Summary

Serum angiotensin-converting enzyme (SACE) and Kveim-Siltzbach test results were obtained in 25 patients with clinically active sarcoidosis. Twenty of these patients had elevated SACE levels and 17 had positive Kveim-Siltzbach tests. One patient had normal SACE activity and a negative Kveim-Siltzbach test. Four of the 5 patients with a normal SACE level had a positive Kveim-Siltzbach test and 7 of the 8 patients with a negative Kveim-Siltzbach test had elevated SACE levels. These results indicate that the two tests are complementary and increase the diagnostic specificity in sarcoidosis. We conclude that the concurrent use of SACE measurement and Kveim-Siltzbach tests is of value in the diagnosis of sarcoidosis.
material studied. The Heaf test was negative in all patients. The chest radiographic findings were graded as follows: stage I — bilateral hilar adenopathy; stage II — bilateral hilar adenopathy and parenchymal infiltration; stage III — parenchymal infiltration without bilateral hilar adenopathy.

Statistical analyses were done by means of the Cochran Q test.

Results

According to the results obtained the patients were divided into three groups: (i) patients with elevated SACE activity and positive Kveim-Siltzbach tests (Table I); (ii) patients with normal SACE activity and positive Kveim-Siltzbach tests (Table II); and (iii) patients with elevated SACE activity and negative Kveim-Siltzbach tests (Table III).

Clinical manifestations, radiological staging, SACE levels and Kveim-Siltzbach test results are depicted in each table. The mean SACE level (± SD) in all the patients was 14.5 ± 3.1 U/ml.

Of the 5 patients with sarcoidosis who had normal levels of SACE, 4 had a positive Kveim-Siltzbach test. Seven of the 8 patients with a negative Kveim-Siltzbach test showed elevated SACE levels. A significant difference was found between the result of the Kveim-Siltzbach test and SACE activities and between the results of the Kveim-Siltzbach test and the combination of SACE activity and Kveim-Siltzbach tests (P < 0.05). Only 1 patient (patient 25) had a negative Kveim-Siltzbach test and a normal SACE level. She was 47 years old and presented with uveitis, hepatomegaly and bilateral hilar adenopathy on chest radiography. The Heaf test was negative and liver biopsy confirmed the presence of non-caseating granuloma. No acid-fast bacilli were seen in the tissue examined.

Discussion

The Kveim-Siltzbach test provides a simple, safe and specific outpatient method for diagnosis of sarcoidosis. However, it is not positive in all patients with sarcoidosis. In a multicentric study involving 1211 patients from 5 cities, the Kveim-Siltzbach test positivity rate varied from 54% to 92%, with a mean of 79%. The reported false-positivity rate is less than 1%. The Kveim-Siltzbach test was positive in 68% of the patients in the present study.

When the 8 patients with negative Kveim-Siltzbach test results were analysed in relation to chest radiographic findings, all stages of involvement were seen, 50% having stage III involvement.

Elevated SACE levels in sarcoidosis were first observed in 1974 by Lieberman in 88% of his patients. This finding was subsequently confirmed by other workers. Not all patients with sarcoidosis have elevated SACE levels and, furthermore, levels may be elevated in patients with other diseases.

In this study we found elevated SACE levels in 20 out of 25 patients. The observations that 4 of the 5 patients with normal SACE activity had a positive Kveim-Siltzbach test and that 7 of the 8 patients with a negative Kveim-Siltzbach test had elevated SACE activity suggests that these two tests complement each other. When both tests are used the diagnostic specificity increases to 96%.

Sarcoidosis can mimic tuberculosis clinically, radiologically and histologically if no acid-fast bacilli are found. In an environment where tuberculosis is endemic there may be difficulty in differentiating sarcoidosis from tuberculosis; this is a particular problem in South African Blacks in whom the incidence of the latter disease is high. The increased diagnostic specificity resulting from combining SACE measurement and the Kveim-Siltzbach test is a step forward in the resolution of this problem.

REFERENCES


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