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THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—37TH YEAR. SYDNEY, SATURDAY, APRIL 15, 1950. No. 15.

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The Beattie-Smith Lectures.[1]

(THE UNIVERSITY OF MELBOURNE.)

WHITHER PSYCHIATRY?

By H. F. MAUDSLEY,
Melbourne.

LECTURE I.

Now see that noble and most sovereign reason,
Like sweet bells jangled, out of tune and harsh.

SHAKESPEARE'S profound knowledge of human emotions and human behaviour gave him a keen psychiatric insight into the discords that may be registered by the mind with consequent discordant human behaviour. "Sweet bells jangled, out of tune and harsh" is no mere poetic fancy of Ophelia's description of Hamlet's real or assumed madness, but can be applied to all manner of psychiatric disabilities that we see today.

There have been many dark chapters in the history of psychiatry between Shakespeare's time and the present century, but I propose in these lectures to deal with some of the modern aspects and developments in psychological medicine.

We are said to live in an enlightened age; a fantastic age where scientific knowledge has run riot, might better describe it. Medical science perhaps shines as a beacon in a world full of doubts and fears. F. M. R. Walshe, in his Harveian Oration of 1948, makes this statement:

> Yet the need of rebuilding the foundations of medicine was never greater than today, when we are being swept along a spate of new knowledge and new techniques, and have so little time for their contemplation and investigation.

Is psychiatry to further the scientific aims and healing functions of medicine, and to play its part in this integration? Or is it to remain in partial isolation, striving yet failing to attain its ultimate objective?

More than a quarter of a century has passed since the foundation of these lectures. The late Dr. Beattie Smith under the provisions of his will had the foresight and imagination to found lectures on the prevention of insanity. I am amongst the minority of you who have a vivid recollection of an alert man with a reddish pointed beard, kindly and lovable, with a shrewd and penetrating eye. A great part of his life was spent in the mental hospital service before he entered private practice as what was then known as an alienist.

Mental disorder was then largely associated with the patient alienated from society because of more or less advanced behaviour problems which render segregation necessary. In his wisdom Dr. Beattie Smith visualized these patients as normal individuals in whom something somewhere had gone astray through physical illness, through some distortion of temperament, or owing to some stress or strain of life, together with some probable hereditary factor. He realized that the preventive side of mental disorder was not only a medical problem, but one of dissemination of informed opinion amongst an almost hostile public, a hostility bound up in the fear that it might be known that some relative had suffered from a mental illness. It is for this reason that these lectures are partly technical and medical and partly for the education of the public.

Since the foundation of these lectures there have been changes in the point of view regarding mental disorder. The public is now conscious that mental disorder exists

[1] Delivered at Melbourne on August 15 and 22, 1949.

Special Article.

THE AUSTRALIAN RHEUMATISM COUNCIL.

THE problem of the rheumatic diseases has been attracting world-wide attention. In Australia it has been felt that the approach should follow broadly the lines adopted in the United Kingdom, where public interest is stimulated by the Empire Rheumatism Council, with membership embracing public-spirited citizens as well as members of the medical profession. The scientific aspects of the question are dealt with by the Scientific Advisory Committee.

The recent formation in Australia of the Australian Rheumatism Council under the sponsorship of The Royal College of Physicians marks the first stage in a determined attack on the problem of the rheumatic diseases in this country. The objectives of the Council are:

1. Stimulation of public interest in the provision of adequate facilities for the prevention and treatment of rheumatic diseases (rheumatic fever, arthritis *et cetera*).
2. Research into problems peculiar to Australia, covering the incidence, degree of economic loss, and other related aspects of rheumatic disease.
3. Training of the profession in the more exact methods of diagnosis and treatment.
4. Education of the general public in the public health aspects of the problem.
5. The provision of adequate methods of rehabilitation for sufferers handicapped by arthritic or cardiac sequelæ of rheumatic disease.

The Scientific Advisory Committee of the Australian Rheumatism Council includes medical men from all States in Australia interested in this problem. As a first step in attaining the objectives of the Council a classification of the rheumatic diseases has been adopted which it is hoped will be used throughout the Commonwealth. The adoption of a standard nomenclature and uniform diagnostic criteria will assist greatly in the collation of information and the improvement of the standard of treatment.

Classification.

The classification is as follows:

1. Rheumatic fever. (a) Acute. (b) Subacute.
2. Non-articular rheumatism.
3. Gout.
4. Rheumatoid arthritis.
5. Osteoarthritis.
   - (a) Generalized.
   - (b) Localized.
     - (i) Secondary to previous trauma.
     - (ii) Secondary to structural abnormality.
     - (iii) Secondary to previous rheumatoid arthritis.
     - (iv) Unknown ætiology.
6. Arthritis associated with infection.
7. Ankylosing spondylitis.
8. Miscellaneous forms of joint disease, for example, neuropathic, neoplastic, manifestations of systemic disease, and local joint disturbances.

Comments.

Non-articular rheumatism includes non-suppurative painful conditions of muscles, tendons, bursæ, nerves, fibrous tissue and subcutaneous tissue, for example, fibrositis, myositis, neuritis, lumbago.

Rheumatoid arthritis includes classical and atypical forms, together with juvenile type (Still's disease), Felty's syndrome *et cetera*.

Osteoarthritis includes osteoarthritis of the spine ("spondylitis") under the subheadings appropriate to the particular case.

Arthritis associated with infection includes only those conditions specifically associated with a known infection such as *gonorrhœa*, brucellosis, dysentery. The following are excluded: (a) suppurative arthritis and tuberculous arthritis; (b) arthritis which may, in the opinion of the physician, be due to infection of the teeth, tonsils, sinuses *et cetera*.

Ankylosing spondylitis (synonym, *spondylitis ankylopoietica*, Marie-Strümpell type of spondylitis) is the type of arthritis in which the brunt of the disease in the early stage falls on the sacro-iliac joints and apophyseal joints of the vertebral column. There is a tendency to centrifugal spread, with ankylosing changes later in the spine.

Miscellaneous forms comprise a group in which are included, under appropriate diagnoses, the various types of arthritic conditions not otherwise included, for example, arthritis of neuropathic origin, neoplasms of joints, arthritis of serum sickness, hæmophilia, intermittent hydrarthrosis, pulmonary osteoarthropathy, hysterical joints; local joint disturbances associated with *osteochondritis (juvenilis dissecans)*, or secondary to contusion, fracture, dislocation or air embolism.

Conclusion.

The Scientific Advisory Committee has before it a programme covering many aspects of diagnosis and treatment. Much preliminary work has already been done on the subject of a nation-wide survey. At present there is little, if any, accurate information available on the incidence and economic consequences of the rheumatic group of diseases. Statistics from overseas are not applicable to local conditions, and much may be learned from a survey carried out in a vast continent which possesses a relatively homogeneous population living in tropical, subtropical and temperate zones.

From the educational viewpoint it is hoped that postgraduate committees throughout Australia will include in their programmes lectures and demonstrations on the various aspects of diagnosis and treatment of the rheumatic group of diseases.

The cooperation of medical men throughout the Commonwealth is sought in furthering the objectives of the Australian Rheumatism Council.

SELWYN NELSON,
Medical Secretary, Scientific Advisory Council, Australian Rheumatism Council.

Public Health.

THIRD INTERNATIONAL CONFERENCE OF EXPERTS ON PNEUMONOKONIOSIS.

THE third international conference of experts on pneumonokoniosis, sponsored by the International Labour Organization, was held at the invitation of the Government of the Commonwealth of Australia at the School of Public Health and Tropical Medicine, Sydney, from February 28 to March 10, 1950. It was attended by experts from Australia, Canada, Denmark, France, Italy, the United Kingdom, New Zealand, Norway, Sweden, Switzerland, the United States of America and the Union of South Africa; the Australian delegates were Professor E. Ford, Director of the School of Public Health and Tropical Medicine, University of Sydney, Dr. G. C. Smith, Senior Medical Officer of the Industrial Health Unit, School of Public Health and Tropical Medicine, University of Sydney, and Dr. K. G. Outhred, District Medical Officer of the Joint Coal Board of New South Wales. There was a delegation of two members of the Governing Body, Mr. F. J. R. Gibson and Mr. A. Monk. In addition five experts attended the conference who had been appointed by the International Labour Office in accordance with the decision of the Governing Body designed to ensure that the agenda would be adequately covered; these were Dr. W. E. George (Australia), Professor C. E. Gernez-Rieux (France), Dr. E. L. Middleton (United Kingdom), Dr. A. J. Orenstein (South Africa) and Dr. A. J. Vorwald (United States of America).

Opening Meeting.

At the opening meeting the conference was addressed by Mr. R. Rao, Secretary-General of the Conference, the Honourable H. E. Holt, Federal Minister for Labour and National Service, the Right Honourable Sir Earle Page, Federal Minister for Health, and the Honourable C. A. Kelly, Minister for Health in the State of New South Wales.

Agenda.

The following items made up the agenda of the conference as determined by the Governing Body of the International Labour Office: (i) the present state of knowledge of the pathogenesis, clinical aspects and diagnosis of pneumonokoniosis; (ii) the present stage of preventive measures (medical and social measures, mechanical and technical measures); (iii) an exchange of views on the possibility of defining minimum international standards of compensation for disability caused by pneumonokoniosis.

Election of Office-Bearers.

The conference unanimously elected as chairman Dr. W. E. George, Chief Medical Officer of the Joint Coal Board of New South Wales, as vice-chairmen Dr. L. Greenburg (United States of America) and Dr. A. J. Orenstein (South

...rica), and as reporters Dr. G. R. Davison (Canada) and ...R. Even (France).

Proceedings and Conclusions of Conference.

The conference took the form of a general discussion amongst all delegates, during which a series of original papers by members and other authorities was introduced, together with appropriate reports prepared by the conference office.

The following is a summary of the proceedings and conclusions of the conference.

Definition of Pneumonokoniosis.

Whilst recognizing that in a wide sense the term "pneumonokoniosis" connoted any condition of the lungs resulting from the inhalation of dust that might or might not be of clinical significance, for the purpose of the International Labour Organization the conference accepted the following definition:

> Pneumonokoniosis is a diagnosable disease of the lungs produced by the inhalation of dust, the term "dust" being understood to refer to particulate matter in the solid phase, but excluding living organisms.

Moreover, the conference deprecated further extension of terms beyond those already in common use, and suggested that for the future the terminology of pneumonokoniosis should take the form of naming the dust to which the worker was exposed, or alternatively the industry or process concerned.

Pneumonokoniosis in Various Countries.

The conference considered reports received concerning the incidence and varieties of pneumonokoniosis in various countries, and a number of members took part in the exchange of views which followed.

Recent Advances in Pathogenesis and Pathology.

A discussion took place on the subject of recent advances in knowledge of the pathogenesis and pathology of (a) pneumonokonioses in general, (b) silicosis, (c) pneumonokoniosis in coal workers, and (d) other pneumonokonioses. Some of the current concepts of the way in which dust acts on the lungs in producing the disease pneumonokoniosis was fully acceptable to the conference, and it was felt that there was still much need for research in that field. The conference therefore, whilst recognizing the valuable advances already made, urged that intensive studies be continued and extended. It was considered that the acquisition of such knowledge was essential for the furtherance of effective methods for prevention and treatment. The influence of the size of dust particles in the production of pneumonokoniosis was undergoing constant study. In general terms it could be stated that in the case of fibrous dusts such as asbestos and certain vegetable dusts the larger sizes appeared to be the more harmful, whereas with many mineral dusts the smaller sizes seemed to be the more injurious. The lower size limits of injurious particles had not yet been determined.

Aluminium as a Prophylactic or Therapeutic Agent.

It was agreed that there was no conclusive evidence before the conference that the inhalation of aluminium in any form prevented the development of silicosis in man. There was no evidence before the conference that aluminium powder was of value as a therapeutic agent in human silicosis or that it was harmful when used for that purpose. There was some evidence that under certain conditions the inhalation of aluminium in industrial processes might be harmful, and further, there was experimental evidence that in animals the inhalation of aluminium dust aggravated pulmonary tuberculosis.

Pneumonokoniosis and Tuberculosis.

The conference recognized that infection, especially by tubercle bacilli, aggravated and was aggravated by pneumonokoniosis, and accordingly drew attention to the importance of excluding subjects of tuberculosis from dusty occupations, and to the value of good hygiene and nutrition.

Tests Used during Examinations.

It was generally felt, after a discussion during which various physiological tests were described, that there was no physiological or laboratory test (or tests) which in the present stage of development could be adopted for routine clinical and periodical examination of large numbers of workers. It was agreed that the essential criteria for such procedures should be as follows: they must measure disability; the error of estimate must not exceed acceptable limits; they must be objective, and the results obtained with normal subjects at all ages must be well established as control standards; they must not require an undue amount of time. Before even those minimal criteria could be met, special research was necessarily directed to the problem both in the laboratory and in the field.

Diagnosis of Pneumonokoniosis.

After hearing various contributions on the early diagnosis of pneumonokoniosis and the differential diagnosis, the conference reached the following conclusions. In the diagnosis of pneumonokoniosis, the history and conditions of exposure to harmful dust, the clinical examination and the radiographic findings are all of importance. The diagnosis of pneumonokoniosis must not rest solely on the radiograph. In the radiological investigation of pneumonokoniosis as an initial step, the classification of radiographs should be in the manner set out in a report compiled by a special committee and approved by the conference, provided, however, that it is clearly understood that that classification deals with radiographic appearances only and cannot be used for any other purposes such as the assessment of clinical conditions or disability; it is not sufficiently exhaustive to be applicable to all forms of pneumonokoniosis.

The conference noted that pneumonokoniosis might be simple in its nature, or might be complicated by infection, and that if it was complicated, particularly by tuberculosis, it became a much more serious condition.

Related Pulmonary Conditions and Concomitant Diseases.

An exchange of views and experiences took place on pulmonary conditions related to pneumonokoniosis and on concomitant diseases, but it was felt that the existing data did not lend themselves to the reaching of definite conclusions. The conference recognized, however, that not all pulmonary abnormalities occurring in workers in dusty occupations were necessarily attributable to the dust.

The Radiograph and Assessment of Severity.

The conference stressed the fact that appearances on a radiograph in the case of pneumonokoniosis were not necessarily related to the severity of the disease.

Pulmonary Cancer in Relation to Silica and Coal Dust.

The conference reached the conclusion that there was no evidence that pulmonary cancer was more common among persons exposed to silica dust and coal dust than among the general population.

The Significance of Dust Found in the Lungs Post Mortem.

The conference recorded its opinion that the quantity and kind of dust found in the lungs *post mortem* could not be accepted as a criterion in estimating the presence or degree of pneumonokoniosis.

Diagnosis of Tuberculosis.

The conference expressed the view that the absence of acid-fast organisms from the sputum could not alone be regarded as conclusive evidence of the absence of pulmonary tuberculosis in the worker suffering from pneumonokoniosis. In some cases tubercle bacilli had not been found in the sputum even after the use of culture and inoculation methods. In such cases, however, the existence of the bacilli might be demonstrated by more intensive investigations involving, for example, bronchial or gastric lavage.

Dust Investigation.

After hearing several contributions on the subject of industrial dust in relation to dust investigation, the conference agreed that an analysis of material from which dust was derived did not of necessity represent the composition of the dust inhaled in an industrial process, and further, that it was important in dust studies to determine the distribution of dust particles by composition and by size. It was agreed that, whilst generally speaking mineral dusts (with the exception of asbestos) exceeding 5μ in particle size were of minor importance, the lower limit of the size of particles causing pneumonokoniosis had not yet been determined.

Dust Suppression and Control.

In regard to dust suppression and control, it was agreed that the protection of the worker against harmful dust exposure might include one or more of the following: (i) abolition of the process creating harmful dust; (ii) substitution of harmless material in certain processes where

dangerous material is being used; (iii) suppression of dust at the source; (iv) removal of dust as near as possible to the point of origin; (v) reduction of the concentration of the dust by ventilation; (vi) removal of dust from the air by wetting; (vii) electrostatic precipitation; (viii) personal respiratory protection of the worker.

The conference reaffirmed the opinion expressed at previous conferences that the main efforts in prevention should be directed towards dust suppression and control, and that personal respiratory protective devices should be used only where the former could not be satisfactorily applied, or as ancillary to dust suppression measures.

It was agreed that sandblasting with siliceous abrasives was highly dangerous. Some experts considered that the use of siliceous abrasives in sandblasting was so dangerous that it should be prohibited and non-siliceous abrasives substituted. Others, however, were of the opinion that experience had proved that siliceous material could be used with safety if effective protection was provided.

Finally, the opinion was expressed that there were known methods of dust suppression and control which, if fully applied and maintained, would protect the worker against hazardous exposure. The conference therefore recommended that every effort should be made to apply those methods.

Grain Dust from Cereal Cargoes.

The conference recommended that the International Labour Organization should take steps to inquire into the possibility of controlling the grain dust associated with the handling of cereal cargoes.

Silicosis and Civil Engineering Undertakings.

The conference agreed that the attention of governments, public utility corporations, local authorities and contractors should be called to the occurrence of silicosis following relatively short exposure to dust in civil engineering undertakings such as tunnelling and excavations.

Preemployment and Periodical Medical Examinations.

Experience gained in various countries in relation to preemployment and periodical medical examinations was described. Attention was drawn to the requirements of the examination and to the need for technical competence of the examiners. It was emphasized that such examinations were necessary in order to prevent physically unsuitable workers from entering an industry with a dust hazard, and to assess the pathogenic effect of dust exposures in relation to the period of exposure and the concentration and the composition of the dust, and that such details should be available to the examiner. The desirability was stressed that such examinations should include radiography of the lungs of technically satisfactory standard.

Cooperation against Tuberculosis.

A proposal was made to the effect that, in communities where there were pneumonokoniosis-producing industries, there should be cooperation between those industries and the health authorities in the general compaign against tuberculosis.

Disability and Compensation.

The conference agreed that in the assessment of disability the three same factors should be taken into account as in the diagnosis of pneumonokoniosis—namely, the history of exposure to harmful dust, the clinical examination and the radiographic findings. The assessment of the degree of disability must be left in each case to the best judgement of the examiner. The conference agreed that the relative importance of each factor varied from case to case, and that it was at present quite impossible to lay down generally acceptable standards for assessment of disability in pneumonokoniosis.

The meaning of the term "pneumonokoniosis" having been defined, it was decided that no further elaboration was necessary; each country should define the conditions for compensation, which should be such as to ensure that any worker suffering from pneumonokoniosis should receive compensation regardless of the time that had elapsed since he was exposed to dust. The term "diagnosable" incorporated in the definition indicated the presence of signs or symptoms, but not always loss of function.

The conference agreed that where pneumonokoniosis increased disability due to other diseases or to age, the compensation accorded should take account of that fact.

Rehabilitation of Workers.

The conference considered the experience in several countries with the rehabilitation of workers suffering from pneumonokoniosis. It was agreed that, when a worker suffering from pneumonokoniosis had to leave his accustomed employment, every endeavour should be made to place him immediately in, or train him for, suitable alternative employment, which should not reduce his standard of living. The provision of such alternative employment should not prejudice the amount of his compensation.

Further Conference on Prevention.

The conference unanimously adopted a proposal by United Kingdom members for the holding of a subsequent conference at an early date to consider the prevention of pneumonokoniosis from the point of view of the engineer, the physician and the chemist.

Directory of Workers in Pneumonokoniosis.

A United States member proposed—and the conference adopted the proposal without opposition—that the Office should prepare a directory of workers in the field of pneumonokoniosis for the use of interested persons.

Publication of Material Presented at Conference.

The conference emphasized the importance of the technical reports submitted to it and the discussions which took place concerning them. These dealt with the incidence, pathology, signs and symptoms and methods of diagnosis of pneumonokoniosis. They also dealt with the various means adopted to protect workers exposed to the hazard of pneumonokoniosis as well as with curative and rehabilitation measures. Films, lantern slides and other relevant material were demonstrated during the conference. The conference agreed that it was impossible to summarize the material brought before the conference, most of which was of immediate value to those concerned with the study of pneumonokoniosis and also to those charged with the framing of legislation and the administration of relevant laws and regulations, and therefore recommended that the papers presented to the conference and the stenographic record of the proceedings be published and widely circulated as early as possible.

Correspondence.

CORRECT FOOTWEAR FOR CHILDREN.

SIR: The importance of correct footwear, particularly in relation to infants and children, is a matter of constant concern to orthopædic surgeons. This concern has been reflected in the appointment by resolution at an annual general meeting of the Australian Orthopædic Association, of a subcommittee to discuss and draw up specifications of an adequately designed shoe for children. The recommendations of the subcommittee, having been adopted, were brought to the notice of certain shoe manufacturers in an endeavour to secure their cooperation in the manufacturing

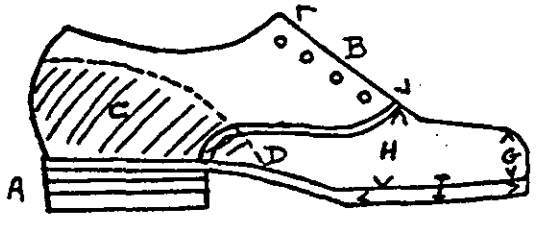

FIGURE I.

of shoes in accordance with the specifications. Unfortunately, these negotiations were fruitless, and it did not appear to the Council that any good purpose would be served by following this approach any further. The Council, however, is of the opinion that some very useful purpose may be achieved if parents seeking advice on the matter can be guided by their private medical attendants on the points necessary in the selection of satisfactory shoes for children.

I have been instructed, therefore, to lay before you the recommendations of the Australian Orthopædic Association in respect of what are considered essential features in a correctly designed shoe, and to ask your cooperation by making these findings available to practitioners throughout the Commonwealth, through the columns of the journal.