

torrential streams reaches Paris in three or four days from the more distant parts of the basin,¹ while the corresponding flood of the lower streams is at least three or four days later.

These meteorological and geographical features must be reckoned with if Paris is to be spared another disaster.

M. Camille Flammarion, the French astronomer, has recalled what the late emperor of the French, Napoleon III, wrote in his essay on the extinction of pauperism: "The sun absorbs vapors to distribute them as rain over places which need water. When this restitution takes place regularly, fertility is the result; but if the sky in its wrath sheds partially in storms and tempest the vapors which it has absorbed, the germs of production are destroyed and sterility is the result. The distribution makes all the difference. If it is equitable and regular, it creates abundance. If it is prodigal and partial, it brings on a dearth." In fact, it is the irregular distribution of rain that brings on disaster.

Under Napoleon III, M. Belgrand, the engineer of the water and sewers department of Paris, established a hydrometric service which enables one to foretell the state of the river twenty-four to forty-eight hours in advance.

How much deforestation has influenced the recent flood is not clear. As far as I have been able to learn, the watershed of the Seine has not undergone marked alterations by deforestation in recent years. The Seine basin is shallow and there is no permanent snow; the steeper slopes are occupied by vines and pastures. There are some large areas of soil of calcareous oolite which are well suited for the growth of pine-trees. As a preventive measure afforestation affords some hope. On Jan. 31 a resolution was adopted by the Council General of the Marne Department urging the government to prevent further deforestation by imposing prohibitive taxes upon timber cutting in the nature of deforestation, and by freeing plantations of young trees from existing taxes. Replantation has been successfully accomplished in the desolate tracts of Champagne-Ponilleuse, where large groves of pine are in vigorous growth.

It will be a very interesting thing to watch the effect of this flood on the occurrence of disease. It must be understood that the waters encroached on some two thousand acres in Paris, along seven miles of the course of the Seine, and many hundreds of square miles above and below the city. Aside from the encroachment of the river, extensive areas filled with water from the sewers. There are hundreds of miles of sewers and two partly underground rivers, the Bievre and Grande Botel Betliere in Paris.² When the river Seine rises to an unusual level there is a back pressure into these sewers and a difficult or sluggish exit of contents; add to this the drainage from streets and houses, and it is not surprising that breaks occur, the contents flooding thousands of cellars, emerging in the streets and at their subsidence

¹ For a review of this subject, see the *Times*, London, Feb. 2, 1910.

² The sewers of Paris converge into large collecting sewers which discharge into the Seine at Clichy, below Paris.

leaving a nasty, foul-smelling deposit, implanting in thousands of homes the danger of disease.

What diseases may we expect? Time only will determine. The French have instituted very active and extensive methods of disinfection and will certainly handle this matter on the best scientific lines.

We naturally first think of epidemic diseases like typhoid fever. We remember the great amount of typhoid that followed the flood at Johnstown, Pa., in May, 1889. It is a matter of record, also, that in Rome, in 589, a great pestilence followed the inundation of the Tiber.³ Instances no doubt could be multiplied.

Bacteriologists state that the vitality of the typhoid bacillus is comparatively small in the presence of the innumerable organisms always present in sewage and sewers. This would seem to minimize the danger from sewage deposits as far as typhoid fever is concerned. It would not, however, be safe to rely on such assurances. The vigorous sanitary measures adopted by the French include wholesale disinfection of all inundated premises by state authorities as well as by private organizations. The Société de Secours aux Blessés Militaires, with its thirty-six branches and one hundred and fifty nurses, are doing everything possible to assist the stricken inhabitants to set their houses in order and begin life again under hygienic conditions.

Paris toward the end of winter is damp at the best, and the access of so much water into cellars will probably increase the amount of illness from influenza, tonsillitis, rheumatism, pneumonia, pleurisy, bronchitis and possibly other diseases. It would be expected that some diseases like neuralgia, gout and diarrhea or dysentery may originate or be aggravated by the cold and wet surroundings in which many thousand Parisians must live and work for months to come.

Since the above was written I have reports from Paris on good authority that no unusual sickness has occurred and that this is attributed to the very energetic methods adopted by the French authorities in meeting the conditions; the underground railway has been fully restored to use, although it was filled with water, and Paris seems to be enjoying its usual state of health.

Reports of Societies.

CONNECTICUT STATE MEDICAL SOCIETY.
ONE HUNDRED AND EIGHTEENTH ANNUAL MEETING,
NEW HAVEN, MAY 25-26, 1910.

(Concluded from No. 6, p. 262.)

DISCUSSION.

DR. PHILIP D. BUNCE, Hartford: In general surgery, if the patient dies, he dies in an orthodox manner; and that is the end of him. If he has a fracture, however, and he has any final disability or deformity, the surgeon is judged to be the cause; and a monument

³ On the Castle St. Angelo, at Rome, is a large figure of an angel sheathing a sword in commemoration of the staying of the pestilence. The latter was very fatal, but its exact nature is not known.

of his skill exists as long as the patient lives. In general, accurate replacement of bones gives the best results, regardless of particular kinds of splints. Severe laceration of the soft parts often makes the application of splints and supports very difficult. Sutures of soft parts should practically never be used in compound fractures. In my opinion, any method of fixation in which nails or drills are allowed to remain projecting through the skin is bad. I believe that x-ray pictures should usually not be shown to the patient.

DR. WILLIAM H. CARMALT, New Haven: I am rather surprised at the pessimism of Dr. Hawley compared with the optimism that I feel with regard to our success in the treatment of fractures. The principles of the care of fractures have not changed; we have simply got to restore the parts as nearly as we can. In these days of antiseptic surgery, there is no reason to hesitate to attack a bone that is not in good position and that you think will have a bad functional result. It is not worth while to cut down on every bone that the x-ray shows is not in perfect apposition; if, from experience, you feel that the limb is going to be useful, let well enough alone.

DR. SAMUEL M. GARLICK, Bridgeport: It is all very well to take the public into our confidence, provided that everything is all right, but sometimes you discover that some things are not so right as you would like to have them. Professional confidence is wise and safe, but public confidence must be very carefully scrutinized.

DR. HAWLEY: We certainly see that there are a large number of deformities following fractures, and it has been impressed upon me that a large proportion of them are unnecessary. In some fractures, too much treatment is done. I think that in a good many cases, little or no treatment other than protection is necessary.

SOME PRINCIPLES OF INTRACRANIAL SURGERY.

DR. WILLIAM H. VERDI, New Haven: The greatest difficulty encountered is not in the surgical technic, but in the cerebral localization. One should not wait too long after making a diagnosis of increased pressure before decompressive measures are instituted; otherwise there is danger of a loss of vision. I do not consider operations upon the brain and cord any more dangerous than operations elsewhere. The most troublesome thing encountered is hemorrhage; and infection is the second chief factor in the mortality of these operations. In my whole series of cases, however, I was obliged to stop only once on account of hemorrhage; and the only case of infection was that of a child operated on for a tumor of the cerebellum that at the time of operation proved to be a tuberculoma. This operation was performed in a private house, and the patient afterward became infected. There is nothing to be gained by the introduction of needles into the various parts of the brain in the exploration of tumors, as they usually have a consistency not very different from the brain itself. An operation for decompression is indicated in all cases that cannot be localized. I have seen the administration of iodides and mercury to patients with symptoms of intracranial pressure kept up until the patient's vision was destroyed. The use of chloroform or ether as the anesthetic is a mere matter of individual choice. While the results of operations for tumor of the brain are not so satisfactory as they should be, I consider the operation itself comparatively devoid of danger.

DISCUSSION.

DR. LEONARD W. BACON, New Haven: What little I have to offer in the way of remarks is based upon a case of brain tumor in which the author of the paper

was kind enough to assist me. The interesting part of the condition was the after-progress of the case. A hole was left in the brain substance as large as a turkey-egg. When we came to withdraw the last piece of gauze, and there was nothing left in the cavity to act as a cushion, we had a repetition of the pressure symptoms. For an interval of three or four days the progress of the case was somewhat in doubt. After that, the woman went along very nicely to recovery, and she is well to-day. So far as I know, this was the first case of brain tumor removed in this city with the survival of the patient. Another case was one of the largest brain abscesses that I have ever seen. There was almost complete blindness when the operation was done, and there was entire recovery except for the sight. If the operation had been done a week earlier, I think that the girl would not have been blind to-day. This emphasizes the fact brought out by the author, that when cerebral compression exists, interference must not be too long delayed.

DR. MAX MAILHOUSE, New Haven: I suggested to Dr. Verdi that in a case of cerebellar tumor in which there was marked bulging of the cerebellum from the great intracranial pressure, a slight incision be made between some of the laminae, thus possibly permitting the pressure to extrude the growth. This actually took place, and the patient was saved the loss of any material amount of brain substance. This same procedure might equally well be pursued in other areas of the brain. Opinions as to the presence of neoplasms based solely upon the appearance of choked disk and pain are sometimes erroneous, as specific disease at the base may give this picture; yet when in doubt, and the optic disks are in such a condition as to threaten vision, the safest procedure for the patient is at least a decompression. In cases of fracture without extreme evidence of local injury, when the symptoms indicate increasing hemorrhage, the unilateral dilatation of the pupil is often an aid in localization. Of greater value, however, is the occurrence of unilateral convulsions on the contralateral side. That convulsive phenomena indicate cortical irritation was evidenced by the case reported by Dr. Verdi, in which, also, immediate incision of the dura at the time of the operation, in order to relieve pressure, was indicated. In the prognosis of the results after operation, one should be guarded.

DR. WILLIAM H. CARMALT, New Haven: The last sentence of Dr. Mailhouse's remarks, which was all that I heard, leads me to speak of a case of operative infiltrating glioma of the cerebellum in a patient previously operated upon unsuccessfully for decompression, the boundaries of the tumor not being made out. There has been no recurrence of the tumor since, and I think that these cases are worth putting on record.

THE TREATMENT OF TUBERCULOUS PATIENTS OUTSIDE THE SANATORIUM.

DR. DUDLEY B. DEMING, Waterbury: Tuberculosis is a disease that needs careful medical attention and nursing. The attempt to treat outside of sanatoria patients in the social station in which the disease abounds is a poor substitute for sanatorium treatment. The disease, however, will not be eradicated by the establishment of sanatoria that admit only incipient cases, while rejecting the advanced cases and discharging cases that they fail to improve. The latter will become advanced cases, and thus spread the disease among others. Tuberculosis may be prevented, but not without the expenditure of vast sums of money to care for advanced and chronic cases in sanatoria,

and to aid the different families thus deprived of their wage-earners. The giving of employment to uncured patients discharged from sanatoria is not unattended with danger to the community. The first and most important factor in the treatment of tuberculosis is to prevent its communication to others, and the second is to benefit the patient. Both these factors are, with the vast majority of patients, more advantageously carried out in a sanatorium than at home.

DISCUSSION.

DR. DAVID R. LYMAN, Wallingford: There is no case of tuberculosis that does not have to be treated outside the sanatorium. Practically all that the sanatorium does is to arrest the disease. Every tuberculosis patient needs treatment for years after he gets home. The most dangerous point in the case is when the patient has got where he looks and feels perfectly well. He then has an anatomical tuberculosis, but not a clinical one; but he must be watched for several years in order to make certain that the anatomical disease does not become clinical. We often see cases of tuberculosis carried on to arrest by the general practitioner as thoroughly as in any sanatorium, but this is not enough. He should be instructed to come back for examination at regular intervals, whether he is feeling badly or not. I do not believe that a good, light, indoor occupation is as bad for such persons as it is considered to be. If you can regulate the patient's life during the fourteen hours when he is not at work, you can very often get him well. If he has a sleeping-porch, you are sure that he is out of doors a good part of this time. I do not believe in forced feeding or in over-feeding. Most of the stomach symptoms are due to this.

DR. HENRY F. STOLL, Hartford: There are a good many people who can work, and get well from tuberculosis; and a good many people who can play, and get well; but very few who can both work and play, and get well. If the patients will go to bed at half-past seven, a good many will get well and stay well under home treatment. With private patients, you can get extremely good results with tuberculin. It relieves the toxic symptoms, and that is a great help. Patients that take tuberculin relapse less frequently and live longer than those that do not take tuberculin; but great harm can be done, if it is not used properly.

DR. I. E. BRAINARD, Wallingford: The handkerchief that is held before the patient's mouth when he coughs should be well taken care of afterward, and not stuffed into his pocket with damp sputum on it.

DR. ERASTUS P. SWASEY, Hartford: Outdoor treatment is not possible in our part of the country in certain seasons. In March we had high winds, and the atmosphere was filled with dust. A great many persons, unless especially instructed, would keep the patients outside in such weather, thinking it was beneficial for them.

DR. DEMING: The matter of climate and location must be taken into consideration; but one of the greatest advantages of keeping the patient out of doors, even when it injures him, is the decreased risk of exposure to the other members of the family. A piece of gauze, sufficiently thick not to wet through, is better than a handkerchief, as it can be burned.

SOME FEATURES OF RECTAL ALIMENTATION.

DR. LOUIS M. GOMPERTZ, New Haven: There is a wide difference of opinion among investigators as to the absorptive power of the rectum. In some experiments that I conducted in order to determine this point, I found salt to be absorbed almost as completely as when given by the mouth. Dextrose was either

completely absorbed or was made to disappear through fermentation. As all authorities agree that there is practically no absorption of fat from the rectum, no experiments in this direction were made. If nutrient enemata do not reach the small intestine, proteins not predigested, when injected into the rectum, simply putrefy in the large intestine and pass out with the feces. Of the carbohydrates, dextrose was selected because the bulk of carbohydrate food reaches the blood as dextrose. If absorbed in sufficient quantity, it would take the place of protein. From these experiments, it was evident that only a little over one third the necessary amount of calories to sustain the body at rest was daily furnished by the dextrose solutions. Although the experiments were limited to the use of water, sodium chloride and dextrose solutions, we must conclude that the rectum is capable of absorbing these in the form of rectal enemata; furthermore, that such substances, when absorbed, are helpful in nourishing the body and in supplying fluids and salts to the tissues. Therefore, I consider rectal enemata as useful in sustaining the body in emergency circumstances, preventing complete starvation for a short period.

DISCUSSION.

DR. LAFAYETTE B. MENDEL, New Haven: The earlier favorable impressions of rectal feeding have largely been replaced by a skeptical attitude on the part of clinicians, and properly so. Our knowledge of the physiology of the alimentary tract has been greatly extended. It ought, therefore, to be possible to introduce anew such features of rectal alimentation as are promising in principle and susceptible of clinical application. Observations like these emphasize the helpfulness that comes from being able to measure in some way the results that any therapeutic procedure can accomplish.

DR. CHARLES J. FOOTE, New Haven: A nutrient enema is a makeshift, designed to meet an emergency, and cannot be continued for any length of time. It is not intended to furnish proteid or build up the body, but merely to furnish heat and energy and to prevent retrogression. This can be done by using dextrose in the enema. Dextrose is absorbed rapidly and furnishes energy; proteid is absorbed less rapidly and does not furnish energy so quickly. I cannot, therefore, see the advantage of using it, even when predigested. Alcohol fills very much the same place as dextrose. As for the absorption of salt, we should be on our guard in certain cases. I have seen instances in which saline was taken readily in cases of uremia, and large quantities were given; but, at the same time, there was a small excretion of urine, so that a great deal was retained in the system. The patient, in such circumstances, becomes waterlogged and develops edema of the lungs.

DR. FRANK P. UNDERHILL, New Haven: Most of the physicians with whom I have talked seem to think that because we cannot supply the entire 1800 calories, there is no use in employing rectal feeding. I think, however, that it is much better to give half a loaf than to give none. Under the conditions that I have worked with, the carbohydrate rectal feeding has been very successful.

DR. WALTER L. BARBER, Waterbury: On one occasion, my wife could retain nothing on her stomach but water. For over a week I kept her up on rectal alimentation, using milk, beef-juice, whiskey and quinine. I do not know whether the rectum received these or the lower intestines, but she recovered.

DR. J. F. CALEF, Middletown: I believe that in cases of the vomiting of pregnancy of the severe type,

there is, more than is usually apparent in any other disease, a reversed peristalsis which may carry rectal alimentation more readily to the stomach than in any other case, for I am sure that in one case that I had, a very small portion of milk was carried up into the stomach.

DR. ELIAS PRATT, Torrington: I should like to ask Dr. Gompertz to state whether he has made any experiment with predigested protein in connection with the dextrose.

DR. GUSTAVUS ELIOT, New Haven: You have all had experience with the difficulty in getting these enemata retained in some cases. It seems a very useful preparation to have the milk partly peptonized by the addition of bicarbonate of soda and extract of pancreas. I have used this, at times, with beneficial results.

DR. GOMPERTZ: I have given predigested protein in days gone by, but have had no analysis of the feces made in these cases, so I do not know whether these enemata were absorbed or not. Patients can live for weeks with only water by rectum, but they are in the beginning stage of starvation, as they live on the tissues themselves. As no accurate measurements were made in the case that Dr. Barber spoke of, I think it very doubtful whether any nutrition was furnished by the milk. With the dextrose solutions, we were able to supply nutrients.

CHRONIC FAMILY JAUNDICE.

DR. WILDER TILESTON, New Haven: The disease is characterized by chronic icterus, of moderate intensity, with enlargement of the spleen and anemia. It is usually hereditary; less often familial or acquired. Males and females are affected with equal frequency. The jaundice is of the non-obstructive type, with well-colored stools and absence of bile in the urine. There is usually a marked urobilinuria. The blood shows the presence of bilirubin and a considerable degree of anemia of the secondary type. The spleen is markedly enlarged; the liver, only slightly so. The patients suffer frequently with "bilious attacks," gallstone colic and nose-bleed, but are otherwise fairly healthy and often live to a good old age. The red corpuscles are abnormally fragile and readily destroyed; hence, the anemia and an increased formation of bile pigment from the hemoglobin thus set free. This leads to the icterus, which is pleiochromatic in origin. The prognosis is good for life; absolutely bad for recovery. Treatment should be confined to general hygiene. Iron may be tried for the anemia. The presence of colic is an indication for the operative removal of the gallstones. I have reports of 13 cases, occurring in four families.

DISCUSSION.

DR. GEORGE BLUMER, New Haven: When the patients are first seen at night, they ought to be seen again in the daytime in order to make out the jaundice. I should like to ask Dr. Tileston whether he has seen any suggestion of a relation between this disease and paroxysmal hemoglobinuria, another disease in which there is excessive fragility of the red blood corpuscles.

So far as I know, although other varieties of hemolytic jaundice have been described, there is no statement to the effect that there is an absence of bile in the urine in these other forms. Another point that might cause confusion is the so-called Gaucher's disease, in which there is family enlargement of the spleen, but not usually associated with jaundice. It is interesting to consider whether, if there were actual obstruction from gallstones, as well as the other type

of jaundice, the urine would contain bile. One other point that should be emphasized is not to remove the spleen in such cases.

DR. TILESTON: There was one case in which there was a condition of paroxysmal hemoglobinuria associated with the family jaundice, but there is not a very close relationship between the two diseases. Regarding the absence of bile in the urine in other types of hemolytic jaundice, there was usually no bile, but only urobilin, although in some cases there was a small amount of bile. Eleven of the twelve reported instances of Gaucher's disease were in females, so it would be unlikely to have been Gaucher's disease in our cases. When the patients get obstruction with gallstones, they also get bile in the urine, with increase of jaundice.

PERIODIC ATTACKS OF INDIGESTION IN CHILDREN.

DR. WALTER G. MURPHY, East Hartford: Diacetic acid is one of the highest chemical compounds associated with acetone, and is the result of intestinal decomposition of food. Various theories have been suggested associating diacetic acid with cyclic vomiting and recurrent attacks of indigestion. The exciting causes of the attacks of vomiting are fright, excitement, fatigue, anger, exposure to cold and similar influences acting through the nervous system. Many argue, also, that the attacks are not due to errors in diet. Acetone may be present in other conditions, and the neurotic and rheumatic aspects must be recognized as contributing causes. The condition is, I believe, a neurosis, toxic in character, based upon a defective nervous control, the result of an inherited, unstable and irritated nervous system. If this idea is correct, treatment should be directed to the cause and not to the result. Most of the children are neurotic and anemic. On account of their digestive troubles, they are often underfed. A full and generous diet should be given them, and general care of the hygienic conditions. On the appearance of symptoms of an attack, stop food and thoroughly clean out the digestive tract with castor oil, and give repeated doses of sodium bicarbonate.

DISCUSSION.

DR. FRANK P. UNDERHILL, New Haven: There is little doubt that the symptoms described by Dr. Murphy are dependent on defective nervous control. It is well known that a child is much more easily put into a condition of defective nervous regulation than is an adult. Excessive putrefaction in the intestine may serve as a stimulus in these neurotic and undernourished subjects. I do not think that the presence of diacetic acid in the urine in these cases should be over-emphasized. Acetone bodies probably arise within the body as the result of the incomplete combustion of fats. I believe that diacetic acid is neither the cause nor the direct result of the pathological condition under discussion; indeed, I should ascribe the presence of this substance in the urine to the condition that accompanies the abnormal manifestation, viz., the under-nutrition, in which it may be easily demonstrated that diacetic acid is always present. Young children are thrown into a condition of acidosis with extreme ease, and a moderate degree of acidosis, especially in children, should not be regarded as a grave symptom.

DR. CHARLES A. GOODRICH, Hartford: We should also bear in mind certain intestinal disorders in children in which there is, besides cyclic vomiting and convulsions, a certain nervous phenomenon resembling the beginning of diabetic coma in adults. These cases should be included in considering this matter. Inas-

