PULMONARY SARCOIDOSIS IN A CHINESE WOMAN

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SYNOPSIS

A case of pulmonary sarcoidosis in a 31 year old Chinese woman is described. Sarcoidosis appears to be extremely rare among the Chinese. This case brings the number of cases reported in the Chinese in the world literature to six.

INTRODUCTION

Sarcoidosis has been defined as "a disease characterised by the presence in all of several affected organs and tissues of non-caseating epithelioid-cell granulomas, proceeding either to resolution or to conversion into featureless hyaline connective tissue" (Mitchell and Scadding, 1974). It is generally believed that wide differences exist in the incidence of sarcoidosis among different ethnic groups, and that the Chinese are relatively free from the disease (Chapman, 1959). In a recent review of the literature on sarcoidosis in South-East Asia, Da Costa (1973) noted that the condition is rarely found in South-East Asians; he reported a case of a Chinese woman with bilateral hilar lymphadenopathy, bringing the number of cases among the Chinese reported in the world literature to four. (Hsing *et al*, 1964, Present and Siltzbach 1967, Tsou *et al*, 1958). Since then another case of sarcoidosis in a Chinese woman has been reported (Ong *et al*, 1975).

CASE REPORT

The patient, a 31 year old Chinese woman born in Segamat, Malaysia, first presented in another Unit in February 1971 with a right supraclavicular lymph node enlargement of two months' duration. A chest radiograph at that time revealed bilateral diffuse mottled opacities. There was no relevant past history. A routine chest radiograph done in 1964 was reported as normal. She was treated as a case of far advanced pulmonary tuberculosis with the standard primary anti-tuberculous drugs although repeated sputum tests failed to show any tubercle bacilli both on smears and cultures. She remained asymptomatic during her course of anti-tuberculous chemotherapy which was stopped in March 1973, and up to the time she was seen by one of us (S.C.P.) because of persistent enlargement of the right supraclavicular lymph nodes. When seen on 23rd August 1975, she was well. Except for a few discrete firm non tender lymph nodes in the right supraclavicular region, the physical examination was normal.

Investigations revealed an haemoglobin of 15.4 g per 100 ml; total leucocyte count 5700 per mm^3, with a normal differential count; erythrocyte sedimentation rate 10 mm per hour; serum calcium 8.8 mg per 100 ml; serum protein electrophoresis normal. The urinalysis and blood urea were normal. Mantoux test with one tuberculin unit P.P.D. gave an induration of 3 mm. The rheumatoid factor was absent and the serum immunoglobulins were IgG 1152 mg per 100 ml, IgA 296 mg per 100 ml and IgM >300 mg per 100 ml. Pulmonary function tests revealed a mild restrictive pattern with some reduction in the diffusing capacity (Table). The chest radiographic appearances were essentially the same as those seen when she first presented in February 1971 (Fig. 1).

Biopsy of the right supraclavicular lymph nodes on 2nd September 1975 revealed multiple non caseating granulomas made up of histiocytes and occasional giant cells almost completely replacing the nodes. Acid fast bacilli were not seen (Fig. 2). An intradermal Kveim test was nonreactive.

COMMENTS

In a recent comprehensive review of sarcoidosis, Mitchell and Scadding, (1974) comment on the "many unsolved problems" of this "puzzling disease"; they advanced the view that "sarcoidosis is probably the result of interaction between an infective agent and a subject with unusual immunologic responses" and that both genetic predisposition and environmental factors may be involved in the abnormal immunologic reactivity. In this regard, while sarcoidosis is rarely found in the Chinese and in South-East Asia, it is not rare amongst the Japanese (Kitamura, 1967) and is more prevalent among the black than the white population in the United States (Israel, 1970), suggesting the influence of race on the susceptibility to the disease. Epidemiological studies among the Danish and British civilian population reveal an annual incidence of sarcoidosis ranging from 0.2 to 1.8 and 0.45 per 10,000 respectively with a slight preponderance of females. (Howitz *et al*, 1967, British

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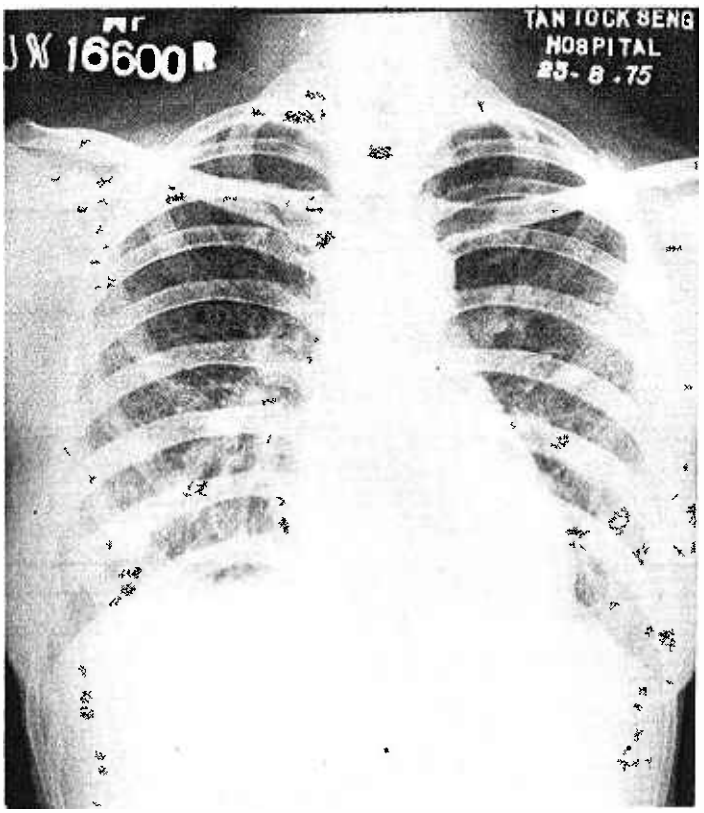

Fig. 1. Chest radiograph showing bilateral diffuse reticulo-nodular opacities.

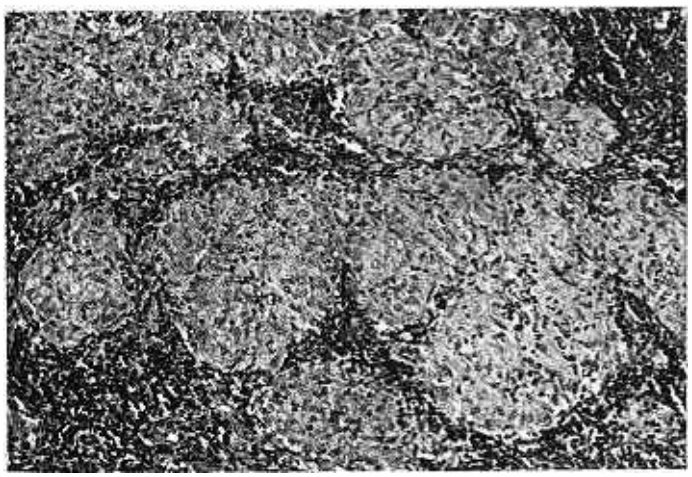

Fig. 2. Section showing multiple discrete non-caseating granulomata. × 100.

Thoracic and Tuberculosis Association, 1969). It is of interest to note that the five reported cases including the present one of sarcoidosis in the Chinese were all females.

Controversy exists at present on the use of corticosteroids in the management of pulmonary sarcoidosis. Mitchell and Scadding, (1974) suggest the decision to use corticosteroids "should be based on the effect on function that is generally reflected in symptoms rather than upon the radiographic appearances". On the other hand, De Remee and Andersen, (1975) advocate that "the propitious time to begin such treatment is in the asymptomatic stage". Our patient has remained well for the past four years with no significant change in the radiological picture. The pulmonary function studies show

TABLE

PULMONARY FUNCTION TESTS

Measurement	Predicted	Result
Vital Capacity (L)	2.63	2.19
Functional Residual Capacity (L)	2.20	1.72
Residual Volume (L)	1.24	0.86
Total Lung Capacity (L)	3.90	3.05
Mixing efficiency (%)	65	60
F.E.$V_{.75}$ × 40 (L/min)	87	68
Maximum Mid Expiratory Flow Rate (L/sec)	3.64	3.18
Diffusing Capacity (CO ml/min/mm Hg)	17.0	11.2
Blood Gas		
pH	7.40	7.36
Standard HCO_3-mEq/L	24	20
$PaCO_2$ mm Hg	40	32
PaO_2 mm Hg	90	99

minimal impairment at rest. This confirms previous reports of symptoms correlating well with tests of function but poorly with radiographic appearances. She has not been started on corticosteroids as it would seem that "the proportion of patients with persistent subacute pulmonary sarcoidosis who develop disabling fibrosis is little affected by corticosteroid treatment, as usually given". (Mitchell and Scadding, 1975).

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