

THE CAMPAIGN AGAINST VENEREAL DISEASE.

SIR WILLIAM OSLER'S ORATION.

On May 14th, the president, Mr. D'Arcy Power, being in the chair, the Annual Lettsomian Oration of the Medical Society of London was delivered by Sir William Osler on "The campaign against venereal disease." The orator said that Nature in the form of disease was more fatal to man than man with his weapons. The needless deaths of peace far exceeded those of the most disastrous wars. More people died of plague in two years in India than had been killed on both sides since the great war began. In 1915, while nine of our soldiers abroad died every hour to save their country, twelve babies died at home in the same time to the scandal of their country.

The story of the conquest of the great infections was the brightest single chapter in the history of science. There was a fly in the amber, of course, as one looked in two directions—towards cancer and towards venereal disease.

Fallacy of Venereal Statistics.

Among infections syphilis and gonorrhoea stood alone. Against all other diseases man waged keen warfare. They presented the remarkable and subtle combination of man and Nature in an incessant and successful propaganda against the health of mankind.

The first thing to arrest attention in the Registrar-General's report for 1915 was the absence of all reference to venereal disease in the "Review of the vital statistics for the year 1915," by Dr. T. H. C. Stevenson. Of eighteen causes of death specially discussed all but three belonged to the infections, of which tuberculosis and pneumonia headed the list—but not a word about syphilis. Syphilis had been, and remained, the despair of the statistician. Trustworthy data were not forthcoming. Even in death a stigma was associated with it, and the returns were everywhere but under the special caption of the disease itself. In a list of eleven causes of infant mortality during the first year syphilis was not mentioned. Syphilis was stated to have been responsible for 1,885 deaths at all ages, and other venereal disease for 61. Of the 1,885, 1,162 were under a year, 1,277 under five years; of the ten best killers among the infections syphilis came last. Content at this stage, the superficial reader would have a very erroneous idea of the position of venereal disease in the nation's life.

The Case against the Gonococcus.

The gonococcus was not a great destroyer of life, but was the greatest known preventer of life; one of its cruel properties was to sterilize a very considerable proportion of its hosts. As high as 25 per cent. of the major operations at gynaecological clinics and hospitals for diseases of women might be for gonorrhoeal complications, which were among the commonest sources of chronic ill health. Conservative estimate placed the percentage of sterility in women due to gonorrhoea at 50. A large majority were innocent victims of infection by husbands who thought themselves free from all traces of what they regarded as a harmless indiscretion of youth, and who could have been cured under a proper system of control and treatment. The complicating epididymitis in the male was another common cause of sterility. One recalled the dictum of Noegerrath, "90 per cent. of sterile women have husbands who have had gonorrhoea."

From the standpoint of race conservation gonorrhoea was a disease of the very first rank, and cost the country annually thousands of lives. With 30 to 40 per cent. of all cases of congenital blindness, with the chronic pelvic mischief in women, and with the unhappiness of sterile marriages—with these and many minor ailments scored up against it, we might say that while not a killer, as a misery producer Neisser's coccus was king among the germs.

The Heritage of Syphilis.

The frequency of transmission of the spirochaete of syphilis from parent to child stood out less as a biological peculiarity than as a fact of supreme importance in the national health. The spirochaete might kill the child *in utero*, a few days after birth, or within the first two years of life, or the blighted survivor might be subject to innumerable maladies.

The stillborn were at last to be numbered. Until now they had remained the "hidden untimely births," to use the language of Job. Sir Arthur Newsholme estimated them at close upon 100,000. What percentage of these deaths were spirochaetal we did not know, but we knew that syphilis was, perhaps, the most common cause of abortion, and, from examinations made at large maternity hospitals, more than 25 per cent. of the stillborn had been found infected. Rejecting the larger estimates, the stillbirths due to syphilis might be put at, say, 20,000 for the year 1915. Of the first 10,000 cases at the special clinic of the Johns Hopkins Hospital there were 705 fetal deaths—that is, from the seventh month onward. In all cases the placenta was examined as well as the fetus. "By far and away the most common etiological factor in the production of death in the fetus is syphilis" was the conclusion; it was responsible for 26.4 per cent. in the series. In addition, at least 53 of the 127 macerated fetuses were probably syphilitic, though this could not be determined microscopically.

In 1915 of 800,000 children born, 90,000 died within the first year. If this were added to the intrauterine deaths it made stock-raising for the human animal a very poor business. About one-fifth of these died within the first week, and one-fourth within the first month. Ten causes were mentioned, but again the interest of the list centred in what was not there—syphilis was not even mentioned! When we turned to the total deaths from syphilis, then we did get light, as among the 1,885 deaths 1,162 were under one year, 1,277 under five years, but these figures were far below the mark. Careful work was in progress to determine the number of deaths within the first year from syphilis, and we should not be far wrong in placing the figure at between 15,000 and 20,000.

Latent Syphilis.

The second point in the biology of the spirochaete was a peculiarity it shared with many other parasites of resting dormant in the body for years. Its capacity to work evil was not to be measured by years. Since Schaudinn's great discovery there was a sharper point to Sigmund's aphorism, "Syphilis is the worm that never dieth." *Venus impura* was a hard mistress—Venus of the long arm she should be called—as ten, twenty, thirty, even forty, years from the date of the infection the book bills were rendered, and she wrung the uttermost farthing out of her poor victims.

No insurance company to-day would take a man who had a positive Wassermann reaction. A good test of the importance of a disease was to take the thirty-seven volumes of the two series of the *Index Catalogue* of the Surgeon-General's Library, Washington, in which was indexed practically all medical literature between 1884 and 1917. In vol. xvii of the second series, issued in 1912, there were 207 double-columned pages of reference, against 117 pages in vol. xiv of the first series in 1893. No other single disease except tuberculosis had so much space devoted to it. The improved technique by which the spirochaete was demonstrated in the tissues and the serum reactions had opened a new chapter in our knowledge of the prevalence of the disease. The profession had read it with amazement, the sanitary authorities with bewilderment, but, best of all, the public was actually reading the chapter in the open.

The Statistics Unravelled.

From the Registrar-General's report, of the 562,000 deaths in 1915, about 58,000 were due to disease of the nervous system. Two of these needed no discussion: locomotor ataxia and general paralysis were syphilis, and accounted for 735 and 2,263 deaths respectively. A certain number of cases classed under meningitis were syphilitic. After locomotor ataxia came "other diseases of the spinal cord," 2,846 deaths, a larger proportion of them in the fourth to the sixth decades. Any neurologist would say that a reasonable estimate would ascribe at least one half of these to syphilis—say 1,500. By far the largest single cause was cerebral haemorrhage, 25,423—a majority of the deaths occurring after 50, beyond which age it was the privilege of any man to rupture a blood vessel in his brain without suspicion; 3,713 of these deaths were between the ages of 25 and 50, of which 3,400 could be claimed as due to syphilis. There were 1,472 returns under the caption of "softening of the brain," and who could deny 500

of these as syphilitic? The "paralyses" without specified cause—2,983 cases—was a hopeless section, but as more than two-thirds were hemiplegia we could add at least another 500. That a certain proportion of other forms of mental alienation—1,100 deaths—were cases of general paralysis of the insane was very probable. From epilepsy, infantile convulsions, and "other diseases of the nervous system" which mount up to about 15,000, we could claim for syphilis 2,000 at least. This gave a total from this section of about 10,000 deaths in which syphilis was the probable cause.

The spirochaete attached itself to the vascular system in preference to all other parts. Aneurysm and the aortitis on which it depended were usually spirochaetal. Between the twenty-fifth and the fifty-fifth years the cases were always spirochaetal. Of the 1,141 deaths we could put down 1,000 to syphilis. There was a terrible bill opposite organic disease of the heart—56,000 deaths. About 17,000 of these were between the ages of 30 and 55, and a majority of these were in men. We should be safe in taking one-third of the cases between 30 and 55—say 5,000 at least—and we might take an equal number from the 10,000 dead of diseases of the arteries, atheroma, and aneurysm. A low estimate would put the cardio-vascular deaths due to syphilis at above 10,000.

It was unnecessary to bring in the comparatively small number contributed to other organs. We had enough to put the grand total of the ravages of the *Spirochaeta pallida* above 60,000, and to move syphilis from the tenth place in the Registrar-General's report to where it belonged—at the top, an easy first among the infections.

In all parts of the world investigations were in progress dealing with the incidence of syphilis in ordinary hospital work. Dr. Warthen investigated the tissues in a series of consecutive necropsies with the most scrupulous care to determine the existence of the spirochaete. One-third of the autopsies in adults showed its presence somewhere in the organs. Of these 41 cases, only 11 were known to have had syphilis, 5 had active lesions in the nervous system, and 25 had shown no clinical changes suggestive of syphilis. In 36 there were syphilitic lesions in the heart, 32 in the aorta, 31 in the testicles, 4 in the liver, and 6 in the adrenals. He concluded that interstitial myocarditis, aortitis, and fibrous orchitis formed a triad distinctively syphilitic. After quoting other investigations, the orator said that modern researches led to three conclusions—first, that there is an immense body of latent syphilis in the community; secondly, that a very large number of persons have not been thoroughly treated; and, thirdly, that to the enormous groups of cerebro-spinal and cardio-vascular deaths syphilis is an all-important contributor.

The Dawn of Action.

Centuries of silence had made venereal disease taboo. The beginning of the twentieth century saw us in a condition of hopeless apathy. Within a decade what a changed attitude in profession and public! The Royal Commission appointed in 1913 gave practical expression to a realization of the importance of the problem by the public. Best of all, Lord Sydenham's report had not been sterile. An outcome of the work of the Commission was the founding in 1914 of the National Council for Combating Venereal Diseases, the primary function of which was educational. The work of the Eugenic Education Society had been most helpful. The outset of the great war had stimulated, not retarded, the plan of campaign. War meant an enormous increase in the number of infections. The last quoted figures for the British army at home were 71,000 cases of gonorrhoea, 21,000 cases of syphilis, and 6,000 cases of soft chancre. In the Canadian army there had been enough cases of venereal disease to stir public opinion in the Dominion to boiling point.

These various agencies had at last the desired effect. The Government felt that opinion in the country was strong enough to act on the advice of the Commission, and hand over the venereal problem to the public health authorities, represented by the Local Government Board. Legislation had been enacted to fight the enemy in a settled plan at many centres under its control. It was a new departure to deal with an individual disease in this way. The word "may" instead of "shall" in the Tuberculosis Act gave us an ineffective guerilla warfare of local bodies instead of a Kitchener and a general staff. The

Government made no mistake this time, and all over the country the clinics were in course of formation. No more hopeful legislation had ever been enacted than the establishment of these venereal clinics. But let the people and their representatives realize that they were dealing with the subtlest foe of humanity and the greatest sanitary problem which confronted civilization.

Organization of the Campaign.

A general staff, controlling the campaign, would work from the Local Government Board (or before long, he hoped, from a Ministry of Health), with laboratory, statistical, and several service departments, a publicity bureau and a library. Already the Commission had opened the doors of the general hospitals to these victims. The profession welcomed the scheme from the educational side, as there would be within easy reach opportunities for the study of all aspects of both disorders, and from the practical side they would be able to bring their patients freely for special treatment, for consultation and for the laboratory tests. There would, he hoped, be at each centre lectures and demonstrations. A sympathetic and loyal feeling on the part of the practitioners in each district was really essential to the success of the work. Between the clinical and the laboratory side there would be enough at each clinic to occupy a large part of the time of a male or female doctor, who would, he trusted, become the skilled advisers of the profession and of the public in each district. These positions should be made sufficiently attractive to catch the very best, and he was sure the hospital authorities would welcome them as members of the staff. A great missionary field would be opened to women doctors, who should do the work among their own sex at the clinic. Social workers of the right sort with the right spirit would do much to make the clinics known and appreciated. The National Council could supervise this work, which should be done by carefully selected volunteers.

The clinic should be the centre in each district of an active educational propaganda, which should be stimulated and planned by the general staff, and not left to the timid discretion of local authorities. By meetings, literature, placards—in every legitimate way—a knowledge of the dangers of venereal disease should be distributed, and the importance of early and thorough treatment insisted upon.

Compulsion or Persuasion?

For any legislation to be successful the people must be prepared. We were committed to a campaign of education and an elaborate scheme of treatment. Two circumstances made it probable that these measures would not suffice to reach the enemy. So deep was the stigma associated with the disease that patients avoided hospital and even their family doctors. To be successful in any fight the primary essential was to know where the enemy was placed. Realizing as fully as any one the strong arguments against notification, the gravity of the situation overweighed with him all private considerations, and he felt sure that within a year we should be ready for the change. It worked well in the Scandinavian countries, and the results from those Australian dominions in which it had been introduced would be interesting.

The other point really more serious was also connected with notification. Both syphilis and gonorrhoea required protracted treatment, and the primary symptoms were often so slight that it was impossible to get patients to continue a course of medication lasting a year or more. Reports from a Boston hospital showed that 28 per cent. of the patients did not return, and to a New York venereal clinic 29 per cent. of the syphilitics came but once. To be successful in this fight we must have control of the patients—the treatment must be compulsory; it was so in the army. If the House of Commons represented outside opinion, the public was a long way from appreciating the appalling risks they ran. The Government was committed, for a time at least, to a policy of persuasion, feeling that notification and compulsory treatment were too far in advance of public opinion.

For the first time in history the outlook was bright. The public was at last awake to the necessity of an educational campaign. That the preaching of chastity appeared a ghastly failure in face of the record of 800,000

fresh cases annually in this Christian kingdom was no reason why the earnest appeal for personal purity should not take the first place in the educational campaign.

That the State had at last intervened was another ground for hope, and most hopeful of all was the changed heart of the people. At last the sinner was to receive Christian treatment.

THE LISTER INSTITUTE.

THE annual general meeting of the Lister Institute of Preventive Medicine was held on May 16th, when Surgeon-General Sir David Bruce, C.B., chairman of the governing body, presided. The report of the governing body showed that the Institute had again been actively engaged in war work, both in the production of serums and vaccines, and in the prosecution of research on problems arising out of the war. In the bacteriological department Dr. Schütze and Mrs. Barratt had prepared large quantities of typhoid, paratyphoid, cholera, melitensis, and plague vaccines for military purposes, over 40,000 c.cm. of these having been issued to the War Office, Admiralty, and Australian Imperial Force.

At Elstree, under the direction of Dr. MacConkey, assisted by Miss Homer and Dr. Zilva, large quantities of various serums had been prepared for the naval and military authorities, and, in addition, two kinds of univalent antimeningococcus serum had been prepared, and proved to be efficacious for curative purposes. Satisfactory accounts of the usefulness of antidyentery serum supplied regularly every month to the War Office had been received from Sir John Rose Bradford, consulting physician with the army in France. In the director's department at Chelsea Miss Chick, assisted by Miss Rhodes and Miss Dalyell, had continued the preparation of agglutinating, haemolytic, and anti-human precipitin serums, and the examination of cultures derived from cerebro-spinal meningitis and various intestinal infections. In the same department Miss Chick, assisted by a number of other ladies, had made a series of investigations into the distribution in food materials of the accessory substances which prevent beri-beri and scurvy, with special reference to the suitability of these foodstuffs for incorporation in the rations of the troops, and the biochemical department had taken a share in similar experiments dealing with the best way of drying foodstuffs, the presence of accessory factors in beer, and the chemical nature of these elusive substances. In the entomological department Mr. Bacot, who has been appointed honorary adviser to the War Office on entomological questions, has been largely employed in testing insecticides for use at the front. During the year the Institute made a grant of £500 to a committee for the study of tetanus formed by the War Office under the chairmanship of Sir David Bruce, and placed a research room at its disposal. The main object of the committee is to study the occurrence and treatment of tetanus arising from wounds, and experimental work for it is being carried on in various laboratories. At the University of London Captain Golla, R.A.M.C.(T.), and Mr. Ransome are directing an investigation into the best mode of administration of tetanus antitoxin, the chemical nature of the toxin and the effect on it of various reagents, the mode of its distribution in the nervous system, and the treatment of infected wounds with antiseptics. At Oxford Professor Sherrington is inquiring into the relative value of different modes of injection of the antitetanic serum in arresting tetanus. At the Institute's department at Elstree Dr. MacConkey and Miss Homer have worked on the duration of the passive immunity conferred by a prophylactic dose of antitetanic serum, and at Chelsea Miss Robertson has investigated the presence of tetanus bacillus in wounds, both in cases showing and not showing clinical symptoms of the disease. Miss Robertson is now engaged, in collaboration with Captain Tulloch, R.A.M.C.(T.), in a detailed investigation of organisms found in a large number of these cases having the morphological characteristics of the tetanus bacillus but not producing the specific toxin. Laboratories in the Institute had been placed at the disposal of the biochemical staff of the Medical Research Committee, of the Canadian Army Medical Corps, of the Australian Army Medical Corps, and of the Ministry of Munitions.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

THE annual meeting of the London and Counties Medical Protection Society, Ltd., was held at 32, Craven Street, Strand, on May 16th. The council's report stated that the work of the society had been but little affected by the war; any decrease in one class of cases dealt with had been counterbalanced by an increase in some other class. The membership of the society had remained almost stationary, and the financial position was satisfactory. Colonel E. C. Bensley, F.R.C.S., chairman of council, said that an alteration in the method of remuneration by the War Office for the medical examination of recruits had been made without the doctors being informed until afterwards when the question of payment arose. Instead of payment per head, the War Office issued an order limiting the fees for one day's work to a maximum far below the amount of the fees earned, on the scale agreed to, on days when the numbers were large. Medical men who objected to the alteration in the terms of their contract without their knowledge or consent had applied to the society, and the society succeeded in obtaining payment of a great part of the amount due under the existing contracts. The administration of the Insurance Act had given rise to many difficulties, and the society had had to adopt legal measures to protect some of its members against unjust surcharges. He also referred to the successful fight in the Court of Appeal which the society had made on behalf of a member who had attended a patient suffering from leprosy, and whose action, after the patient's death, in having the rooms disinfected drew attention to the nature of the disease and led to a claim for damages on the ground that the fact that the leper was in residence should have been disclosed to the landlord. The new departure entered upon in 1911 in regard to insurance against the costs of the other side and damages in unsuccessful cases had been of great advantage to the society. The risk, which formerly cost each member 10s. a year to insure against, was now undertaken by the society itself, and the excess of that risk over £4,000 a year was covered by an insurance with Lloyds underwriters up to £24,000. Sir John Rose Bradford was re-elected president and the vice-presidents were re-elected, together with Surgeon-General Sir George H. Makins and Professor Sidney H. C. Martin, to fill vacancies caused by the deaths of Sir Lauder Brunton and Sir James Goodhart.

THE WAR.

CASUALTIES IN THE MEDICAL SERVICES.

ARMY.

Killed in Action.

LIEUTENANT-COLONEL W. B. GRANDAGE, M.D. CANTAB.,
R.F.A.(T.F.).

Lieutenant-Colonel William Briggs Grandage, R.F.A., who was in command of a brigade of the Royal Field Artillery, died on May 14th of wounds received in action half an hour earlier. He was 37 years of age and was the fifth son of Mr. and Mrs. A. Grandage, of Kent House, Rawdon, near Leeds. He was educated at Sedburgh School, Clare College, Cambridge, and St. Bartholomew's Hospital, and in his student days was a well-known Rugby football player. He took the diplomas of M.R.C.S., L.R.C.P. in 1905, and graduated B.A. and B.C. in 1906 and M.D. two years later. Before the war he was in practice in South Kensington and held the posts of honorary anaesthetist to the Victoria Hospital for Children, Chelsea, and clinical assistant in the gynaecological department of St. Bartholomew's Hospital, where he had formerly been house-physician. He held a captain's commission in a London brigade of the Territorial Force, R.F.A., prior to the war, was promoted major in August, 1914, and in April, 1916, was given the temporary rank of lieutenant-colonel. The injury from which he died was caused by a large shell bursting whilst he was walking from his own head quarters to that of an infantry brigade. An R.A.M.C. officer went to his assistance, but was told by the wounded officer to take shelter, as the enemy was sure to send over more shells. He was conveyed to a first-aid field post,