

WORLD FIGHT AGAINST DISEASE

In the world political situation, oppressed and threatening, full of antagonisms and mistrust, the Annual Report of the Director-General to the World Health Assembly and to the United Nations¹ comes as a cool refreshment. It is as though the word "international" had been taken out of its murky context and given a thorough cleaning. The report (which unfortunately has no index) contains a list of over three hundred major health projects being carried out in 1954—20 of them in Africa (the continent in which the work of W.H.O. seems to have been least developed), 58 in the Americas, 66 in south-east Asia, 62 in Europe, 72 in the eastern Mediterranean, and 51 in the western Pacific. They include surveys, seminars, the founding of institutes and schools, field missions, control measures, and much else, many of the projects lasting over several years. It is not difficult to illustrate from them the imaginative help that W.H.O. gives—a quarantine station for pilgrims at Jeddah, a five-year project in Tokyo to investigate the causes of prematurity and devise methods of preventing it, the control of bejel and syphilis in Syria, the teaching of pharmacy in the Sudan, the extension of mental health services in Jerusalem and Bethlehem, a midwifery school at Teheran, fellowships for training in cardiology in Yugoslavia, postgraduate education in public health in Athens, the establishment of a physiotherapy centre in Bombay, a school for male nurses in Afghanistan—all these together with innumerable operations to control disease, such as anti-malaria schemes, which were current in 20 countries in 1954, and assistance towards combating tuberculosis in 28.

Nevertheless, the aim of W.H.O. is not short-term campaigns, although many of its projects are in that category, but to strengthen the permanent structure of public health services in its eighty-three member-states. One encouraging feature, noted by Dr. Candau, the Director-General, is the growing acceptance of the idea of joint action between neighbouring countries. Regional efforts covering several countries are not only more effective as such but promote good relations. An instance of such co-operation is the establishment of an Inter-American centre of biostatistics at Santiago to serve the whole of Latin America, and another is a regional college of nursing in association with the University of Alexandria to raise the level of nursing in the Eastern Mediterranean area. The most outstanding co-ordination of national efforts last year was the campaign of the American countries represented at the Fourteenth Pan-American Sanitary Congress (which served also as the sixth session of the W.H.O. Regional Committee for the Americas) for a five-year plan to eradicate malaria for good and all from the Western Hemisphere.

Not only is W.H.O., with its panels of experts in thirty-three subjects, a complete organization in itself—a full-bodied one beside which the admirable Health Organization of the League of Nations appears in retrospect a mere wraith—but it works in collaboration with

many other bodies. These include the Economic and Social Council and other branches of the United Nations, and non-governmental agencies, twenty-five in all. Among them is the World Medical Association, which is co-operating with W.H.O. in questions concerning the preparation of the *Pharmacopoea Internationalis*. Another is the Council for International Organizations of Medical Sciences; this has been making a critical assessment of the usefulness and potentialities of large international congresses and other types of scientific meetings.

W.H.O. looks back on six years' experience during which public health has covered the world map in a way it has never done before. This raises some wider problems of ecology. Much has been said about the possibility of contamination of air, soil, and water owing to the increased use of atomic energy. But that, if it is occurring, is only one of the obscure changes which may be working themselves out. To what extent may the balance of nature be subject to interference by the wholesale destruction of insects? Dozens of the projects which W.H.O. is sponsoring in various parts of the world have to do with insect control. Again, what will be the long-term results of the extensive use of antibiotics? How will the trends of disease in whole populations be influenced by the intense efforts to raise the standards of environmental sanitation? These are new questions, and only an organization of the compass and equipment of W.H.O. can in due course answer them and meet the challenge which some of them may make.

GIANT CELLS IN MEASLES

The presence of giant cells in measles cases was first reported by C. Ciaccio¹ in 1910 and by G. Alagna² in 1911. Little interest was aroused until A. S. Warthin³ in 1931 and W. Finkeldey⁴ in the same year reported independently on a peculiar type of giant cell which they had found in the tissues of patients in the prodromal stage of the disease. Warthin, having noted these cells in tonsils removed at operation in one case, was able successfully to predict the onset of measles in three later cases in which he found the same type of cell. Since these reports the cells have often been described, and they are now generally known as Warthin-Finkeldey cells. They have been seen in tonsils, adenoids, lymph nodes, spleen, thymus, and appendix. They occur in the germinal centres of lymphoid tissue, and in the tonsil they have been found especially just beneath the surface of the crypts, where they can occur in very large numbers. Their appearance is so striking that Warthin suspected that his first case might be one of Hodgkin's disease or lymphoblastoma. The cells are round or irregularly lobed, and they have a variable number of nuclei, sometimes as many as 100. The nuclei never show a peripheral distribution and they

¹ Ciaccio, C., *Virchows Arch. path. Anat.*, 1910, **199**, 378.

² Alagna, G., *Arch. Laryng. Rhin. (Berl.)*, 1911, **25**, 527.

³ Warthin, A. S., *Arch. Path. (Chicago)*, 1931, **11**, 864.

⁴ Finkeldey, W., *Virchows Arch. path. Anat.*, 1931, **281**, 321.

⁵ Denton, J., *Amer. J. med. Sci.*, 1925, **169**, 531.

⁶ Bunting, C. H., *Yale J. Biol. Med.*, 1950, **22**, 513.

⁷ Tompkins, M. D., and Macaulay, J. C., *J. Amer. med. Ass.*, 1955, **157**, 711.

¹ *The Work of WHO 1954. Annual Report of the Director-General. World Health Organization, Geneva.* 10s. (\$2).

are said to be commonly found as grape-like clusters in the centre of the cell. Often the cells are found in a degenerate stage, when they show strongly eosinophilic cytoplasm and pyknotic nuclei. The time of their appearance and disappearance is not known with certainty; they have been reported as early as four days after exposure to infection, and it seems certain that they will be present five days before the onset of the rash and that they persist for one or more days after the rash appears. Many views have been expressed about their origin—that they are formed by fusion of lymphocytes, that they originate by amitotic division of cells of the lymphocyte series, that they come from the reticulo-endothelial system, and that they are macrophages which have phagocytosed lymphocytes attacked by the measles virus. There is, however, general agreement about their specificity, and their appearance in lymphoid tissue has been used as a criterion of a successful experiment in the inoculation of monkeys with measles material.

Another type of giant cell has been described in measles, this time in respiratory epithelium, but the specificity of this cell is still under discussion. J. Denton⁵ in 1925, in a report of a series of necropsies on fatal cases of measles, drew attention to a giant cell which he found in the bronchial epithelium; it had 5 to 20 nuclei, and cytoplasm which might be well preserved or might be degenerate. Other observers have confirmed his findings. In appearance these cells are usually stated to resemble fused epithelial masses in the earlier stages, and sometimes the normal cilia are retained. The presence of inclusion bodies in the cells has been reported, but not by all observers. At a later stage they become eosinophilic and the nuclei shrunken and pyknotic. Sometimes in these cases epithelial cells become fused into large sheets rather than into small syncytial masses, and such sheets have often been found lying free in the bronchi. A similar fusion of epithelial cells has also been noted in the intestinal mucosa. The specificity of this type of cell has often been questioned, and its relationship to the giant cells which may occur in other virus infections is not clear. Possibly these cells are identical with the giant cells found in so-called giant cell pneumonia, which itself can be associated with measles. C. H. Bunting⁶ in 1950 found such cells lying free in the bronchi, and interest in them has been revived recently by M. D. Tompkins and J. C. Macaulay.⁷ They have confirmed the finding of these cells in the bronchi in a fatal case and have also demonstrated them in smears made by the Papanicolaou technique from sputum obtained from children in the prodromal stage. Having found sputum difficult to obtain from children, they examined nasal secretion by the same technique, and found that the cells were regularly present in ten cases ranging from five days prodromal to the day of the appearance of the rash. If their findings are confirmed they will constitute an interesting application of diagnostic cytological methods, and the possibility of diagnosis in the prodromal stage might be of some importance in children's institutions and hospitals. It is probable, however, that as with other cytological methods only the positive results will be significant.

COUGH SYNCOPE

In 1876 J. M. Charcot first drew attention to the transient loss of consciousness which sometimes follows severe bouts of coughing in patients afflicted with paroxysmal cough.¹ He thought they were induced by irritation of the laryngeal nerves during cough, and, from analogy with Ménière's syndrome, called the attacks "laryngeal vertigo." Subsequently the condition has been described under a variety of different titles, and it has been a popular diagnosis on the Continent for many years. It has not been so widely recognized in Britain, but, as C. Baker affirmed in describing nine cases, it is as common here.² The attacks usually afflict middle-aged men suffering from chronic bronchitis; thick-set people addicted to tobacco and alcohol are particularly prone. After a bout of severe unproductive coughing the patient momentarily loses consciousness; he may fall to the ground and perhaps twitch. Full consciousness quickly returns and the patient carries on as though nothing untoward had happened. In less severe attacks the patient experiences dizziness or temporary mental clouding but does not become unconscious. The mechanism of syncope after coughing was studied by E. P. Sharpey-Schafer.³ He found that unconsciousness occurred at the end of the coughing attacks just when the arterial blood pressure was at its lowest and the intrathoracic (and therefore the venous) pressure at its highest. Thus he concluded that syncope resulted from cerebral anoxia due to diminished blood flow through the brain. In some patients, however, syncope is preceded by only a single short cough, and it seems likely that these are cases of primary epilepsy having cough as an epileptic aura.⁴

The importance of recognizing this benign disorder is to exclude more serious causes of loss of consciousness. Once the characteristic clinical history is known, diagnosis is a simple matter, but the patients are not always aware of the association between coughing and syncope until closely questioned. Although cough syncope is almost confined to middle-aged men, it may sometimes present a difficult diagnostic problem in childhood, and J. M. Sutherland⁵ has recently described the disorder in a child of 9 years.

Treatment should aim at preventing the paroxysms of cough. Reduction of smoking and carrying out breathing exercises are sufficient in some cases; sometimes a clear explanation that coughing is the direct cause of the attacks will encourage patients to change their bad habits. Weight reduction and sedatives are also of some help. Nevertheless, many patients continue to have attacks in spite of treatment, and the loss of consciousness is not only distressing but may also be a source of danger both to the patients and to others.

We record with deep regret the death on April 26 of Dr. Egbert Coleby Morland, who joined the staff of the *Lancet* in 1915 and was its editor from 1937 to 1944. He was 80 years of age.

¹ Charcot, J. M., *Gaz. méd. Paris*, 1876, 5, 588.

² Baker, C., *Guy's Hosp. Rep.*, 1949, 98, 132.

³ Sharpey-Schafer, E. P., *British Medical Journal*, 1953, 2, 860.

⁴ Whitty, C. W. M., *ibid.*, 1949, 2, 311.

⁵ Sutherland, J. M., *Glasg. med. J.*, 1954, 35, 335.