Diabetes Mellitus in Black and Coloured Tuberculosis Patients

R. M. MARAIS

SUMMARY

Four hundred and thirty-six Black and Coloured patients with tuberculosis were examined for diabetes mellitus, which was found in 2.1%. In this series 29% of diabetics with tuberculosis had lower lung field involvement only, while the prevalence of isolated lower lung field tuberculosis among the non-diabetics was only 4.5%. It was therefore concluded that diabetes mellitus should be looked for in patients with isolated lower lung field tuberculosis.


Diabetics are prone to infection. This is thought to be due to a decreased ability to control the early stages of infection as a result of a defective immune system. Mowat and Baum and Brayton et al. have shown in separate studies that the chemotactic and phagocytic capacities of the polymorphonuclear leucocytes are deficient. The function of lymphocytes and macrophages involved in cell-mediated immunity may also be impaired, according to studies by Brody and Merlic and Ragab et al.

The literature shows a higher prevalence of tuberculosis among diabetic patients. During the 1920s and 1930s Himsworth found the prevalence to be 2-8%, and according to Golli et al. the prevalence is similar today. Golli et al. found that the poorer the control of diabetes, the higher the prevalence, which reaches 17.5% in patients with severe diabetes. Underweight diabetic patients have a higher prevalence of tuberculosis than do overweight patients. Steidl and Sosman have found certain radiographic changes to be typical of tuberculosis in diabetic patients, describing the appearance of lower lung field involvement with a tendency to consolidation. This appearance was also found by Weaver in 11% of her series.

The object of this study is to present the picture of diabetes mellitus in Black and Coloured tuberculosis patients.

SUBJECTS AND METHODS

This is a retrospective study of Black and Coloured patients with pulmonary tuberculosis admitted to the isolation department at Pelonomi Hospital during 1977. Out of a total of 436 tuberculosis patients, 9 were diabetic. Diabetes was diagnosed by means of glucose tolerance tests. Tuberculosis was diagnosed on clinical, radiological and sputum findings; detailed findings were available in 7 of the patients only (Table I).
RESULTS

The prevalence of diabetes among 436 Black and Coloured tuberculosis patients admitted during 1977 was found to be 2.1%. Two of the 9 diabetic patients were male, and the average age was 40 years. Two of the 7 patients whose radiographs were available had lower zone involvement only; the remaining patients' had extensive tuberculosis involving all fields. Only 4.5% of another series of 134 tuberculosis patients admitted had isolated lower lung field involvement, compared with 29% among patients with diabetes and tuberculosis.

DISCUSSION

In this study 29% of diabetics with tuberculosis had lower lobe involvement only, in contrast with a prevalence of only 4.5% in non-diabetics. Weaver reviewed 205 tuberculosis patients in the USA and found 23 with diabetes mellitus, a prevalence of 11%. All her patients were male, with an average age of 55 years. Twenty per cent of her diabetic tuberculosis patients had involvement of the lower lung zones only, in contrast with a figure of 0.5% for non-diabetic tuberculosis patients.

Weaver does not mention the racial group of her patients, but it can be concluded that when isolated lower lung zone tuberculosis is found clinically, diabetes should be suspected.

REFERENCES


Books Received : Boeke Ontvangst


