marked change in symptomatology occurred in 62 per cent of the cases in which the onset was gradual, symptoms occurring which resembled those in the group in which the onset was acute. A mass was palpated clinically in the region of the primary tumor in approximately 24 per cent of the cases. The gastric or duodenal contents contained blood in 8 of 13 cases, free hydrochloric acid in 7, and bile in only one in which choledocystogastrostomy had been performed. The stools contained blood in 13 of 21 cases, and 9 were acholic; typical "pancreatic" stools were found in one case in which the duct of Wirsung was obstructed. A marked grade of anemia was present in 10 cases, the color index being low in 7 and high in 3.

"Roentgenographic studies are of little direct value in making a positive diagnosis of carcinoma of the suprapapillary portion of the duodenum. In a few cases evidence of an ulcerated lesion in the duodenum or of obstruction of the gastro-intestinal tract was suggested but, on the other hand, extensive constricting lesions were frequently not demonstrated. Irrespective of the anatomic point of obstruction, the findings are frequently interpreted as pyloric obstruction. This method of examination is of greatest value in ruling out lesions of the stomach, colon, or gallbladder.

"A correct preoperative clinical diagnosis of carcinoma of the suprapapillary portion of the duodenum was made only twice. A correct surgical diagnosis was made in 9 of 17 cases, biopsy being of especial value in this connection. No instance of cure has been recorded, although follow-up studies were incomplete in a few cases.

"The growth averaged 2.5 cm. in length in 56.1 per cent of cases and varied from 4.5 to 8 cm. in length in 31.7 per cent. It was localized in 68.3 per cent of cases, and in one half of these to the bulbar region. Ulceration occurred in about 73 per cent of cases, about half of these being annular or constricting lesions. Extension or metastasis occurred in 75.6 per cent of cases, to the liver, lymph nodes, pancreas, biliary passages, peritoneum, lungs, and bone. All the growths were adenocarcinoma but one, which was an adenosquamous-cell carcinoma.

"No definite evidence has been advanced to support the hypothesis that simple ulcer of the duodenum is a precancerous lesion."

The report dealing with infrapapillary duodenal carcinomas is based on 30 cases, of which 2 are recorded here for the first time. Twenty of the patients were men and 10 women, the average age being about forty-eight years.

The clinical onset was acute in 40 per cent of cases, with an average duration of four months; it was gradual throughout in 40 per cent, with an average duration of eleven months, and first gradual and then acute in 20 per cent, with an average duration of ten months, the gradual phase occupying four and a half months. The principal symptoms and signs, irrespective of the mode of onset, were pain, vomiting, and cachexia. Other less common symptoms included anorexia, constipation, diarrhea, abdominal distention, and jaundice. The vomitus or gastric contents were analyzed in 20 cases, and bile was detected in 70 per cent of these and blood in 35 per cent; free hydrochloric acid was absent in 37 per cent of 14 specimens. A mass in the region of the primary tumor was palpated clinically in 16.6 per cent of the cases.

A correct preoperative clinical diagnosis is rarely made. An obstructing lesion of the duodenum was visualized roentgenographically with a fair degree of accuracy in 40 per cent of 15 cases; in 33 per cent the lesion was incorrectly localized at or near the pylorus, and in the remainder no lesion was demonstrated. A correct diagnosis was
made at laparotomy in 61.9 per cent of 21 cases, the results being unsatisfactory in 81 per cent of these, and the postoperative follow-up studies were incomplete in the remainder.

The primary tumor measured from 3 to 5 cm. in length in the majority of cases, and in one case the infrapapillary segment of the duodenum was involved diffusely in its entirety. All the tumors were adenocarcinomas. The descending and ascending portions of the infrapapillary segment were most frequently involved. Extension of the primary tumor to adjacent structures and organs and metastasis or both occurred in 50 per cent of cases. Some degree of obstruction of the terminal end of the common bile-duct or of the ampulla of Vater or both was a terminal feature in 16.6 per cent. Duodenal fistulas existed in 13.3 per cent. A high grade of intestinal obstruction was present in 56.6 per cent. The alimentary canal proximal to the primary duodenal lesion was maximally distended, the stomach and proximal portion of the duodenum often giving the appearance of a bilocular viscus.

Photomicrographs illustrating some of the authors' cases are reproduced and a bibliography accompanies each paper.


A man sixty-one years of age who complained of epigastric pain was found by x-ray to have a tumor of the first portion of the duodenum. At operation a polyp was removed which proved microscopically to be an adenoma of Brunner's glands. The patient remained symptom-free. Two roentgenograms are included.

Edward Herbert, Jr.


Among 104 patients at the Lahey Clinic with endometriosis there were 17 with involvement of the sigmoid colon or rectum.

The author recognizes three groups of cases: those with rectovaginal involvement; those with diffuse involvement of the rectosigmoid and rectum; and those with discrete endometrioma of the sigmoid. Of his series of patients, 5 had involvement of the rectovaginal septum, and in 2 of these definite obstruction of the bowel was present. Eight patients had endometriosis involving the rectosigmoid and rectum, all with some degree of obstruction. The sigmoid was primarily involved in 4 patients, 2 of whom had almost complete intestinal obstruction.

Endometriosis of the rectovaginal septum can be demonstrated on bimanual pelvic examination and proved by biopsy. A positive preoperative diagnosis of endometriosis of the sigmoid or upper rectum can seldom be made, but should be suggested by long-standing symptoms of obstruction which are enhanced during the menstrual period.

Treatment must take into consideration both the ovaries and intestinal lesions. In the cases of rectovaginal involvement, if this is extensive and is producing a severe obstruction, a bilateral oophorectomy with or without a temporary colostomy is indicated. In the presence of diffuse involvement of the rectosigmoid and sigmoid, treatment is radical so far as concerns the uterus, tubes, and ovaries but resection of the bowel is not considered necessary. All 4 of the author's patients with discrete implants involving the sigmoid were operated on for obstruction. In 3 resection of the sigmoid was done, but the authors believe that if the obstruction is not severe and if the diagnosis is confirmed by frozen section, removal of the ovaries may be sufficient. Where carcinoma cannot be excluded resection is indicated.

The results of operation are good. Of the 5 patients with endometrioma of the rectovaginal septum, 3 have no remaining tumor and 1 has no symptoms although a small mass remains. The fifth patient was treated, after biopsy, by x-ray therapy and is unimproved. Of the patients with implants encroaching on the rectosigmoid and rectum, 5 are free of symptoms, but, in spite of removal of both ovaries, barium enemas show narrowing and spasm of the bowel. One other patient in this group has no
bowel or pelvic symptoms but has become insane. All the patients with discrete lesions in the sigmoid are well.

Six cases representative of the different groups are recorded, with photographs of the resected bowel in one and photomicrographs in another. Seven references are appended.


Subtotal hysterectomy for fibroids was carried out in a woman aged twenty-nine who had had dysmenorrhea and menorrhagia for four years. During the operation a growth of the sigmoid was seen and regarded as a cancer. It was removed a fortnight later, after signs of intestinal obstruction had appeared, and was then much smaller than at the previous operation. Histologically, typical endometrioma was found and the intestinal mucosa was intact. The authors consider that certain features of their tumor are in favor of Meyer’s metaplastic theory of the origin of endometriomas and believe that all tumors of the iliac and pelvic segments of the intestine in women who have not passed the menopause should be examined histologically for endometrioma. There are six poor photomicrographs but no references.


A general discussion with emphasis upon diagnosis and treatment.


A woman aged forty-eight was admitted to the hospital with an ovarian tumor. Two years previously a tumor of the breast had been removed, and this had not recurred. At operation, a large subserous fibroma of the uterus, a tumor of the left ovary, and a tumor the size of a hazelnut in the middle third of the appendix were found. Subtotal hysterectomy, bilateral castration and appendicectomy were carried out and the patient was well about two years later. The tumor of the appendix was an alveolar carcinoma of the type usually found there. The alveolar structure was completely lost in most parts of the ovarian growth, but in some parts the structure was closely or exactly similar to that of the neoplasm in the appendix. Metastasis of a cancer of the appendix to the ovary is extremely rare. The case illustrates the importance to the surgeon of a knowledge of the possible metastases from tumors of the digestive tract.

A photograph of the gross specimen and four photomicrographs are included.


In a survey of the literature there were found 18 instances of malignant tumor of Meckel’s diverticulum, of which 6 were carcinomata and 12 sarcomata. One case as yet unpublished and the case here recorded bring the latter figure to 14 and the total to 20. The authors’ patient was a man of sixty-two with a leiomyosarcoma discovered at an exploratory operation. It was encapsulated and pedunculated and of a low grade of malignancy.

The symptoms of tumors arising in a Meckel’s diverticulum are those referable to the tumor itself, as abdominal distress or pain, and secondary symptoms due to perforation of the diverticulum or intussusception. Localized or diffuse peritonitis due to necrosis or perforation of the diverticulum occurred in 3 of the 20 cases considered here and was fatal in all. Intussusception was encountered but once.

No evidence of metastases was found in any of the cases but in 2 there was a recurrence five years after operation. References are included and there are photographs of the tumor from the authors’ patient and a photomicrograph.
ABSTRACTS

RETROPERITONEAL TUMORS


A thirty-one-year-old married woman complaining of lower back pain and dysuria was found by pyelographic examination to have a non-filling left kidney pelvis and ureter. Cystoscopic examination showed no excretion from the left ureter after sixteen minutes. At operation two calcified and partially ossified cysts were removed from the retroperitoneal tissue of the left lumbar region. Microscopic examination showed the cysts to have no inner lining or structure of any specific character. The possibilities of lymphatic cyst, calcified tuberculous nodes, echinococcus cyst, remnant of the wolffian duct, and non-specific abscess are discussed.

The author's second patient was a forty-nine-year-old woman with a large, smooth, round abdominal mass extending to the epigastrium. It had been present almost a year. At operation a 19-pound retroperitoneal tumor was removed. It consisted chiefly of fatty tissue but in its lower portion, in the pelvis, there was transition from adult fat tissue to a cellular fibroma or fibrosarcoma. Several weeks after operation a large tumor was again palpable. This was treated with heavy radiation and eight months after the first operation a second retroperitoneal tumor, weighing 11½ pounds, was removed. Histologically it showed the structure of a rapidly growing sarcoma. Death from inanition followed shortly.

The author reviews the literature concerning these retroperitoneal lipomas and their tendency to recurrence and malignant degeneration and failure to produce distant metastases. Diagnosis and treatment are also briefly discussed. Seaton Sailer


A woman fifty-six years of age with a large abdominal mass was found at operation to have a retroperitoneal tumor which was described microscopically as a benign fibro- reticulomyo-angio-endothelioma. She remained free of symptoms or evidence of recurrence after its removal. From a study of this case and a review of the literature it is concluded that a retroperitoneal tumor, unconnected with any organ, which remains stationary for some time and then shows a period of rapid growth, is probably a benign retroperitoneal tumor of embryonic origin. Histologically it will show mesenchymal elements, often young forms, and usually of mixed type. Three photomicrographs and a short bibliography are included. Edward Herbert, Jr.

THE PANCREAS


A man fifty-seven years of age gave a history of intermittent jaundice and glycosuria for seven years, with abdominal pain, diarrhea, and increased fat in the feces. At times an epigastric tumor could be felt. The original diagnosis was pancreatic carcinoma, but the prolonged course caused this to be changed to pancreatitis. At autopsy, seven years after the first symptoms, a carcinoma of the head of the pancreas was found with a proliferation of fibrous tissue around the dilated ducts. From the structure of the tumor and the arrangement of the fibrous tissue it was believed that the carcinoma had been present during the entire course of the disease. There are no illustrations. Edward Herbert, Jr.


Report of a calcified adenoma of the pancreas with periodic attacks of hyperinsulinism in a woman of thirty-two years. Before the cause of the symptoms was discovered,
observations were made with reference to the effect of emotional factors, diet, and the administration of acids and alkali. The patient was found to respond favorably to a high-carbohydrate, low-fat diet and poorly to a low-carbohydrate régime. The threshold of the development of symptoms was not appreciably affected by the administration of large amounts of alkali or acid. No direct relation between emotional tension and the onset of symptoms was established. Symptoms ceased after removal of the adenoma and the general condition showed great improvement. Photomicrographs and references are included.

THE BILIARY TRACT


Among 24,400 necropsies done at Bellevue Hospital, New York, in a period of thirty years, there were found 62 instances of unquestionable primary carcinoma of the liver, an incidence of 0.25 per cent. Thirty-nine of these cases were of liver-cell type and 21 of bile-duct type; 2 were of indeterminate or dual origin. Fifty-three of the patients were males and 9 females; 5 were Orientals—a much higher proportion than could be accounted for by the admission rates. The highest incidence was in the fifth to the seventh decade. There were no cases in children.

Clinically the cases are divided into six groups. (1) The largest group, numbering 18, presented chiefly the history and symptoms of cirrhosis of the liver. (2) In 14 patients the complaints were referable to the biliary or gastro-intestinal tract. (3) The third group of patients, also 14 in number, presented signs of malignant growth somewhere in the body, as loss of weight, weakness, or metastatic nodules; in 4 of this group a correct clinical diagnosis was made. (4) Three patients died before or shortly after operation, as a result of spontaneous hemorrhage from a ruptured carcinomatous nodule of the liver. (5) In the fifth group—6 cases—the symptoms and signs did not point to liver pathology and (6) in the sixth group—7 cases—death occurred before any diagnosis was possible. The average course was 2.5 months for patients with liver-cell tumors and 4.17 months when the growth was of the bile-duct type, but these figures are of questionable value except as indicating the brief duration.

A review of the physical findings suggests that the clinical diagnosis may be postulated with reasonable certainty on the following criteria: (a) the presence of a palpable massive solitary growth in the right lobe of the liver in a male over thirty-five years of age; (b) inability to determine a primary growth in any other part of the body; (c) jaundice, usually of a mild grade; (d) ascites; (e) a low degree of otherwise unexplainable fever. In addition to these criteria a preliminary history of vague gastro-intestinal disturbances of short duration, or signs of portal obstruction extending over a period of a few weeks only, should be taken into consideration.

Hepatic cirrhosis was present in 32 or 51.6 per cent of the author's series, including 6 cases of hemochromatosis of the liver with cirrhosis. In 29 cases, or in 46.8 per cent of the entire series, there was no naked eye evidence of metastasis. In the remaining 33 the sites of metastases were numerous. The most frequent were the periportal lymph nodes and the lungs, especially the right lung.

There are no illustrations. A short bibliography is given.


Carcinoma of the liver with bone metastasis is rare. In the case recorded the secondary lesion involved the sacro-iliac joint and invaded both the sacrum and the ilium. Material removed at operation showed metastatic carcinoma but the primary site was not discovered until necropsy, which revealed a small bile-duct carcinoma in the dome of the right lobe of the liver. Roentgenograms and photomicrographs are reproduced. A bibliography includes references to other cases of liver carcinoma with secondary bone deposits.

This is a general discussion based on the literature. There are no illustrations, but many references are given.


The author analyzes clinically 48 cases of primary gallbladder cancer from the records of the Boston City Hospital. All were verified at operation or autopsy. A correct clinical diagnosis was made in only 2 of these cases. Twenty-eight patients were females, 20 males. The ages ranged from twenty-six to eighty-four; the average for both males and females was fifty-six. Twenty-eight patients had no symptoms or signs of a preceding involvement of the biliary tract, although stones were found in 7 of the males and 4 of the females. Nine patients (1 male and 8 females) gave symptoms of repeated gallstone colic, some for five years and more. Eleven patients (3 males and 8 females) gave long histories suggestive of chronic cholecystitis. In 5 of these stones were found.

As the tumor increases in size, pain and jaundice are frequent symptoms. Not infrequently the first evidence of the disease is due to a metastasis. A palpable mass in the gallbladder was observed in 25 cases. Loss of weight was invariably recorded.

References are appended.


The author reviews the literature and records his observations in a series of 48 cases of carcinoma of the gallbladder observed at the New York Hospital over a period of twenty years. Operation was performed in 45 of these cases. In 21 this was confined to exploration and biopsy. Cholecystectomy was done in 16 cases, cholecystostomy in 6, and a palliative gastro-enterostomy in 2. One of the patients was known to be alive and well two years after cholecystectomy but was subsequently untraced. All the others died. A bibliography of 65 references is included.

THE SPLEEN


A woman of thirty-one years had a large swelling in the left upper abdominal quadrant that had been present for seven years, without any general disturbance of health. It had grown steadily larger and recently twinges of pain had occurred in the region. Roentgenograms revealed a splenic tumor and splenectomy was done. The patient was well a year and a half later.

The spleen was largely replaced by an encapsulated mass of necrotic and degenerated tissue. In many places there was a network of trabeculae forming spaces of irregular size and shape containing old and fresh blood. The diagnosis was hemangioma of the spleen.

Smith and Rusk in 1923 (Arch. Surg. 7: 371, 1923) recorded 15 cases of angiomata of the spleen, for 11 of which reasonably complete data were available, 4 cases have been found in the more recent literature [including one reported by Kellert in Am. J. Cancer 16: 412, 1932]. On these and his own cases the author bases a discussion of the pathology and clinical features. In 13 cases in which splenectomy was done a cure was obtained. Two photomicrographs are included and references are appended.

THE SUPRARENAL GLANDS


Four cases are recorded—3 of adenoma of the adrenal cortex and one of a pituitary adenoma associated with adrenal hypertrophy.
The first case, in a girl originally seen at the age of thirteen, was noteworthy for the long duration of symptoms. Menstruation had ceased within a year of its establishment at the age of eleven, and changes in the voice and abnormal hair growth were observed a year later. The diagnosis was not established until eight years after this. It was confirmed at operation, following which menstruation was reestablished and the signs of masculinization regressed.

The second patient was a woman of twenty-four first seen in an attack of hypoglycemia. A large abdominal tumor was present and an operation was undertaken. Removal of the growth proved impossible at this time or on another attempt seven months later, but a specimen was obtained and a diagnosis made of adrenal cortex tumor. The course of the disease was marked by recurrent hypoglycemic attacks and by amenorrhea and severe acne over the face, neck, chest, and back. Death occurred sixteen months after the patient was first seen. Roentgen examination shortly before had shown evidence of metastatic growth in the right lung. Assays of the urine were negative for prolan and estrin but positive for the male hormone. Autopsy was not permitted.

The third patient was a woman of thirty with symptoms typical of pituitary basophilism—obesity, hypertrichosis, amenorrhea, skin changes, fatigue, etc.—and in addition a change in the voice. An exploratory operation revealed an adenoma of the right adrenal, following removal of which the patient died, apparently from acute adrenal failure. No pituitary changes were discovered at autopsy.


Two cases are recorded in which an adenoma of the suprarenal gland was associated with a Grawitz tumor of the kidney. One of the patients, a man of sixty, died nine days after nephrectomy, with uremia; the other, a woman of sixty-two, survived operation but died of metastases within a year. Roentgenograms, photographs of the gross specimens and photomicrographs are included.

THE FEMALE GENITAL TRACT


A brief discussion illustrated by case reports. In one patient the clinical diagnosis was fibromyoma, in one endometriosis, in one a corpus luteum cyst, and in one a dermoid cyst of the ovary. In only the second case had operation been done, establishing the diagnosis.


In two earlier papers the authors discussed the ureteral, renal, and bladder complications of carcinoma of the cervix (J. Urol. 36: 618, 1936, and Surg., Gynec. & Obst. 63: 785, 1936. Abst. in Am. J. Cancer 31: 332, 650, 1937) based on a series of 257 cases which had urologic examinations. The present paper is a rather general discussion covering the same points. The authors have added 133 to their original series but do not analyze these in detail. A pyelogram and a photograph of a gross specimen are reproduced.

In the Leeuwenhoek Clinic in Amsterdam from 1915 to 1924 the percentages of cures in cervical carcinoma were as follows: Groups I and II, 48 per cent; Group III, 10 per cent; Group IV, none. From 1924 to 1932 they were: Groups I and II, 58 per cent; Group III, 19 per cent; Group IV, none. In the latter part of this second period, i.e., 1928–32 the percentages were still higher: for Groups I and II, 66 per cent; for Groups III and IV, 23 per cent, or for all groups 43 per cent five-year cures. Further improvements must depend not only on improved technic, but on beginning treatment in the earlier stages. To this end the cooperation of the general practitioner must be obtained.

Edward Herbert, Jr.


Nine cases of hydatidiform mole and 4 of chorionepithelioma are reported, and the management of both conditions is discussed.


Subtotal hysterectomy was carried out in a woman aged twenty-five for chronic salpingitis and fibrocystic ovary. There was a spherical nodule the size of a pea entirely included in the myometrium; it had no connection with the uterine mucosa, from which it was separated by muscle. The tumor contained gland-like tubes with cylindrical epithelium radiating from a large central canal. The stroma was formed by a mucous chorion like that of the endometrium. The authors have seen a similar disposition of tissues in an endometrioma of the umbilicus. Two photomicrographs are included.

L. Foulds


A short description is given of various technics of radium and x-ray therapy of uterine myomata. No new material is included and there are no illustrations.

Edward Herbert, Jr.


A large fibroid uterus was removed by abdominal subtotal hysterectomy. Seventeen and a half years later, when the patient was aged sixty-one, an encapsulated tumor the size of an orange was removed; it was a calcified fibroma which had developed in contact with, but independent of, the uterine stump. Probably a small myoma had been overlooked at the first operation and had grown and undergone progressive calcification.

L. Foulds


A benign fibroma was removed from the uterovesical septum of a woman aged thirty-two. It had caused severe pain after coitus.

L. Foulds


The authors' patient had intense abdominal pain, lasting one to two hours at the beginning of the menstrual periods. Menstruation was otherwise normal and there were no symptoms between the periods. Tarry cysts were present in each ovary and
endometrioma was recognized in histological preparations. Although the pains were entirely menstrual and the patient was sterile, the case was unusual since neither exacerbations of pain nor enlargement of the ovarian tumors occurred at the end of menstruation and there was no menorrhagia.

L. Foulds


The authors describe the clinical and histological features of Brenner tumors of the ovary and add two personal cases to the 105 of which they have found records. There are no illustrations or references.

L. Foulds


The most common and dangerous complication of ovarian tumors is torsion of the pedicle. Ninety-seven instances (9 per cent) were encountered in a series of 1101 operations for ovarian neoplasms. The cause is not known, but a smooth tumor surface, solidity, a tumor of moderate size, a roomy pelvis, and a relaxed abdominal wall seem to be favoring factors. A single complete twist is most common, but in one of the cases in this series there were seven turns and as many as fifteen have been recorded. While ovarian tumors occur with equal frequency on the right and left sides, torsion occurs twice as frequently on the right. There may be no symptoms, or these may be mild and recurrent, or acute with partial or complete shock, depending upon the suddenness and extent of vascular obstruction. Complications are rupture with hemorrhage, infarction, torsion of the fallopian tube, and bloody or clear peritoneal fluid, in order of their frequency. Necrobiosis, gangrene, and peritonitis are the end-results. References are included.

Edward Herbert, Jr.


A woman aged fifty-two had an attack of acute right iliac pain. There had been two similar but less severe attacks during the previous two months. The diagnosis at first was renal colic but after further examination was changed to ovarian cyst with torsion of the pedicle. An ovarian fibroma with a twisted pedicle was removed at operation.

L. Foulds


A girl barely two years of age had hypertrophied breasts, pubic hair, and uterine bleeding. A pelvic mass was palpable and at operation a tumor of the right ovary was removed, weighing 600 gm. The uterus was large and the left ovary appeared to be normal. Histologically the tumor was a benign granulosa-cell tumor. Hormonal studies when the child was first seen showed an increase in follicular hormone, but there was a return to normal after operation. No further record is given. Four photographs and 3 references are included.

Edward Herbert, Jr.


One hundred and five cases of renal cancer, 200 of prostatic cancer, and 100 of cancer of the testicle were reviewed to determine what symptoms led the patients to seek medical advice. In 22 per cent of the kidney cases, 12 per cent of those of prostatic cancer, and 37 per cent of the cancers of the testicle the chief complaint was not referable to the primary seat of the tumor. In nearly every instance the symptoms were attributable to metastatic growth.

A man aged fifty-four suffered from progressive emaciation and digestive disturbances and had an enlarged lymph node above the left clavicle. Three months later he complained of pain in the left lumbar region and a small tumor was felt in the left hypochondrium. Hodgkin’s disease or gastric cancer was suspected. The supraclavicular node was removed and had the structure of a carcinoma of the kidney. At subsequent operation a renal tumor the size of a child’s head was found. There had been no urinary symptoms. Lymph node metastases from latent cancers are rare, the authors having found only one recorded case resembling their own. There are no illustrations.

L. Foulds


The tumor described here was removed at autopsy from a man aged fifty-nine. The greater part of the growth had the appearance of spindle-cell sarcoma with considerable polymorphism; it contained large multinucleated syncytial elements and giant cells. Longitudinal striation was seen in the spindle cells but cross-striation was not certainly recognized. This part of the tumor corresponded in structure with myoblastoma. The part of the growth in and near the kidney consisted mainly of typical solid alveolar hypernephroma, but there were some areas of atypical papillo-adenomatous hypernephroma. The myoblastoma and hypernephroma were intermingled in places but more usually a connective-tissue capsule intervened. The author considers that there are two possible explanations of the genesis of this tumor: (1) simultaneous heterotopia of adrenal cortex and of myotome tissue; (2) an origin from mesodermal cells which retained the capacity to differentiate into muscle, adrenal cortex and, eventually, into renal tissue. The second explanation is preferred. The author discusses the histogenesis of hypernephroma and the relationship of his tumor to embryonic nephromas. Six photomicrographs and a bibliography are included.

L. Foulds


In two infants vomiting was the first and, for some time, the only symptom of renal tumor. Growths were later recognized and were removed with difficulty, at the unusual ages of seventy-six days and fifty days. Radiotherapy was given after operation and both children are alive and in excellent health twenty-three months and eight months respectively after operation. The two tumors represented almost the extreme histologic types of embryonic nephroma. The first was highly undifferentiated, with a predominance of embryonic and epithelial tissue. The second tumor was well differentiated and contained some epithelial elements in an advanced stage of differentiation but a preponderance of tissue of sarcomatous appearance. In the second case no ureter was found on the side of the tumor and the malformation is regarded as undoubtedly a factor in the development of the nephroma.

L. Foulds


A large tumor of the left kidney weighing 1,240 gm. was removed from a girl aged three. Two months later there was a recurrence in the loin, which was treated by radium. The patient died about four months afterwards with multiple tumors in the liver, lungs, and retrovesical region. At autopsy there was no trace of the lumbar recurrence. This observation proves the radiosensitivity of the tumor, which was a typical malignant dysembryoma of renal blastema type.

L. Foulds

A woman aged thirty-two died after an illness which lasted a month. Acute miliary tuberculosis was suspected but autopsy revealed a tumor of the right kidney with secondary deposits in the liver and lungs and in the supraclavicular, tracheobronchial and mediastinal lymph nodes. The histologic structure of the tumor was identical with that of the malignant dysembryoma of the renal blastema which is ordinarily found in infancy. There are references to three previous records of tumors of the renal blastema in adults. No illustrations are included.


A man aged forty-one suffered from hematuria and lumbar pain. Simple nephrectomy was performed and the patient was well, without signs of metastasis or recurrence, three years later. The kidney bore a tumor the size of a large orange. Histologically it resembled a malignant dysembryoma of "renal blastoma" type rather than the usual cancer of the kidney in adults. In view of the excellent results of simple nephrectomy without postoperative irradiation, contrasted with the results in children, the authors ask whether malignancy is a function not only of the tumor but also of the age of the patient. The histologic features are well illustrated by four drawings.


The authors review the subject of solitary cysts of the kidney and record a case in a man of thirty-one. After aspiration of the cyst contents it was enucleated and the wall was found to contain masses of adenocarcinoma. Death occurred five and a half months later from pulmonary metastases. Pyelograms, a photograph of the cyst, and a photomicrograph are included, and references are given.


Beer describes his technic for total cystectomy and implantation of the ureters in the skin in a single stage. Because of the lower mortality he believes that where total cystectomy is indicated, this procedure is preferable to the theoretically more ideal technic of implantation of the ureters into the sigmoid followed by removal of the bladder in a subsequent stage. Furthermore, skin implantation of the ureters makes possible irrigation of the upper urinary tract whereby small calculi and phosphatic incrustations can be washed out as occasion requires. Total cystectomy is indicated in infiltrating growths of the bladder neck and those involving both ureters or one ureter with extension close to the other ureteral orifice; also in diffuse carcinomatous infiltration of the bladder wall.

Of 23 patients in whom a total cystectomy with skin implantation of the ureters was done in a single stage, 17 survived the procedure. One patient has lived nine years and 4 others five years or longer. Six patients died within a year of unknown cause, 3 died from intercurrent complications, and 2 with metastases; 1 committed suicide. It is the author's experience that the intubation of the ureters and use of a urinal is not attended by the objections frequently reported.

Two drawings illustrate the technic.


There are on record with the Registry Committee of the American Urological Association 176 cases of infiltrating cancer of the trigone of the bladder treated more than five years ago. Only 13 patients, or 7 per cent, were alive without evidence of the disease after the five-year period, though 88 were seen within six months after the
appearance of symptoms. These tumors result in ureteral or urethral obstruction, or both, and in many instances extend to the prostate or vesicovaginal septum. They metastasize early, approximately 50 per cent showing secondary deposits within a year of onset. Treatment is primarily palliative. When the patient is apparently free of metastatic disease, serious infection, or impaired renal function, or when the latter factors have been improved sufficiently by palliative therapy, radical treatment of the tumor may be considered. References are appended. There are no illustrations.

**Fibrorhabdomyoma of the Bladder, P. M. De Planque.** Fibrorhabdomyoma van de blaas, Nederl. tijdschr. v. geneesk. 81: 1298–1302, 1937.

A boy two years of age who had hematuria was found to have a tumor measuring 5 × 4 × 3 cm., arising from the posterior wall of the bladder. On removal it was found to be a benign rhabdomyoma containing a large amount of loose fibrous tissue. Two photomicrographs are included.

Edward Herbert, Jr.


A report of a case with a general discussion and review of the literature. References are appended.


A man thirty years of age had a proliferative lesion of the penis. Biopsy indicated a benign papilloma and a conservative excision was done. Further histologic studies showed an unquestionable carcinoma, but the patient was symptom-free two years later. On the basis of this case a general discussion is given of benign and malignant penile lesions, a plea being made for careful microscopic examination of the entire lesion in order to avoid unnecessary amputations. Three photographs and two photomicrographs are included.

Edward Herbert, Jr.

**Early Stage of Carcinoma of the Penis, E. Zurhelle.** Over beginvormen van penis-carcinoom, Nederl. tijdschr. v. geneesk. 81: 2960–2961, 1937.

A man thirty-one years of age with a marked phimosis had a tumor of the glans penis which perforated the prepuce. Biopsy showed a papilloma which at one point had progressed to frank carcinoma. A local excision was carried out and the patient was well two years later. It is emphasized that conservative surgery should be employed when possible, especially if the carcinoma seems to be in the early stages, and when the patient is young. There are no illustrations.

Edward Herbert, Jr.


In the section of this paper devoted to tumors the author reviews critically the reported cases of interstitial-cell tumor of the testis and presents these in abstract form. In only 6 can the growth be considered as indubitably arising from the interstitial cells. The occurrence of the tumor in animals is also discussed and a new case in man is recorded.

The patient, thirty-five years of age, had an enlarged left testis. It was about twice the normal size and was firm and solid. A left orchidectomy was done with subsequent radiotherapy. The testicular mass, measuring 6.5 × 6.0 × 3.5 cm., consisted almost wholly of tumor except for a small area of atrophic testicular tissue at the lower pole which was completely demarcated from the tumor proper by a thin fibrous capsule fusing with the albuginea. The histologic picture was characteristic of interstitial-cell tumor—large polymorphous cells with abundant cytoplasm, usually containing a single nucleus and brown or brown-yellow pigment granules.

Neoplasms of this type are differentiated from other testicular tumors chiefly by the cell type. They are distinguished from simple hyperplasia by absence of an etiologic
factor for the latter, the enlargement of the testicle, and the absence of proliferation of interstitial cells between the residual tubules.

Orchidectomy is indicated with postoperative radiotherapy because of the possibility of malignancy, though only one of the reported cases was clinically malignant.

In an addendum the author calls attention to two recently recorded cases and one other that had escaped his attention. One of these was published in the Am. J. Cancer 26: 144, 1936.

Photomicrographs are included and a comprehensive bibliography is appended.


This is a review of the subject of testicular tumors, with a bibliography. No cases are reported, but several photomicrographs are included.

**THE NERVOUS SYSTEM**


In functional visual tests for the localization of brain tumors it is necessary to distinguish between diminution of vision due to retinal changes and that due to the brain lesion. In this preliminary report visual tests are described for ascertaining the reciprocal relation of area and light by which it is possible to obtain information regarding the retinal component in visual loss and to determine the parts of the fovea most affected by the retinal lesion.


Quantitative tests of visual acuity and of the time required for dark adaptation were carried out, according to a method described by the authors, in 127 patients, of whom 19 had supratentorial brain tumors verified by operation, air injection studies, or necropsy. While the study is regarded as a preliminary one, it is concluded tentatively that these quantitative visual tests are of definite clinical value in the localization of supratentorial tumors. References are appended.


The ocular symptoms are described in 21 cases of suprasellar meningioma, all of which were operated on and verified anatomically and microscopically. The eye grounds showed primary bilateral optic atrophy in 12 cases, unilateral optic atrophy in 3, Foster Kennedy's syndrome [retrobulbar neuritis with the formation of a central scotoma and primary optic atrophy on the side of the lesion with papilledema on the opposite side] in 3, bilateral papilledema in 2, and normal eye grounds in 1 case. Visual acuity was determined in 19 of the patients and varied greatly in degree. In general a slow decrease in vision over a period of years was the rule, with a preponderance of diminution on one side. Central scotomata were noticed in 4 cases. The visual fields were outlined in 18 cases. There was a bitemporal limitation of the fields in 15 cases, varying from a slight degree to complete hemianopsia. In one case each there was homonymous hemianopsia, horizontal hemianopsia, and a concentric diminution with scotoma. Other eye symptoms which were noted were diplopia twice, sixth nerve paralysis twice, nystagmus twice, corneal hypesthesia twice, unilateral exophthalmos three times, bilateral exophthalmos once, chemosis once, and a collateral circulation of the eyelids in two cases, due to compression of the cavernous sinus.

Of the 21 patients, 7 died as a result of operation. Nine of the remaining 14 showed definite improvement in vision after operation. The visual fields showed the earliest
and most marked improvement, increase of visual acuity was slower and less constant,
and the eye grounds showed the least change.
Several drawings and tables, and a bibliography are included.

Edward Herbert, Jr.

Basal Meningiomas of the Posterior Cranial Fossa, O. Voss. Basale Meningeome der

Four examples of meningioma arising from the dura at the base of the posterior
cranial fossa are reported briefly. In 2 partial resection was done with clinical improve-
ment; in 2 a radical resection was performed. In one of the latter a portion of the
sigmoid sinus was removed with the tumor. In the other the tumor arose from the
clivus and extended in the spinal foramen to the level of the 2nd and 3rd cervical verte-
brae. Complete resection necessitated exposing the cord as well as the site of origin
of the tumor. Both these patients made good recoveries.

Seaton Sailer

Meningioma of the Rolandic Fissure, J. H. Zaaijer. Meningeoma in den sulcus cen-
tralis, Nederl. tijdschr. v. geneesk. 81: 1828-1832, 1937.

A man forty-two years of age received a severe blow on the right side of the head.
The skull was not fractured, however, and he was well five weeks later. Three and a
half years afterward he had recurrent attacks of jacksonian epilepsy and was believed
to have a subdural hematoma. At operation a meningioma of the rolandic fissure was
found. It recurred and was removed radically at a second operation, following which
the patient remained symptom-free. There are no illustrations.

Edward Herbert, Jr.

Effects of Irradiation on Gliomas, C. H. Frazier, B. J. Alpers, E. P. Pendergrass, and

This is a histologic study of thirty gliomas to show the effects of irradiation. The
cases are grouped arbitrarily as receiving (1) inadequate treatment, i.e., less than 1000 r;
moderate treatment (1000-2000 r); (3) adequate treatment (more than 2000 r). The
factors varied. The r per minute output with 0.5 mm. copper filtration was about
40; with 2.0 mm. copper or its equivalent 15. The authors summarize their observations
as follows.

"Of 12 medulloblastomas, 5 showed either a moderate or marked histological
response to irradiation, 5 showed a mild response, and 2 none at all. The histological
effects were seen primarily in the cells, next in the connective tissue stroma, and least in
the vessels.

"The medulloblastomas are radiosensitive. Our data indicate that they should be
treated at brief intervals of not more than six weeks between any two series. Each
series should be delivered through a maximum number of skin portals. Approximately
2,000 r (measured in air) can be safely delivered to each portal.

"Of 7 cases of glioblastoma multiforme, only 4 showed mild responses to irradiation.
These were indefinite. They were exhibited in an increase in pseudomitoses and giant
cells, and a slightly increased fibrosis.

"The glioblastoma multiforme group must be regarded as only slightly sensitive to
irradiation. The cells show a greater resistance to irradiation than the cells of the
medulloblastomas. The value of radiation treatment of these tumors is an open ques-
tion. Until further information is available, we believe they should be irradiated with
massive doses according to the Coutard principle, using four or five portals of entry.
The time interval between treatments may be slightly longer than is advisable with the
medulloblastomas.

"Of 6 astrocytomas, 2 showed a moderate and 1 a mild histological response. This
was seen in a more mature appearance of the cells after irradiation, an increase in multi-
nucleated forms, and in fibrous and glial stroma.

"Some astrocytomas are slightly radiosensitive. The results in this group warrant
much more optimism concerning the rôle which irradiation may play in their treatment.
They should receive thorough radiation treatment at six or eight week intervals.
"Two ependymomas responded fairly well to treatment and showed a definite
tendency to increased maturity of the cells after irradiation. Further treatment of
these tumors seems indicated.

"Three oligodendrogliomas showed no response to irradiation."

Typical histories are included, illustrated with photomicrographs. References are
appended.

Observations on the Roentgen Treatment of Intracranial Gliomata with Especial Refer-
ence to the Effects of Irradiation upon the Surrounding Brain, J. E. A. O'CONNELL

After reviewing the literature on the effect of radiation on normal nervous tissue, the
authors record their observations at necropsy in 3 cases in which roentgen therapy
had been given for brain tumor. A case of untreated brain tumor and one in which
no brain lesion was present served as controls. A record is also given of an instance of
glioblastoma multiforme which was apparently completely arrested by roentgen therapy
after fifty months.

The authors found that in the irradiated cases degenerative changes were produced
in the brain tissues surrounding the tumor, involving the nerve cells, the neuroglia, and
blood vessels.

Roentgen therapy, preceded by accurate pathologic diagnosis and a decompression,
is of value in the treatment of the gliomata, especially the medulloblastoma and, to a
less extent, glioblastoma multiforme. It is also indicated as a prophylactic measure
following operation for certain of the more benign gliomata which may possibly undergo
malignant dedifferentiation. Clinical experience has shown, however, that where
excessive doses have been administered, causing serious damage to the normal tissue,
the neoplasm is not controlled. Large surface doses, therefore, are to be avoided. The
optimum dose is yet to be determined, but the authors suggest that 4,500 r, which ap-
pears to be the most favorable dosage in nasopharyngeal squamous-cell carcinoma, may
produce good results if given over a period of forty days, the intensity not to exceed
10 r per minute.

Photomicrographs and references are included.

Cerebral Arterial Hemangioma; Vascular Anomaly; Arteriogram, E. REHWALD.
Haemangioma arteriale cerebri, Gefässanomalie, Arteriogramm, Deutsche Ztschr. f.

A single case report. A woman of forty-two suddenly developed coma, bilateral
exophthalmos, and right hemiparesis. X-rays of the skull revealed findings character-
istic of "arterial hemangioma." The lesion was not verified. EDWIN M. DEERY


A case is presented of multiple angiomata in the brain with local calcium deposits in
the vessels. One of these angiomata, located in the pons, ruptured, giving rise to a
lethal hemorrhage. The literature is reviewed, references are supplied, and photomicro-
graphs are reproduced.

Lipomatosis of the Central Nervous System, A. B. BAKER AND J. M. ADAMS. Am. J.

A one-year-old girl with roentgen evidence of increased intracranial pressure was
found at autopsy to have a multiple lipomatosis involving the choroid plexus, the base
of the brain, and the spinal cord. The recent literature of lipomas of the brain and cord
is reviewed and references are given. Photomicrographs are included.

Origin of the Raised Pressure of the Cerebrospinal Fluid Which Accompanies Sub-

The author studied the effects of artificially produced subtentorial tumors on intra-
cranial pressure in 21 dogs. In nearly every instance a pronounced increase occurred
in the pressure of the cerebrospinal fluid in the cisterna magna. In some of the animals
the pressure in the lateral ventricles was also measured and this was found to be identical
with the cisternal pressure.

Hydrocephalus was observed in only 4 animals. The dilatation was moderate in
degree and involved the lateral and third ventricles, although there was slight dilatation
also of the aqueduct and fourth ventricle. The pressure in the cisterna magna in these
animals was no greater than in those without hydrocephalus.

As to the mechanism of the increased pressure of the cerebrospinal fluid, the author’s
conclusions are as follows: (a) There may have been an increased production of fluid
by the choroid plexuses brought about by some means as yet undetermined. The
absorption apparatus may have been unable to deal with this excess, or the cerebro-
spinal fluid channels distal to the cisterna magna may have been too small to permit its
free circulation. (b) Displacement of the brain stem may have led to an incomplete
or temporary obstruction of the circulation of the fluid at some point between the
cisterna magna and the base of the brain.

Full details of the experimental technic are given and a bibliography is added.

Diagnostic Difficulties in Extramedullary Tumors, A. Biemond. Bizzondere diagno-
sistische koeilizkheden bij extramedullaire tumoren, Nederl. tijdschr. v. geneesk. 81:
4515–4521, 1937.

Two extramedullary tumors of the spinal cord are described: a meningioma of the third
dorsal segment and an ependymoma of the cauda equina. In both cases the diagnosis
was difficult, in the first because of a coexistent syphilitic infection, and in the second
because of a previous arsenical neuritis which began with the same symptoms as the
tumor. The clinical findings are described in detail. There are no illustrations.

Edward Herbert, Jr.

Changes in the Vertebral Arches in Tumors of the Spinal Cord, H. Stefan. Wirbel-
ogenveranderungen bei Rückenmarkstumoren, Deutsche Ztschr. f. Nervenh. 139:
96–97, 1936.

A report of roentgen studies of the vertebral arches in a series of 38 cases of spinal
cord tumors. In this group 30 per cent showed roentgenographic evidence of measurable
widening of the canal due to pressure of the tumor contained therein. This widening,
the writer believes, is due to pressure atrophy of the bone. There follows a detailed
description of the measurements used from the roentgenological point of view.

[A local widening of the interpediculate spaces is sometimes demonstrable, roentgeno-
graphically, in cases of spinal-cord tumors, generally the benign slow growing ones.
When found, it is of great diagnostic aid.] Edwin M. Derry

Clinical Syndrome Manifested by Various Types of Compression of the Spinal Cord:
America 17: 559–577, 1937.

Five cases of spinal cord tumors are presented from the clinical point of view, with
emphasis on the diagnostic features.

THE BONES, JOINTS, AND TENDON SHEATHS

Diagnosis and Treatment of Bone Tumors, T. v. Matolcsvy. Diagnose und Behandlung

This is a general discussion of the diagnosis and treatment of bone tumors based on
382 cases of sarcoma observed clinically over a period of twenty years. One hundred
and sixty-two of these cases were examined radiologically, the tumors were studied
histologically, and the course after treatment was followed.

The tumor was resected in 14 patients, and the defect replaced with transplanted
bone. In 2 of this group the tumor recurred, metastases in the lungs developed in 7,
and 5 patients remained tumor-free.

Radical amputation was performed in 148 cases. Forty-two patients died within
five years, metastases developed in 20 patients, and 47 were cured. End-results were
not available in 39 cases. Thirty-five of the 47 cured patients had tumors of the small bones, jaws or tooth structures, but only 12 (7.5 per cent of 162 treated) had sarcoma of the long bones.

There are thirty-nine x-ray pictures of various lesions.


The authors record a series of 41 pelvic girdle tumors seen in two hospitals in a period of five years, of which 21 were primary. Among the types represented were osteochondroma, osteogenic sarcoma, fibrosarcoma, endothelial myeloma, lymphosarcoma, metastatic carcinoma, myosarcoma of uterine origin, and hypernephroma. In 37 of the 41 cases the presenting symptom was pain suggesting, as a rule, some form of the sciatic syndrome, lumbar radiculitis, or the sacro-iliac syndrome. Nine patients complained of weakness in the affected extremities some time after the onset of pain.

The author concludes that motor disability in an extremity, of a non-specific character, during the course of a sciatic or sacro-iliac syndrome calls for roentgen examination of the pelvis even though earlier roentgen studies may have shown no lesion. The possibility of a pelvic girdle tumor should be considered in all patients complaining of low-back, sacro-iliac, or sciatic symptoms.


A series of 158 cases of sclerosing sarcoma of the bone is reviewed. This type of tumor is more frequently seen in adolescents and young adults, and the long bones are chiefly involved. Twenty-eight patients in the series were from fourteen to fifteen years of age and 68 were between fifteen and twenty-four. Only 12 were more than thirty-five. The diagnosis is based on the roentgen and microscopic pictures. In the long bones the tumor develops in the end of the bone on the shaft side of the epiphyseal line. The most common sites for development are the lower end of the femur and the upper end of the tibia. Some degree of periosteal reaction is usually found, but the earliest evidence of tumor formation is sclerosis, which obliterates the normal markings of the bone in the part involved.

The final differentiation of sclerosing osteogenic sarcoma from other varieties of sarcoma of bone is made by microscopic examination. The former is composed of malignant osteoblasts separated by relatively large amounts of intercellular osteoid tissue. There are also found spicules of bone and spindle cells representing undifferentiated connective tissue. The irregular character of the osteoid tissue and its occurrence in all parts of the tumor in the primary growth and in metastases indicate that the osseous material is developed in the tumor. The tumor apparently arises from pre-ossous connective tissue and rapidly differentiates toward the end-product—bone.

While the prognosis is grave, the authors are able to report 18 five-year cures among 106 patients followed for five years or until a fatal termination. All were treated by radical surgical measures. No cures followed irradiation. Recurrence in the amputation stump may take place but metastasis to other bones is rare.

Illustrative case records, roentgenograms, and photomicrographs are included. A single reference is given.


A girl of eight years had a Ewing sarcoma involving both tibiae in their epiphyseal ends and affecting the bone marrow cavity without the characteristic periosteal changes which give the tumor its usual onion-peel appearance. There were multiple metastatic deposits in the skull, a tumor in the right mandible, and large metastases at the base of either lung. Photographs and photomicrographs illustrate the report.
Osteochondrosarcoma of the Lower End of the Femur with Exceptional Clinical Onset,

A man aged twenty-three fell and injured his right knee. Hemarthrosis developed immediately and roentgenograms showed a fracture with detachment of the posterior third of the external condyle. Treatment was given for hemarthrosis and fracture, but ten weeks later a swelling deformed the lower end of the femur. Roentgenograms now showed clear evidence of malignant tumor and a diagnosis of osteochondrosarcoma was established by biopsy. Amputation was subsequently carried out.

When a tumor was suspected a history of previous injuries and pain in the knee was elicited and the onset of the disease was thereby dated about two and one-half years previously. Two months before the final accident, pain in the knee was ascribed, after radiological examination in another hospital, to “dry arthritis.” It is concluded that the case was one of pathological fracture due to a pre-existing tumor. Fracture is rarely the first sign of osteogenic tumor, and it is yet more exceptional for the fracture to be articular. The authors found no previous record of so early neoplastic arthropathy.

The paper is not illustrated and there is no bibliography. L. Foulds


The study of the intermediate stages in the dissemination of cancer is of first importance on account of the success now attained in dealing with the primary growth. Isolated deposits in the skeleton, preceding general dissemination, are common. Pain is always prominent. Radiography of the spine for obscure lumbar pain often reveals an osteoplastic carcinoma derived from a prostatic carcinoma which is not detected by palpation. Persistent pain in a patient known to have or to have had a malignant growth should always arouse suspicion of metastasis. Radiological examination almost invariably establishes the diagnosis, though symptoms may be present before the changes are sufficiently advanced to be detected radiologically; typical changes are found on subsequent examination.

Roberts discusses features in the distribution of secondary deposits. Some kinds of carcinoma are more liable to form distant metastases than others; metastases are more likely to form in some tissues than others; and the favored site for secondaries varies according to the site of the primary. Within the skeleton there are favored sites. Roberts’ observations of early secondary deposits of breast cancer detected radiologically confirmed the opinion that the main incidence falls on those parts of the skeleton through which the weight of the body is transmitted and which first show senile changes. It seems that bone can resist the growth of metastatic tumors better when it is strong than when it weakened. In 4 out of 5 cases of early metastasis from carcinoma of the prostate there was secondary growth in the second lumbar vertebra. Though the number of cases is small it is significant that the invasion of this vertebra was complete while the vertebrae above and below remained free until after the pelvis was involved. The only connection between the second lumbar vertebra and the prostate is that the latter receives its sympathetic nerve supply from the second and third lumbar segments of the cord; possibly, therefore, a trophic factor is implicated.

Skeletal deposits are probably carried by the blood. The site of lodgment of emboli is a matter of chance, the subsequent development into tumors depending mainly on the suitability of the soil coupled with lowering of bodily resistance, other possible factors being mechanical strain and a trophic element. No abnormality in the radiological appearance of the lungs was detected in patients with early skeletal deposits, and it is unlikely that the lungs are the site of an intermediate stage in dissemination. The structure of secondary deposits, their slow growth, and their sensitiveness to radiation suggest that there is considerable resistance to their growth.

X-ray therapy has a remarkable effect upon skeletal deposits, especially of the osteoclastic type; the effect on osteoplastic deposits is less regular, though sometimes good. Radiation relieves pain, probably prolongs life, and certainly greatly diminishes the period of invalidism; sometimes normal bone is re-formed. Secondary deposits are
usually more sensitive than the primary growths and need a much smaller dose of radiation. Roberts uses a beam of 200 kv. filtered through 1 mm. Cu + 1 mm. Al. For a lumbar vertebra a beam of 8 × 10 cm. or 10 × 15 cm. at a distance of 40 cm. is advised and two fields are used, the bone receiving a dose from the combined fields of about 500–800 r within ten days.

Five cases illustrating the effects of x-ray therapy are described and there is a short bibliography.


A man thirty-one years of age suffered from generalized skeletal pain. X-rays showed osteitis fibrosa cystica. A tumor the size of a chestnut was felt on the right side of the neck and was found, on removal, to be a malignant adenoma of the parathyroid. The calcium and phosphorus content of the blood, which had been respectively increased and decreased, returned to normal postoperatively. After operation there was a transient tetany, which responded to calcium and parathormone therapy. One year later the patient was symptom-free and x-ray examination showed only slight changes from the normal. Only two other instances of osteitis fibrosa cystica due to a malignant parathyroid tumor were found in the literature.

Three photographs, 4 roentgenograms, 4 photomicrographs, and several references are included.


Curettage followed by implantation of bone chips from the tibia is recommended in the treatment of localized osteitis fibrosa cystica, and several cases are recorded in which a favorable result was obtained. A good outcome was also obtained in a case of giant-cell tumor, but the method seems to be less adapted to lesions of this type, especially if they are advanced and if too great a defect remains after curettage. Roentgenograms are reproduced to show the results of treatment.


A woman forty-six years of age had symptoms of a complete transverse myelitis. X-ray gave evidence of an angioma of the fifth dorsal vertebra. At operation this diagnosis was verified and the tumor was found to have grown into the vertebral canal. Histologically it was a cavernous angioma. Postoperative radiotherapy was given and a slow improvement in the symptoms took place. Bladder and rectal control as well as sensation returned completely, the motor functions improving sufficiently so that the patient could walk. One roentgenogram is included.


Twelve cases of multiple myeloma occurring among 20,000 hospital admissions are reported. In all neurologic signs and symptoms were present. In 6 cases the brain and cord were studied at autopsy and in all of these involvement of the cord, spinal roots, peripheral nerves or brain was found.

In most of the patients with spinal cord lesions the neurological symptoms were due to compression of the vessels of the cord and interference with the circulation, resulting in a myelopathic process. The damage to the fiber tracts varied with the degree and duration of the compression. In one case there was a direct metastasis to the spinal dura. Herpes zoster was present in several cases and is attributed to direct compression of the spinal roots by the tumor. One patient had a peripheral neuritis, though the peripheral nerves were not invaded by the myelomatous process; it may have been
secondary to severe anemia or to a toxic factor. In one instance there were metastatic deposits in the skull and cerebral dura, interfering with the cerebral circulation and producing a paranoid psychosis. One patient lived fifteen years, the first instance of so long a survival.

Roentgenograms, photomicrographs, and references are included.


Berger accepts as true synovial tumors only those which present features characteristic of normal synovial tissue. He records 5 cases originating in serous bursae or tendon sheaths. Three of these are diagnosed as endothelial synovialosarcoma, one as a mucous synovialosarcoma, and one as a histiocytic synovialosarcoma. This last the author believes is the first case of an indisputably malignant xanthomatous giant-cell tumor to be reported.

A critical review of the literature is given and 24 cases (including the author’s) which can be accepted as showing specific synovial features are tabulated. On the basis of these a classification is suggested to include both innocent and malignant types.

The paper is illustrated by beautiful histologic drawings, and a comprehensive bibliography is appended.


Burman and Milgrim (Surg., Gynec. & Obst. 50: 397, 1930) found in the literature 10 examples of hemangioma of a tendon or tendon sheath and recorded 6 additional cases. The author has since found records of 8 more cases and presents one of his own. Omitting one of the cases collected by Burman and Milgrim, which was in reality a lymphangio-endothelioma, the total number is 24.

Harkins’ patient was a woman of twenty with a painful swelling of the palmar surface of the left forearm. At operation a bluish red tumor lying along the tendon of the flexor carpi ulnaris muscle was removed. It contained cavernous spaces lined with endothelium and filled with red blood cells. Two rounded masses of living bone were also present. An early recurrence resembling the original tumor except for the presence of bone was successfully removed and five months later the patient was tumor-free. Two photomicrographs are reproduced. References are appended.

**THE LEUKEMIAS, HODGKIN'S DISEASE, RETICULOSIS**


Numerous reports have appeared of lymphosarcoma terminating in lymphatic leukemia. Cytological studies show, however, that the characteristic cell in these terminal leukemias is not a lymphocyte but a lymphosarcoma cell, so that the condition more properly be designated as a true lymphosarcoma-cell leukemia. While the lymphosarcoma cell is usually mistaken for a lymphocyte, it has characteristic cytologic features which permit of its differentiation. It may account for 4 to 98 per cent of the leukocytes in the peripheral circulation.

Of a series of 43 patients known to have lymphosarcoma, 15 developed a leukemia. In most of these enlargement of the lymph nodes was the first evidence of the disease. The leukocyte count may reach a maximum of from 23,000 to 156,000, and there is progressive anemia and thrombocytopenia. With the onset of the leukemic phase fever is common.

The duration of the disease in the series studied varied from 2.5 to 36 months. The duration of the leukemic phase was from two days to sixty days in 11 patients for whom approximate data were available. One patient, however, gave a history of a leukemic blood picture (94,000 per cu. mm.), diagnosed as lymphatic leukemia, for over seven years. In one case there was a remission during pregnancy with a subsequent relapse.
Autopsy studies of the organs of patients dying during the leukemic phase showed transformation, in varying degrees, of all lymphoid tissue in the body, into the lymphosarcoma type.

In view of the tendency of the lymphosarcoma cell to invade the tissues, it is not surprising that some of the cells enter the bloodstream. However, it appears that the number does not reach leukemic proportions until there is extensive growth in moving organs, as the lungs. This phenomenon is similar to that found in other types of leukemia (Isaacs: Folia haemat. 40: 395, 1930).

Acute Lymphatic Leukemia in Childhood, F. D. Hart.

The author describes acute lymphatic leukemia in a boy aged five and a girl aged six. In each case there was a great temporary improvement after blood transfusion, probably due largely to the reduction of temperature. There seemed to be a definite response to treatment as for a secondary anemia. For the greater part of the illnesses the red cells and neutrophils were reduced; almost throughout the number of circulating lymphocytes was decreased but not to so great an extent as the neutrophils, and the lymphocyte-polymerph ratio was consistently increased. Immature lymphocytes were seen only in the terminal stages. Marked anemia plus neutropenia in a child with a persistent increase in the leukocyte-polymerphonuclear ratio should suggest lymphatic leukemia whatever the total number of lymphocytes in the blood smears. Sternal biopsy will often establish the diagnosis in a doubtful case, but sometimes diagnosis cannot be made with certainty until a few days before death and sometimes not until autopsy.

L. Foulds


Two cases are reported. The first patient was a man thirty-five years of age who suddenly developed signs of meningitis and died after a few weeks' illness. A subacute lymphatic leukemia was found at autopsy. The second case was one of Weil's disease with meningitic symptoms. There are no illustrations.

Edward Herbert, Jr.


A patient with chronic lymphatic leukemia, classified originally as in blood group AB, received repeated transfusions with blood of Group A and B. No reaction followed the use of Group B, but Group A produced fever and malaise. A rise in the red cell count, nevertheless, occurred. Commercial sera revealed only B-agglutinogen, but anti-A rabbit serum agglutinated the patient's erythrocytes. The authors classify the patient as in sub-group A2B. Untoward reactions occurred after using blood of a universal donor for transfusion. The patient's blood immediately after the transfusion showed hemolysis of red cells produced by hemolysins of the donor's blood. The authors caution, therefore, against indiscriminate use of blood of so-called universal donors, without previous cross-matching of the red cells and serum of the donor and recipient for hemolysins, and against the rapid determination of blood grouping with commercial sera.

Spiller believes that commercial sera, if used carefully, are adequate for blood group determinations. The error is minimal in Neumann and Neugebauer's patient. Instead of transfusing group B blood only, both A and B were given. The moderate general reaction which group A produced may have been of value therapeutically to the patient. Groups A, B and 0 are readily distinguished with the usual sera.
The papers contain a detailed discussion on the technic and theoretical aspects of blood typing and transfusion.  

**Milton J. Eisen**


The case histories and course of therapy are briefly reported for 10 cases of Hodgkin’s disease with predominantly mediastinal or pleural localizations. All were proved by biopsy of a superficial lymph node at some time in the course of the disease. Treatment consisted of telerentgentherapy in all cases, with the addition of localized radiotherapy in several. The mediastinal form showed definitely increased resistance to radiation and the pleural form almost complete radioresistance. This is explained by the fact that these cases are usually advanced by the time symptoms arise, and histologically have progressed to the stage of predominant fibrosis. The results of telerentgentherapy alone were disappointing, the best results being obtained when localized radiotherapy was used in addition. It was noted that telerentgentherapy caused a rapid disappearance of the frequently very distressing pruritus. Ten roentgenograms are included.  

**Edward Herbert, Jr.**


A girl of fifteen had an osteomyelitic process in the manubrium and a skin ulcer which proved to be the first tangible manifestation of Hodgkin’s disease. The ulcer healed following irradiation but generalized lymphadenopathy developed and other skin lesions appeared. Autopsy was not obtained. Roentgenograms, photographs of the patient, and photomicrographs are included.


The outstanding clinical feature of the case here recorded was the occurrence of skin nodules beginning as small thickened papules. A diagnosis of Hodgkin’s disease was suggested by the pleomorphic cell picture with giant cells and increase of reticular fibers and by the absence of splenomegaly or of obvious involvement of the lymph nodes in any part of the body, but the giant cells were not of the Sternberg type, with densely staining nuclei. Moreover the cellular infiltrate, though actually lying in contact with the cutaneous epithelium, did not actually invade it. Nor could a diagnosis of leukemic lymphadenosis be made in the absence of lymph node enlargement and of a leukemic blood picture. The authors have therefore designated the case as dermal reticulosis. The patient was lost to follow-up and the eventual outcome is not known. Photomicrographs are included.

**PUBLIC HEALTH**


The main factor in the anti-cancer organization in Czechoslovakia is the Association for the Study and Control of Malignant Growths. The program of this society comprises the following five points, briefly defined in this paper: (1) effective treatment, (2) scientific study of the cause of cancer, (3) early diagnosis, (4) foundation of institutes as centers of scientific and practical control of cancer, (5) instruction of the population concerning the significance of cancer.  

**F. Burgheim**

The new radiotherapeutic institute in Prague, the second of its kind in Czechoslovakia, was established by the Czechoslovak Association for the Control and Treatment of Cancer. Not only the ideas resulting from the personal experience of the author but the suggestions of the Radiumhemmet in Stockholm entered into its construction and arrangement. The building contains departments for research, radium and roentgen therapy, statistics, social work, physical laboratories, and a hospital with 80 beds. There are also rooms for minor surgery, x-ray diagnosis, physiotherapy, radioactive baths and inhalations. The actual quantity of radium element is 4 gm., 0.5 gm. of which is used for preparing emanation. F. Burgheim


The mortality from cancer in Austria increased 12.22 per cent in the second half of the period 1924 to 1935 as compared to the first half. The statistics of the various provinces are analyzed, and the increase in population in the older age groups and improved diagnostic methods are regarded as insufficient to account wholly for this rise. Milton J. Eisen