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DEMONSTRATION OF THE PECULIAR BODIES OF PULMONARY ASBESTOSIS ("ASBESTOSIS BODIES") IN MATERIAL OBTAINED BY LUNG PUNCTURE AND IN THE SPUTUM.

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The occurrence of highly characteristic golden-yellow bodies in the fibrosed lungs of asbestos workers has now been demonstrated by a number of observers (Stuart M'Donald, *Brit. Med. Journ.*, 1927, ii. 1025; Cooke and Hill, *Journ. R. Micr. Soc.*, 1927, p. 232; Taylor and Grieve, unpublished observation; Simson, *Brit. Med. Journ.*, 1928, i. 889). They have been found in every fatal case of the disease in which they have been looked for, including the original case published by Murray (*Charing Cross Hospital Gazette*, 1900) and recently re-examined by Dr E. L. Middleton of the Home Office (personal communication), and they were present in the lungs of a guinea-pig which had been experimentally exposed to an asbestos dust atmosphere (Mavrogordato, quoted by Simson, *op. cit.*). They occurred in large numbers in four fatal Leeds cases of pulmonary asbestosis, in the last of which they were readily demonstrable in smears from the cut surface of the lungs (Stewart, *Brit. Med. Journ.*, 1928, ii. 509). Arising out of this observation it was suggested to one of us by Dr S. A. Henry of the Home Office that exploratory puncture of the lung might yield positive results. So far, this procedure has been attempted in two cases only, and in one of them asbestosis bodies were recovered from the lung.

A married woman of 38, with five children, had worked in an asbestos factory since the age of 16 until a year ago, with intervals totalling about six years. She had a dry, irritating cough with moderate dyspnœa and marked loss of weight. The physical signs were limited to the bases of the lungs, where there was definite dulness with diminished breath sounds and fine crepitations. On 15th December 1928 the left base was explored with a hollow needle and a minute amount of blood-stained material withdrawn. This was smeared on four microscope slides two of which were dried, fixed with heat and mounted in canada balsam; one was treated with hydrochloric acid and potassium ferrocyanide, and one was stained for tubercle bacilli. The material obtained consisted mainly of blood, partly fluid, partly clotted, with numerous carbon-containing macrophages. The peculiar and quite unmistakeable golden-yellow asbestosis bodies were present in considerable numbers, especially within the small blood-clots. They gave a rather feeble prussian blue reaction. Occasionally there was evidence of phagocytosis by large macrophages, some of which had multiple nuclei and contained carbon dust. No tubercle bacilli were found.

In a second very similar case, negative results were obtained, the material withdrawn consisting apparently of blood with an excess of leucocytes.

Following the positive findings in the first case, we attempted to recover the bodies from the sputum. As a rule there is little or no sputum in these cases except during an actual bronchitic attack, and in neither of the cases punctured was any available. About half an ounce of mucopurulent sputum obtained from each of two other patients was dissolved up in an equal quantity of undiluted antiformin, centrifuged, and the deposit washed and examined microscopically. After prolonged search through numerous films two typical asbestosis bodies were found in one of the specimens examined. The other was entirely negative.

This work is being continued, but we thought it well to make a preliminary communication now in the hope that the methods we have adopted might prove of use to other workers.