

record of each individual member. At each reservation or agency there resides a government physician. Of the 130 physicians thus employed, data were obtained from 107. The practice of these physicians covers a population of 115,455, and during a time ranging from a few months to over twenty years, and only 24 cases of cancer were encountered during the investigation. Thus cancer is extremely rare among the Indians, and this rare occurrence cannot be apparent, since it is impossible to suppose that cases of death from cancer could have escaped the notice of the government physician, nor did the investigation show any difference in length of life between the American Indians and their white neighbors. The only explanation, then, that may be given of these results is that racial characteristics, which comprise not only the ethnologic difference in the structure of the body, but also the difference in the environment, the mode of life, etc., must play an important part in the causation of cancer.

A Transmissible Sarcoma of the Common Fowl

DR. PEYTON ROUS, New York: This is a report of the first avian tumor that has proven transplantable to other individuals—a spindle-celled sarcoma of the hen, which has thus far been propagated to its fourth tumor-generation. Success has been made possible by the use of fowls from the intimately-related, pure-blood stock in which the growth was found. Market-bought fowls of similar variety and appearance, though probably not of pure blood, have shown themselves insusceptible, as have fowls of mixed breed, and pigeons and guineapigs. The percentage of successful transplantations has been small, but in the individuals developing a tumor its growth has been fairly rapid, and it has attained large size before obviously affecting the health of the host. Young chickens seem more susceptible than adults. The reinoculation of fowls once negative has always failed to result in a growth. Histologically, the tumor is a characteristic sarcoma, and it has remained true to type throughout the transplantations. It is infiltrative and destructive. As a rule, it undergoes widespread coagulation-necrosis at its center, and the thin rim of living tissue is not unfrequently myxomatous. Metastasis (to the heart) has been once observed. Experiments to determine whether the growth may be transmitted by cell-fragments have not yet been done. At best, it is difficult to propagate. Repeated bacteriologic examinations, including tests for acid-fast bacilli, have given negative results. In its general behavior, so far as tested, this avian tumor closely resembles the typical mammalian neoplasms that are transplantable.

The Chemistry of the Melanins of Tumors

DR. CARL L. ALSBERG, Washington: Some years ago I had occasion to study a melanotic sarcoma of the liver secondary to a choroid tumor of the eye. Inasmuch as melanin-like compounds may be formed by the action of enzymes, I undertook to investigate the question whether or not this melanotic tumor contained oxidizing enzymes capable of converting aromatic compounds into melanin-like bodies. I was able to find that tumor extracts formed pigment from pyrocatechin, but not appreciably from tyrosine. In view of the finding in my case, and the wide distribution of the oxidizing enzymes, it is doubtful whether this fact has much significance from a diagnostic point of view.

Influence of Heat on Tumor Cells

DRS. ELLEN P. C. WHITE AND LEO LOEB, Philadelphia: In continuation of the former experiments of one of us we studied the effect of heat on tumor cells in a quantitative manner and from various points of view. We heated the tumor material uniformly to 44 degrees in the test tube during variable periods. We found that the effect of heating varied approximately proportionately to the period of exposure up to a certain maximum when the influence became rapidly more intense. The curve of decrease of virulence under the influence of heating is accompanied by a similar curve indicating the number of retrogressions, which increased proportionately to the length of exposure to a certain point and then increased more rapidly. In originally weakly-growing tumors the relative effect of heating is not greater than in tumors that before the heating grew

more vigorously. An increase in the energy of growth directly following low degrees of heating has not been observed. A summation of the effects of heating through a series of generations does not take place. The decrease in virulence is transmitted only to a limited number of cell generations. Gradually a recovery takes place. This proves an unexpected degree of elasticity which the tumor cells possess. To an unusual extent they are able to recover from injuries which they received. This is a new argument in favor of the statement published nine years ago by one of us, namely, that many facts render probable the assumption that somatic cells, of which the majority of the tumor cells represent a modification, are potentially immortal. On the other hand, through long-continued heating through many generations the resistance of the tumor cells to moderate degrees of heating does not take place. Neither an active immunization of the tumor cells, nor a selection of the naturally more resisting cells is noticeable.

STATE MEDICAL SOCIETY OF WISCONSIN

Sixty-fourth Annual Meeting, held in Milwaukee, June 22, 1910

Under the Presidency of DR. EDWARD EVANS, La Crosse

Officers Elected

The officers elected were named in THE JOURNAL last week, in the News Department.

Medical Education and Medicine

DR. EDWARD EVANS, La Crosse: The university must educate the public to know the great value and possibilities of modern medicine. Within a few years the free medical course has developed into the school of medicine. The state hygienic laboratory is doing vastly increased work in state medicine. A thorough course for medical health officers will soon be offered. In the universities the complex problems of state medicine must be solved. The department of health should be a department of the university. The university can do much for medical education where the medical school is an integral part, by maintaining high standards of entrance, by the inspiration of productive scholarship and by the financial support of the medical department. The work done in the medical school at the University of Wisconsin the first two years is of the highest order. Here we may hope to see a great post-graduate school in medicine.

Medical inspection of schools should be compulsory. Industrial colleges should be inspected by the state. Water, milk and food supplies should be supervised. The infective diseases, especially the so-called social diseases, should be, if possible, eradicated. Proper vivisection should be uncompromisingly supported.

Human Pancreatic Juice

DR. H. C. BRADLEY, Madison: Human pancreatic juice in its normal form has been rarely attainable. In the case under consideration an opportunity offered for its examination for six successive weeks, owing to a temporary fistula. The physical and chemical characteristics of the juice were determined from day to day. And contrary to general teaching the juice was found seldom to be alkaline with sodium bicarbonate. Contrary to general belief pancreatic juice is proteolytic before it reaches the intestines; and the pancreatic juice of one animal will activate the pancreatic juice of another animal that flows inactively. The enzyme trypsin was found to activate itself within 48 hours to a week.

DISCUSSION

DR. WILHELM BECKER, Milwaukee: It is fairly well determined that it is merely atmospheric air, or the carbonic acid in the intestine, which activates the enzymes.

DR. A. S. LOEVENHART, Madison: Nothing has been thus far proved as to the nature of the activation of the pancreatic juice that comes about on standing; it is, perhaps, due to hydrolysis or some combination between the enzymes and some other unknown constituent of the juice.

Possibilities of Prophylaxis Against Insanity

DR. ARTHUR W. ROGERS, Oconomowoc: Insanity is increasing to an alarming extent. The fight against tuberculosis is world wide, but who hears of the fight against the prevalence of insanity? The disease must be fought through instruction in the public schools and on the part of parents. The liquor traffic should be regulated. The rapid increase of drug habits must be checked. The social evil must be curbed. Venereal diseases must be as far as possible eradicated. Prejudice and ignorance must be overcome, for they have caused mental diseases to be neglected in the medical colleges and by the medical profession, giving rise to the crude schools of Eddyism and Emmanuelism. The physician has too long been only a medical man; he must also be a good citizen. A national department of health should be established. The first duty of the medical profession lies along the lines of prophylaxis: Education is the important feature. Reduce the number of medical colleges and elevate their standard, then wage a campaign through the medical and lay press, local and state boards of health, and through the schools and universities, to prevent the spread of insanity.

DISCUSSION

DR. W. F. BECKER, Milwaukee: Prophylaxis is a difficult problem. All the activities that make for human betterment lead to the solution of the problem of the prevention of insanity. Heredity and alcoholism are important factors of causation. I cannot endorse the sterilization of the criminal as practiced in Indiana. Environment and not vicious predisposition frequently produces the criminal. However, vasectomy and sterilization are advisable in cases of imbecility. Societies should be established for the care of the insane after their discharge from insane hospitals, and also for the care of those who are in danger of becoming insane. This is a most important point and should be undertaken along the lines of the antituberculosis crusade.

Results of Heredity and Their Bearing on Poverty, Crime and Disease

DR. A. W. WILMARTH, Chippewa Falls: There is a great awakening of public interest in the increase of the dependent classes. The number of mentally and morally incompetent may be measured in the loss of hundreds of thousands of dollars. Their cost to the competent members of society is reckoned in millions of dollars. Their harmful influence is beyond computation. The laws of Nature indicate and actual observation confirms the fact that the physical conditions on which such incompetency is based are in the majority of cases transmitted, and consequently largely preventable. Among other methods of curtailment I should suggest in proper cases restriction of marriage, sequestration and surgical intervention.

DISCUSSION

DR. W. H. WASHBURN, Milwaukee: Disease is a great factor in natural selection, and disease has been in great measure prevented by the advance in medical science. Under the circumstances it is surprising that the human race is as decent as it is, and we have the female portion of the community to thank that this is so. Humanity and altruism impose on us the obligation of supervising the unborn. In the case of chronic criminals, I advise vasectomy or resection of the Fallopian tubes. Education is the keynote. Let us take the first step. The people must be educated. Then in another generation the legislators can be reached and, perhaps, in a generation after that legislation secured.

Correlation Between Splanchnoptosis and Pulmonary Tuberculosis

DR. WILHELM BECKER, Milwaukee: The phthisic habit and asthenia universalis, splanchnoptosis, are identical. Hence, the phthisical habit is not a specific phthisical inheritance. Stiller's costal stigma is a constant concomitant of the habit, indicating its presence, but not its degree. Stiller's costal stigma, being a congenital defect, and present in earliest

fancy can, therefore, be considered a diagnostic feature of the habitus phthisicus (so-called) long before phthisis has developed. The early diagnosis of asthenia universalis offers great opportunities of combating congenital disposition to tuberculosis.

Practical Medicinal Therapeutics as it Appears from the Prescription File

DR. JULIUS NOER, Stoughton: An examination of many thousands of prescriptions from the files in drugstores shows prescriptions by physicians of an inordinate mass of pseudo-therapeutic agents. My investigation shows, first, that talismanic therapeutics did not die with Paracelsus, nor has the mother church in Boston a monopoly as a promoter of pseudo-science; and second, that the excellent work of the Council on Pharmacy and Chemistry of the American Medical Association is not without cause and justification. How can we improve existing conditions as regards the use of proprietary and semi-secret nostrums? We should urge the continuance of this monumental work of the council. The new edition of the Pharmacopeia should contain the remedies in general use by practicing physicians which have been shown to possess therapeutic properties. It would be further advisable to establish a pharmacologic laboratory.

DISCUSSION

DR. A. S. LOEVENHART, Madison: The situation is not encouraging. The nostrum and proprietary evil is growing. The whole drug business is in a bad state in many ways. With some striking exceptions, the vast majority of drug houses are interested purely and simply in the making of money and are unconcerned with the question of public health. Moreover, our expectations with regard to the pharmacopeial convention have been absolutely disappointed. The convention was dominated by poor medical schools and the pharmaceutical associations in the interests of the drug trade. The convention refused to pass a resolution excluding from the Pharmacopeia drugs which are known to possess no therapeutic effect. It is impossible to use the Pharmacopeia with our students when we know that of 975 titles only 150 to 250 drugs are of any therapeutic value.

The Plaster Spica in High Fractures of the Femur

DR. CHARLES H. LEMON, Milwaukee: With the plaster spica applied with the leg and thigh abducted, the thigh flexed on the trunk, seemingly impossible obstacles can many times be overcome. The plaster spica is by no means an easy dressing to apply. Its use requires a definite apprenticeship, but when one has become sufficiently skilled in its use, so that he has confidence in his ability to accomplish definite results, there is no appliance that gives greater comfort to the patient nor greater peace of mind to the surgeon.

Tincture of Iodin as a Skin Antiseptic

DR. M. W. DVORAK, La Crosse: As a skin antiseptic iodine has not received the attention it deserves. The method commends itself for simplicity and thoroughness, and wherever it is necessary to render the skin field aseptic.

DR. W. H. BROWN, Madison: Tincture of iodine produces absolute asepsis of the skin in three minutes, and penetrates deeply, sterilizing the entire depth of the epithelium. The bactericidal power is due to the iodine *per se* and not to the alcohol. Skin changes are not of serious import.

DISCUSSION

DR. A. S. LOEVENHART, Madison: The antiseptic power of iodine is dependent on its power to precipitate proteid and on its action as an oxidizing agent.

DR. L. A. MOORE, Monroe: The use of ether to dissolve the oil of the skin before applying the iodine causes the iodine to reach the deeper layers of the skin more readily. I have used iodine in fresh wounds with good results.

DR. JOSEPH F. SMITH, Wausau: I have adopted the use of iodine exclusively in clean cases. The results have been very gratifying. I have found no deleterious action on the skin.

DR. T. L. HARRINGTON, Milwaukee: I have been using tincture of iodine for a considerable time. It is a great advance over the ordinary skin antiseptics. Suppurating wounds are avoided.

DR. C. M. ECHOLS, Milwaukee: I should prefer a 50 per cent. solution of alcohol as a solvent.

The Medical and Surgical Aspects of Tumors, Including Inflammatory and Neoplastic Formations

DR. J. C. BLOODGOOD, Baltimore: The old treatment for cancer is still the only treatment—its radical removal. Malignant tumors are curable in proportion to the earliness of surgical intervention. There must be publicity in regard to early symptoms. Skill in differential diagnosis must be increased with a view to earlier recognition of malignancy. Contrary to general opinion, 50 per cent. of bone lesions are curable by operation without amputation. Amputation seldom effects a cure. When in doubt it is better to treat bone lesions as relatively benign. In examining bone lesions by the *x*-ray, take a number of skiagraphs, because bone lesions are often multiple. A bone cyst is a benign bone lesion and can be cured by simple incision and drainage. Curettement often cures where resection fails. Differential diagnosis must be studiously made between malignant sarcoma and benign bone cyst. Otherwise amputation may be done when contra-indicated. Resection is often preferable to amputation, even in malignant bone tumors. But these operations should all be done as early as possible. Giant-cell sarcoma is frequently curable, as metastasis does not usually occur. In operating for giant-cell sarcoma remember the danger of hemorrhage. There is no danger of disseminating the disease by curetting.

Glands with continuous function, such as the thyroid, are not usually the seat of malignant disease, while in the breast which has not a continuous function carcinoma is relatively frequent (67 per cent. in 1048 cases). Although restricted operation is often proper in sarcoma it is dangerous in cancer of the breast. A lump in the breast should be regarded as an acute disease and treated accordingly. Early operation insures cure in 80 per cent. of cases, while the operation at the end of the fifth year effects cure in about 40 per cent. of cases. Differentiate between benign breast cyst and cancer. Ulcer of the nipple is suspicious. Complete excision should be the watchword. Recurrence is most frequent in cases which appeared to be favorable, and the operator is influenced by the desire to secure a cosmetic effect.

The Wassermann Reaction in Syphilis

DR. R. M. PEARCE, New York: The Wassermann test shows a high percentage of positive reactions in general paralysis, tabes, aneurism, aortic insufficiency, mesarteritis, chronic bone disease, arthritis deformans and congenital affections of the nervous system, most of which diseases may be classed as largely metasymphilitic. Seldom has a new method of diagnosis or treatment promised as much as does the Wassermann reaction, and if the future work tends to the fulfillment of this promise we have in the Wassermann reaction one of the greatest advances in the history of medicine ever made. The knowledge which it yields, coupled with that resulting from the study of the etiology and from experimental inoculation should eventually place syphilis in the group of subjugated diseases, diseases of which the etiology and pathology are known, for which there exists an absolute diagnostic method and a rational specific treatment.

Serum Treatment of Hemophilia

DR. A. J. PATEK, Milwaukee: The etiology of the disease is still shrouded in mystery, but it is probable that in hemophilia the clothing ferment is absent, deficient or held in abeyance. Human or animal blood serum applied locally, subcutaneously or intravenously may have a styptic action during hemorrhage. But owing to the danger of anaphylaxis when alien serum is used, human serum is preferable. A prophylactic injection of serum prior to operation is advisable in these cases. Subcutaneous injections are preferable in most cases. Transfusion may be employed in massive hemorrhage.

Chronic Diphtheria

DR. G. C. RUHLAND, Milwaukee: Chronic diphtheria is at present little or not at all recognized by the profession at large. It is a condition that, however, frequently is associated with definite symptoms of disease, the recognition of which is of greatest importance in the history of disease epidemics. It is fallacious to depend on symptoms for differentiating acute and chronic diseases. I desire to emphasize the great importance of local after-treatment in all cases of diphtheria, both for the good of the patient and for epidemiologic considerations.

Aneurism of the Thoracic Aorta

DR. JOSEPH F. SMITH, Wausau: My case was one of aneurism of the descending portion of the thoracic aorta, with fatal termination by rupture into the esophagus. The chief clinical feature of the case was persistent boring pain referred to the right lumbar region, just beneath the twelfth rib, and in front just beneath the right costal arch. Diagnosis in these cases is often difficult, and the *x*-ray is frequently a valuable aid.

Traumatic Hernia

DR. T. W. NUZUM, Janesville: In making experiments in the production of hernias 12 cats were used, 6 fasting and 6 not fasting. Hernias were more often and more easily produced in those that were fed. A rolling motion will more often produce hernia than direct pressure of equal severity. Seven hernias were produced, 3 inguinal and 4 diaphragmatic. The peritoneum was torn in 3 instances and was pushed in front of the hernial contents and formed a sac for the same in 4. In every instance there was more or less severe injury done to the vessels, viscera or both. As conclusions from these experiments it appears that hernia is not likely to be produced by a blow unless a punctured wound is produced. The rolling motion is more likely to produce hernia than mere pressure. The inguinal region and the diaphragm are points of least resistance. Hernia is more easily produced in the young than in fully developed muscular animals, and in those with a full stomach rather than in those fasting. In true traumatic hernia the peritoneum is often forced through the abdominal wall ahead of the hernial contents, forming a sac for the latter.

The Nursing Mother from the Baby's Standpoint

DR. A. W. MYERS, Milwaukee: There are three classes of errors into which nursing mothers may fall: (1) Too frequent nursing. A three-hour interval is about right. Do not wake the child up to nurse it. (2) Over-feeding on the part of the mother, producing milk which is too rich. (3) Lack of care on the part of the mother in choosing food, especially the too early and abundant use of fruit and vegetables. These are some of the causes which lead to the divorce of the baby from the breast on the ground of incompatibility of temperament.

RHODE ISLAND MEDICAL SOCIETY

Annual Meeting, held May 31, 1910

Under the Presidency of DR. EUGENE KINGMAN, Providence

Officers Elected

The following were elected to serve for the ensuing year: President, Dr. Augustine A. Mann, Central Falls; vice-presidents, Drs. Frederick T. Rogers, Providence, Alexander B. Briggs, Ashaway; secretary, Dr. Stephen A. Welch, Providence; treasurer, Dr. Winthrop A. Risk, Providence.

The treasurer reported that a special fund of \$5,000 had been received from the estate of the late Dr. Horace G. Miller, which is to be used to maintain the ophthalmologic library.

The annual report of the secretary showed that the society numbered 384 members.

President's Address: The Needs of the Society

DR. EUGENE KINGMAN: By a provision of our charter we can hold property, a body politic and corporate. "Men may come and men may go, but we (can) go on forever." In