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Clustering of sarcoidosis

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Sarcoidosis is an uncommon granulomatous disorder of unknown aetiology. Although an increased incidence has been noted within family groups,[1-4] clustering of sarcoidosis in unrelated people appears to be very uncommon. We describe a group of four patients who have had symptomatic sarcoidosis—two sisters and two unrelated social contacts.

Case reports

CASE 1 (PROPOSITUS)

A woman of 33 years presented in 1980 with a pyrexia of 39°C and general malaise. Her chest radiograph was normal, but she had abnormal liver function tests, and her liver biopsy showed numerous granulomata typical of sarcoidosis. She was treated with prednisolone: her malaise disappeared, she became apyrexial, and her liver function tests returned to normal. Her Kveim test, on steroids, was negative.

CASE 2

The sister of case 1 presented in 1979, also aged 33 years, with a solitary neck lymph node and hilar lymphadenopathy on chest radiograph. Lymph node biopsy showed numerous granulomata, some with central necrosis. No acid/alcohol-fast bacilli were seen. Her Kveim test was positive, the biopsy showing granulomata with necrosis and giant cells. She recovered spontaneously on no specific therapy.

CASE 3

A male employer of the propositus presented in 1974, aged 40 years, with a cough and enlarged epitrochlear lymph nodes, a biopsy of which showed follicles composed of epithelioid cells and occasional giant cells, but no acid/alcohol-fast bacilli. The Kveim test was positive, showing granulomata with necrotic debris heavily infiltrated by epithelioid cells. Because of increasing lymphadenopathy, he was treated with steroids, and full recovery followed.

CASE 4

A female friend of case 3, not acquainted with the propositus, presented in 1967, aged 28 years, with arthralgia and erythema nodosum. Her chest radiograph showed bilateral hilar lymphadenopathy with diffuse mid-zone opacities. Her Mantoux test was negative to 1:100; biopsy of her small Kveim test nodule showed only scanty perivascular lymphocytic infiltration, but the solution was of low potency. She recovered on no specific therapy.

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Discussion

Familial sarcoidosis is becoming increasingly recognised, there now being over 110 cases reported in the world literature, with an excess of monozygotic over dizygotic twins, of like-sex pairs over unlike-sex pairs, and of mother-child over father-child relationships, only partly explained by the known sex distribution of the disease.[2] A recessive mode of inheritance, with partial expression in homozygotes, has been suggested.[3] Sarcoidosis has also been reported in husband and wife,[3] but it seems to be very uncommon in unrelated people linked only socially. We report four people with strong links with each other who developed sarcoidosis. The first two patients were sisters. Case 3 had been the employer of case 1 for 13 years, and had also been a life-long friend of case 4: these relationships were purely occupational and social, as far as we are aware, but had extended over many years. The group reflects the preponderance of like over unlike sex pairs known also to occur in sibling and parent-child associations.[2] The chances of sarcoidosis having occurred spontaneously in this group of people must be remote, with a prevalence in Britain of the order of 10 per 100 000 by radiography, and probably far less for symptomatic disease, and the question naturally arises as to whether there was an environmental factor linking the cases which is, as yet, unrecognised. The aetiology of sarcoidosis remains unknown. Transmissible agents have been suggested,[4 5] but there is a complete lack of convincing evidence in favour of their role, or even their presence. Ethnic differences both in the incidence and in the clinical features of the disease[6 7] have been noted, and it has been concluded that immune responses governing expression of the disease may be genetically determined,[6] and a recessive mode of inheritance with partial expression has been suggested.[3] A tendency has also been noted for the age of onset to be very similar in related patients,[2] as was the case in our two sisters. Whether the cluster which we describe is a chance association, or arises partly from genetic influences and partly from the virulence of an infective agent, is unknown, but increasing awareness of clustering in sarcoidosis may yield further epidemiological information as to its aetiology.

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