MISCELLANEA

Byssinosis in Great Britain


The German Association of Industrial Medical Officers was founded in the spring of 1962. Its first scientific meeting convened at Augsburg, Bavaria, the centre of the cotton industry, from October 8 to 9, 1962. The conference, under Prof. Dr. med. h.c. E. W. Baader, since deceased, took the form of an international symposium on byssinosis. Professor R. S. F. Schilling was invited to present the paper on Byssinosis in Great Britain but he was unable to accept. In the emergency Dr. A. Meiklejohn, at the request of Professor Baader, agreed to assist. This paper, published in English, is the full text on which the lecture was based.

Cotton manufacture originated in India, whence it spread to Asia and Africa. It reached Europe through Spain in the tenth century. England was among the latest countries to receive cotton manufacture and, although all the raw material had to be imported, by reason of mechanical inventions she soon outstripped all competitors so that since about 1760 Lancashire, centred on Manchester, has been identified with the spinning and weaving of the finest cottons. The industry was attracted to this area through concurrent flax and woollen manufactures and by such natural resources as water power and coal. Consolidation of the industry in the area derived from the associated development of the manufacture of textile machinery.

In 1831 James Kay, a Manchester practitioner, described spinners' phthisis, which his contemporary, Dr. Charles Thackrah of Leeds, recognized as similar to the lung disease which he encountered in his practice among flax hecklers and which had been described by Ramazzini in 1700. The disease was attributed to the inhalation of dust produced in the various processes. Jesse Leach, a certifying surgeon at Heywood, Lancashire, comprehensively reviewed the subject in a paper published in the Lancet in 1863. He described the line flow of operations as follows: opening and mixing, carding, spinning, weaving, and packing for dispatch. Leach commented that these operations successively became less dusty and correspondingly less harmful to the operatives. In due course improved ventilation and dust suppression in textile mills and factories led to some control of the disease but the Workmen's Compensation Act of 1897 emerged as the exciting force which has since directed the study of the disease. This Act provided compensation for accidents arising out of and in the course of employment, but did not cover trade diseases in so-called dangerous trades. The difficulty of compensating these diseases was that so often they were indistinguishable from diseases common in the general community. This pointed the need to discover some specific diagnostic sign(s) or syndrome whereby occupational cases could be separated from non-occupational ones. This became the main objective of the subsequent investigations into the chest diseases of cotton workers.

In 1902 Oliver coined the term byssinosis but it did not come into general use until 1939. Collis in 1909, following an enquiry on behalf of the Factory Department, described "Monday feeling", now designated "Monday symptoms". Under pressure by the Trade Unions, Parliament in 1927 appointed a Departmental Committee to inquire into the problem. The Report on Dust in Cardrooms in the Cotton Industry was published in 1932. This was comprehensive and focused attention on the history of "Monday feeling" and its possible cause by histamine in cotton dust. The Committee recommended further research, which was organized at Manchester under the direction of Professor Carl Prausnitz from the University of Breslau. In a masterly report, in which no important matter escaped notice, Prausnitz argued that the diagnosis of the disease depended primarily on the history of "Monday feeling", a condition familiar to local practitioners. Byssinosis was established as an occupational disease of cotton workers but as not all operatives were affected the need was to define which occupational groups were involved. This was the main issue decided by the Ross Committee which reported in 1939. Under the Byssinosis (Workmen's Compensation) Scheme, 1941, the disease was made compensable but only in prescribed occupations and processes and only in men who had been so employed for at least 20 years and who were totally and permanently disabled by the disease. These restrictions gave rise to hard cases and a general sense of injustice and called for closer epidemiological studies. These initiated the modern phase of research by Schilling and his co-workers at the Nuffield Department of Occupational Health, Manchester, under Professor R. E. Lane.

As a result of the findings of epidemiological, clinical, physiological, and pharmacological studies, the compensation provisions were progressively relaxed, so that now they are practically comprehensive. The history of "Monday symptoms" proved to be the critical diagnostic test and it was discovered that these could not only be recognized by the subjective history of the patient but objectively by certain physiological tests of pulmonary ventilation. The compensation issues having been largely resolved the researches are now being concentrated on the pharmacological agents in the various sizes of dust. Concurrent with the foregoing medical investigations prevention of the disease has been advanced by improved systems of dust control.
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