Sir GEORGE SAVAGE then took the chair, and carried on the discussion. He referred to the times when the only consultants were those who had private asylums to which they could send their cases, and where they could carry on the observation and treatment of their cases. Dr. Hack Tuke was about the first, and he himself was one of the earliest independent consultants unconnected with any private institution. Private asylums were undoubtedly the best places for many cases, which could not possibly receive proper care and attention elsewhere. He instanced a case to which he had been called, where he was informed that everything that could be done had been done, that eight nurses had been engaged, and where the unhappy patient said she felt she was being made insane by them.

Dr. STEWART endorsed Dr. Chambers' encomium of the paper.

Dr. SERGEANT and Dr. TURNER also discussed the paper.

Dr. SEYMOUR TUKE and Mr. C. M. TUKE replied.

After passing a hearty vote of thanks to Dr. Seymour Tuke, the meeting terminated, and the members were entertained to tea by Mrs. Tuke.

IRISH DIVISION.

THE SUMMER MEETING of the Irish Division was held on Thursday, July 2nd, 1914, at Carlow District Asylum, by the kind invitation of Dr. Thomas Adrian Greene. The following members were present:

Dr. W. R. Dawson (in the chair), Sir John Lentaigne, Drs. Considine, Greene, Nolan, Gavin, Keene, O'Mara, Oakshott, W. Eustace, Rainsford, Benson and Dr. Leeper (Hon. Secretary).

Letters of apology for unavoidable absence were read from Drs. Hetherington, O'Neill, and Rutherford.

The minutes of the previous meeting having been read and signed, Dr. W. Eustace proceeded to read his communication (held over for want of time from the Spring Meeting).

SOME CONSIDERATIONS ON INTESTINAL AUTO-INTOXICATION.

BY WILLIAM N. EUSTACE, L.R.C.S. & P. Irel.

Intestinal auto-intoxication is a disease produced by the absorption from the alimentary canal of chemical poisons, of known and unknown composition, due to abnormal metabolism or bacterial activity, the blood serving as the channel of distribution to those tissues affected by the poison. The greatest authorities on intestinal auto-intoxication in Switzerland, Germany, and France, recognise that experimental proof of this condition is far from satisfactory, which is not astonishing, as the difficulties are enormous, and the conditions under which the experiments should be made almost impossible to accomplish. Nevertheless, I am inclined to believe that the study of *it* is of more value in asylums than that of "vaccines," the administration of which is dangerous, except when administered by one who has made it a special study. I believe there are more cases of intestinal auto-intoxication among the insane than the sane, because of the way the former are liable to abuse their alimentary tract. This disease has been reproduced in animals by injection and inoculation of intestinal products, and all the lesions of auto-intoxication in man produced.

Histogenic auto-intoxication.—This occurs when the fats and albumens of the body are destroyed rapidly; fatty volatile acids are formed, and also large quantities of ammonia, which the acids take from the albumens and combine with. When the fats are especially attacked, *acetone* is produced. This form of intoxication is sometimes called *acetonæmia*. It accompanies, and is characteristic of, starvation, carcinomatous cachexia, grave anæmias, intestinal affections, and especially grave diabetes.

Organopathic auto-intoxication.—This occurs when certain glands intended for the elimination of noxious substances become inefficient. Then retention of these toxines takes place, which brings about grave morbid conditions, which vary with the glands at fault, for example: Uræmia, cholæmia, myxœdema, and acromegaly, when the kidneys, liver, thyroid, and suprarenals are respectively affected.

Gastro-intestinal auto-intoxication.—In normal digestion, as well as digestion

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by the enzymes of the stomach and intestines, there occurs a digestion brought about by the action of microbes, which live and thrive in the digestive tract.

We also find in chyle and fæcal matter sulphuretted hydrogen and acids, also aromatic substances, and ptomaines. These substances are not produced by the enzymes themselves, but by the action of microbes.

It is possible for toxic substances produced by microbes to become excessive, and pass into the blood-stream, and give rise to auto-intoxication.

In the normal colon we find aerobic bacteria, in enteritis the anaerobic predominate, and the aerobic disappear.

Farinaceous diet, milk diet, and curdled milk increase the proportion of aerobic bacteria.

It is certain that a too nitrogenous diet, high game, ripe cheese, stale meat, and eggs increase putrefaction.

Putrefaction of the proteid in intestinal digestion gives rise to puticine, cadæverne, and hexamethylendiamin aromatic bodies (indol, phenol, and skatol).

Intestinal gases (carbonic acid, methane, and sulphuretted hydrogen).

Sulphuretted hydrogen, when formed in large quantities, may give rise to a disease with nervous symptoms known as hydrothionæmia, and described by Senator.

Triple line of defence.—(1) *The intestinal mucosa*, by its cells and secretions. (2) *The liver* has enormous power of destroying poisons absorbed from the bowel. Urea is especially formed in the liver at the expense of amino acids and ammonia. Ammonia has extremely toxic properties; uric acid is barely toxic. The liver also transforms the aromatic bodies (which are formed by the decomposition of intestinal juices) into a less offensive material, and retains a certain proportion. (3) *The thyroid:* It is stated by Blum that the thyroid neutralises the toxins coming from the digestive canal, and probably those produced by the putrefaction of the albumens.

Dogs and other carnivora, on whom thyroidectomy has been performed, when fed on beef-tea and roast meats die from convulsions, or suffer rapid malnutrition.

On the other hand, herbivora suffer very little after thyroidectomy. The pituitary body, which is composed of two parts, one posterior, nervous, the other anterior, in which is found a colloid secretion absolutely analogous to that of the thyroid. Animals deprived of the suprarenal capsules die rapidly; those from whom a tenth part was removed showed signs of progressive depression of nutrition.

Elimination of the intestinal poisons.—This takes place by—(1) *Respiration:* Carbonic acid, ammonia, and acetone. (2) *The kidneys:* Aromatic bodies. (3) *The bowels.*

Subjective symptoms. — Headache, lassitude, and coldness of the extremities. Constipation is the rule. Digestion troubles with pain, causing emaciation, physical and mental debility. Dizziness. Bulimia and *polydipsia.* Painful sensations in the region of the cæcum, ordinarily dull and constant, sometimes acute.

Objective symptoms.—Tongue yellow or brown, and coated posteriorly. Breath foul, and a peculiar mawkish and mal-odorous sweat. Motions infrequent, constipated, tubular, and peculiarly fœtid stools. Premature senility (at a discussion at the Royal Society of Medicine, intestinal auto-intoxication was regarded as the prime cause of senility and death). Eyelids swollen, eyes sunken, drawn expression, yellow complexion, yellowish or brown spots on the forehead. White spots on the skin in the region of the neck and axilla. Acne, seborrhœa, and eczema. Children suffer from growing pains, distended abdomen, abdominal pains, night sweats, and nocturnal terrors, dwarfism. Tachycardia or bradycardia, or arrhythmia. Cæcum distended on palpation, which gives a sort of crepitation like that of crushing snow. Deep palpation over McBurney's point reveals a pad-like body, which is the paralysed wall of the distended cæcum rolling upon itself under the fingers, and not the appendix as so many believe. It is the cæcum and ascending colon which suffer most from distension.

Diseases accompanying intestinal auto-intoxication.—Pseudo angina pectoris, which occurs after copious meals, and is preceded by a sense of weight in the epigastrium; Uveitis; Migraines, nervous crises, with or without convulsions; Mental disorders; Phobias, misanthropy, and even melancholia.

Treatment of auto-intoxication.—(1) Early stages of the malady can be success-

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fully treated medically; those of long duration require surgical treatment. (2) The paramount importance of oral sepsis must be observed. (3) Suitable diet is a diet which will not produce ptomaines, but will encourage aerobic bacteria. (4) Abdominal belt, and exercises which develop the abdominal muscles, and the administration of liquid paraffin. (5) *Surgical Operations:* Short-circuiting the intestinal flow by ileo-colostomy. The ileum is divided about six inches above the ileo-cæcal valve, and its proximal end implanted into the pelvic colon as low down as possible. Colectomy is performed for cases where the colon is extensively diseased.

Dr. W. R. DAWSON said he wished, as Chairman of the Meeting, to thank Dr. Eustace for the valuable paper. The subject of auto-intoxication was of an importance we could not ignore in connection with insanity.

Sir JOHN LENTAIGNE gave an exhaustive and clear account of the diseases produced by auto-intoxication, and of his large experience of the condition, and the serious results to health produced where the condition was insufficiently recognised and unskilfully treated.

Most of the cases he had seen which were improperly diagnosed were mistaken for cases of chronic appendicitis, and ulcer of the stomach. Although these cases got better if operated on, they never got well, and where gastro-enterostomy had been done without any permanent or real benefit, the cases were due to intestinal auto-intoxication.

Sir John reviewed in detail the opinions of Sir Arbuthnot Lane and others as regards the condition under discussion, and said that all authorities seemed agreed that ptomaines contained in the intestines were absorbed into the circulation, and were productive of auto-intoxication. All, too, were agreed that these ptomaines were absorbed through the large intestine. Nobody, he stated, died of old age, everybody died of disease, and disease frequently begins by constipation and intestinal stasis.

Medical treatment for the condition of auto-intoxication was very difficult and troublesome. Treatment required must be persistent, and the intestines must be emptied frequently. For the poor medical treatment was most difficult, if not impossible, owing to the difficulties of carrying out the treatment for a sufficient period of time. He did not practise Sir Arbuthnot Lane's radical measure, he simply short-circuited the small intestine, and no poisoning occurs from the small intestine, but always from the large.

Although he did not wish to speak too dogmatically upon the subject, the cases he had operated upon by this method had been so far successful in many instances, and left him much impressed by the value of the operation. In cases of dementia præcox, as in maniac depressive insanity, Dr. Lewis Bruce had found a large increase of proteolytic bacteria in the intestinal contents.

Dr. BENSON wished to direct attention to three cases he had recently treated in his asylum. They were admitted in an acutely maniacal condition, with foul tongues and also deep cracks in the tongue. All were treated by a milk diet and the administration of large doses of sulphate and carbonate of magnesia. Within three months recovery occurred.

Dr. Gavin and Dr. O'Mara also joined in the discussion. Dr. Eustace thanked the members for the way they had received his paper, and for the interesting discussion it had produced.

Dr. Rainsford next read a paper introducing the discussion, of which the members had previous notice, on "The Use of Hypnotics in Acute Mania." Dr. Nolan thanked Dr. Rainsford most heartily for his communication, but, as many of the members had to leave, it was decided to adjourn the discussion (with Dr. Rainsford's consent), till the Autumn meeting, owing to the lateness of the hour.

As the Chairman had to leave, Dr. Greene was moved to the chair. Lord Wolmer's Bill *re* Superannuation and Employment of Asylum Officials was next considered. After a discussion in which Dr. Nolan fully joined, and gave valuable information, it was decided to take no further action in the matter at present. The position of Irish Asylum officials as regards their superannuation under the Government of Ireland Bill was then discussed. It was decided to take no further action at present, but that Dr. Nolan, Dr. O'Mara and Dr. Greene be requested to obtain all information possible from the Irish Parliamentary party, and to report the result at the next meeting of the Division.

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Dr. Leeper proposed a cordial vote of thanks to Dr. Greene for the most enjoyable day he had given them, and for his hospitality. He begged to move that the best thanks of the meeting be tendered to Dr. Greene. This having been seconded, it was passed with acclamation, and the proceedings terminated.

PARLIAMENTARY NEWS.

The following Bills, of interest to members of the Association, have been presented to Parliament:

(1) A Bill to amend the Asylum Officers' Superannuation Act, 1909, presented by Mr. Duncan Millar, and supported by Sir John Jardine, Sir Charles Nicholson, Mr. Barnes, Capt. Gilmour, Mr. William Redmond, Mr. Crooks, Sir John Bethell, Col. Burn, and Capt. Campbell.

"Clause 1 sub-clause (1) applies to women workers of the first class. It raises the period of service for pension from 20 to 25 years, but allows the pension, irrespective of age. Sub-clause (2) allows a visiting committee of an asylum to grant a pension to male officers of the first class after 25 years' service, subject to a minimum age limit of 50. Clause 2 enables the visiting committee to make a grant to a worker of less than 10 years' service who is permanently incapacitated through illness acquired in the execution of duty. Clause 3 deals with gratuities to widows and children. Clause 4 calculates the pension on the average salary of the last five years instead of 10. Clause 5 arranges for distribution where a pensioner who is illegitimate dies intestate. Clause 6 substitutes one year of service for two years in aggregating terms spent in different asylums. Clause 7 makes service in parochial asylums in Scotland count in this aggregate. Clause 8 allows those who contracted out of the Act of 1909 to come in on terms. Clause 9 deals with the classification of established officers or servants, and Clause 10 allows an appeal on classification to the Commissioners in Lunacy (Board of Control)."—*Abstract from Introductory Memorandum.*

(2) Voluntary Mental Treatment Bill, 1914, presented by the Earl Russell.

"This Bill is intended to secure that persons whose mental condition is uncertain, but requires medical treatment to prevent their becoming lunatics, may receive such treatment in a manner which is at present impracticable, owing to the present state of the law.

"The existing law assumes that a given person is or is not insane, and takes no notice of early symptoms of insanity. These symptoms are curable by early treatment, but, although medical treatment of a person who is not insane may be given without fear of penalty, any person who keeps such a patient is liable to be prosecuted under section 315 of the Lunacy Act, 1890, on the ground that the patient is in fact insane. This risk attaching to early treatment without a certificate of insanity is so great that it is almost impossible to secure adequate medical treatment for such patients, nor can they be kept under observation; and consequently they are left to become lunatics in fact or, in order to avoid that consequence, it must be assumed already to have taken place. Thus, in order to prevent patients becoming confirmed lunatics by neglect, there is a strong tendency to certify all doubtful cases as insane. Of these the great majority very quickly regain their mental equilibrium, and are sent out again perfectly sane, but with the stigma of insanity upon them, and having been subjected to deprivation of liberty and rights. This inflicts exceptional hardship upon persons with families, and such classes of persons as clerks and teachers and governesses, whose chance of earning a livelihood is practically destroyed by having been certified as insane.

"The Bill is intended to remedy this defect. By giving permission to treat such patients, while making adequate provision against abuse, and providing that they can only be detained while they are willing, the law will be restated so that mental disorder of a kind which merely demands observation and treatment will be kept distinct from insanity, with which it is at present confused merely by reason of fear of prosecution, and not by reason of any express provision of the Lunacy Acts. The section in question was inserted for the protection of the public; its application tends to harm the public. This Bill is intended to make it clear that to treat and observe persons whose mental condition is in

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