

Professional Review.

LECTURES ON AUTO-INTOXICATION IN DISEASE.

A book, which while primarily written for the medical profession, is of considerable interest to nurses also, is that by Professor Ch. Bouchard, Professor of Pathology and Therapeutics, member of the Academy of Medicine, and physician to the Hospitals, Paris, on "Auto-Intoxication in Disease; or, Self-Poisoning of the Individual." The second, like the first edition, has been translated into English by Dr. Thomas Oliver, M.A., F.R.C.P., Professor of Physiology in the University of Durham, who adds a preface and some new chapters. It is published by the F. A. Davis Company, 1914 to 1916, Cherry Street, Philadelphia, the price being two dollars (8s. 4d.) net.

Dr. Oliver in his preface thus explains its purport: "The daily round of human life is a repetition of integrations and disintegrations, of processes of building up and breaking down. Metabolism is taking place everywhere within the human body, with the result that the complex molecules of brain and muscle in their catalysis pass through intermediate stages and are finally resolved into carbonic acid, water and ammonia. We do not know what part oxygen plays in putrefaction, but the researches of Pasteur have shown how important is the rôle played by micro-organisms. We are forced to acknowledge the great impetus given to disintegrating processes in organic matter by bacteria. In no part of the body is this more true than in the intestines. At the present time it is a debatable question as to how far even normal digestion may not be aided by the functional activity and multiplication of micro-organisms. Pasteur has isolated as many as seventeen microbes from the mouth. Some of these dissolve albumin, gluten, and casein, while others are capable of converting starch into glucose. Considering the multiform changes that take place in the small intestine during digestion—changes of a chemical, putrefactive, and fermenting nature—there must be produced substances of a highly complex nature—alkaloids or ptomaines—which, when absorbed into the system, may seriously affect the vitality of the individual. We are all, to some extent protected against the injurious effects of micro-organisms by the fact that certain products formed within the body, as the result of microbial activity react upon the micro-organisms themselves, thus limiting their longevity, and diminishing their power for harm.

By this means man is rendered immune, and a defence is raised in the human organism against disease. How far, speaking generally, immunity is brought about by chemical or biological methods it is difficult to say. Herter ("Lectures on Chemical Pathology") deals at considerable length with this important subject. He considers that the chemical defences of the body are directed mainly against bacteria, bacterial toxins, and poisons other than those toxins formed during digestion, during metabolism, or introduced from without. The acidity of

the gastric juice, for example, is a means of defence against certain micro-organisms; so too is the acidity of the urine. A much more important defence against microbes is the bactericidal action of the blood and lymph. This, according to Hankin, may depend upon the alkalinity of these fluids, or it may be due to the presence of proteids, resembling enzymes derived from the leucocytes. It is common experience that during acute infectious fevers there are developed in the human body substances that destroy bacteria or their toxins. During the early stages of pneumonia, for example, while the specific microbes or pneumococci are multiplying, the patient is often extremely ill, and yet hardly has the crisis been reached than, notwithstanding the presence of those micro-organisms in the body as revealed in the expectoration, or if the case has gone wrong in the discharge from an empyema which has unfortunately formed, the patient feels well, and is little disturbed although pneumococci are still plentiful. This feeling of well-being must depend upon either the pathogenic micro-organisms becoming destroyed by the bacteriolytic action of the blood or upon a neutralisation of the products formed by the pneumococci. The circulation of toxins in the blood is sooner or later followed by the development of antitoxins."

The above extract leads up to the interesting theory which is demonstrated throughout the book. As Dr. Oliver explains: "Bouchard, in 'Auto-intoxication' clearly indicates that man is standing, as it were, on the brink of a precipice; he is continually on the threshold of disease. Every moment of his life he runs the risk of being overpowered by poisons generated within his system. Self-poisoning is only prevented by the activity of such excretory organs as the kidneys, and by the watchfulness of the liver, which acts the part of a sentinel to the materials brought to it by the portal vein from the alimentary canal. Disease is not something altogether apart from the individual. The patient and his disease are too often found living under identical conditions."

To those who have followed the trend of this argument the book itself will be absorbingly interesting. The point of practical interest for nurses to grasp is that since auto-intoxication, in the manner indicated, is possible they must be watchful to observe whether the excretory organs of patients in their care—the skin, the liver, the kidneys—are performing their important functions, and to report any deviation from the normal to the medical attendant. As an illustration of the importance of this point we may again quote Dr. Oliver: "The administration of a large dose of calomel, followed hours afterwards by a saline purge, will often clear a patient's mind as well as relieve his body during the delirium of acute mania. Towards the terminal stages of chronic interstitial nephritis, and diabetes, &c., psychoses of an hallucinatory nature are not unknown. They are due to impaired cerebral nutrition, or to the circulation of some form of nerve poison in the blood, consequent upon defective elimination." It is quite impossible to lay too much stress on these facts,

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