

## Sarcoidosis in nurses: is there an association?

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**ABSTRACT** A retrospective survey of patients with sarcoidosis has revealed a 7.5 times greater number of nurses with the condition than expected. Nurses may be especially susceptible to sarcoidosis.

A recent case-control study in the Isle of Man observed an excess of health workers with sarcoidosis<sup>1</sup> and a companion study found a clustering of cases around a hospital.<sup>2</sup> Both studies concluded that sarcoidosis may be a communicable disease. This report provides further evidence of an association between sarcoidosis and hospital based occupations, particularly nursing.

### Methods

A retrospective survey of 156 patients with sarcoidosis was carried out in 1983 and studied all cases presenting to two South London hospitals from 1969 to 1982. The aim was to compare the incidence and clinical features of the disease in black, Asian, and white people, and the methods and results have been reported elsewhere.<sup>3</sup> Only patients with histologically proved or clinically definite sarcoidosis were studied and an attempt was made to include the maximum number of cases by reference to the Hospital Activity Analysis computer and to registers held by the departments of thoracic medicine, radiology, dermatology, and renal medicine. Information extracted from case notes included occupation, address, ethnic origin and country of birth, and full clinical details. Data estimating the numbers of nurses in the population were obtained for women of British and West Indian origin resident in the London boroughs of Wandsworth and Merton. This information was derived from the 1981 census by means of a special tabulation commissioned from the Office of Population Censuses and Surveys (unpublished).

### Results

The sample of 156 patients with sarcoidosis included 24 hospital workers (15.4%) (table). Seventy two of the patients were female residents of Wandsworth and Merton, of whom 20 worked in hospitals (27.8%) and 14 (19.4%) were nurses.

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All but three patients had symptomatic sarcoidosis; two cleaners and a hospital driver presented with abnormal routine chest radiographs. The table shows that the apparent excess of hospital workers was principally due to female nurses.

In an attempt to put this unexpected finding into perspective the population data were examined. According to the 1981 census, the population of women aged over 16 in Wandsworth and Merton was 14 726, of whom 364 (2.47%) were nurses. Figures are available only for women of British or West Indian origin. Of the 14 female nurses with sarcoidosis, 12 were British or West Indian, as were 65 of the 72 female residents of Wandsworth and Merton. On the basis of the census figures the expected number of nurses with sarcoidosis was 1.6 but the observed number was 7.5 times greater. The probability of finding such an excess by chance was calculated by binomial distribution to be less than 0.0001. Of the 12 nurses considered, eight developed their sarcoidosis during 1979-82, and we may reasonably assume that they were included in the 1981 census figures.

### Discussion

The results of this survey are similar to those of the Isle of Man studies,<sup>1,2</sup> which found that 13 (18.8%) of a group of 69 economically active patients with sarcoidosis were health workers, although it was not stated how many were nurses. This study suggests that the excess of health workers with sarcoidosis is due to a preponderance of nurses. Although Hills *et al* postulated transmission of an infective agent between young adults in close contact,<sup>2</sup> it is also possible that sarcoidosis in nurses results from the ward environment. For example, of the hospital workers in this series, nurses are likely to have had the greatest exposure to patients. If sarcoidosis spread between young adults, clustering might be expected to occur in prisons or the armed services, but there is no evidence that this occurs. Furthermore, the nurses in this

#### Numbers of hospital workers with sarcoidosis

	Male	Female	Total
Nurses	2	14	16
Cleaners	0	3†	3
Ward orderly	0	1	1
Photographer	0	1	1
Linen supervisor	0	1	1
Doctor	1	0	1
Driver	1*	0	1
Total	4	20	24

\*One case. †Two cases where sarcoidosis was detected by a routine chest radiograph.

study worked in various South London hospitals and in many different branches of nursing; none was aware of having had any contact with the others in the group.

Although nurses are more likely to have routine chest radiographs than the general population, none of those in this study presented in this way. Easier access to medical care or increased awareness of symptoms, it could be argued, might lead nurses to seek help more readily than others. Review of the cases, however, shows that all had substantial symptoms that would not have been tolerated by individuals in the general population.

This report and the observations in the Isle of Man study suggest that hospital workers and particularly nurses are

more susceptible to sarcoidosis than other occupational groups. Further investigation of this phenomenon may help to elucidate the aetiology of the condition.

#### References

- 1 Parkes SA, Baker SB de C, Bourdillon RE, Murray CRH, Rakshit M. Epidemiology of sarcoidosis in the Isle of Man—1: A case controlled study. *Thorax* 1987;**42**:420–6.
- 2 Hills SE, Parkes SA, Baker SB de C. Epidemiology of sarcoidosis in the Isle of Man—2: Evidence for space-time clustering. *Thorax* 1987;**42**:427–30.
- 3 Edmondstone WM, Wilson AG. Sarcoidosis in caucasians, blacks and Asians in London. *Br J Dis Chest* 1985;**79**:27–36.

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## Notices

### Lung pathology course

A course on lung pathology will be held at the Brompton Hospital, London, on 18–20 July 1988. It is designed primarily for pathologists but should also prove suitable for others interested in pulmonary disease. There will be a common core of lectures, but the practical sessions will differ for pathologists and others. For the latter a television linked microscope will be used to demonstrate unequivocal examples of common and unusual lesions, whereas practical sessions for pathologists will consist of examining sections from a large collection of rare or problem cases, the salient histological features of which are documented. Further details may be obtained from the Postgraduate Secretary, Cardiothoracic Institute, London SW3 6HP (01-351 8003).

### Symposium on occupational lung disease

Chicago Lung Association's third annual national research symposium, to be held on 27 and 28 October 1988 in Chicago, will provide a forum for exchanging ideas and sharing information on occupational lung disease, with sessions on mechanisms of cellular response to inhaled substances, acute and chronic pulmonary reactions, epidemiology, workplace-environment interactions, and clinical and radiological studies. Abstracts should address issues related to this theme and be submitted by 1 June to Dr David Cugell, Chicago Lung Association, 1440 W Washington Boulevard, Chicago, Illinois 60607, USA (original abstract, in American Thoracic Society format, with two copies).

### Symposium on magnetic resonance imaging

The second annual symposium on magnetic resonance imaging will be held at the Ritz-Carleton Resort Hotel in Laguna Niguel, California, on 28–31 July 1988. The course director is Dr Michael Brant-Zawadyki. The course is designed to update the clinician and radiologist on the current use of magnetic resonance imaging and introduce newer applications. The registration fee for the course is \$395 for physicians and \$250 for residents. Further information from Dawne Ryals, Ryals and Associates, PO Box 920113, Norcross, GA 30092-0113, USA ((404)-641-9773).

### Symposium in the practical management of patients with cystic fibrosis

A symposium entitled "Growing Points in the Practical Management of Cystic Fibrosis Patients" will be held on Friday 22 April 1988 at East Birmingham Hospital Postgraduate Medical Centre. Full details from Miss M C Wood, postgraduate secretary, East Birmingham Hospital, Birmingham B9 5ST (021 772 4311).