

THE INTRODUCTION OF THE RHEUMATIC FEVER SERVICE AT THE NEW SOMERSET HOSPITAL

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At the beginning of 1961 consternation was aroused by the number of patients (especially in the age group 5-40 years), with rheumatic fever or its sequelae, in the 50 medical beds at Somerset Hospital. The gravity of the

* A descendant of Captain Benjamin Moodie who brought John Laing to the Cape Colony in 1817 as one of his apprentices.² Subsequently, Dr. Laing became the first Surgeon to the New Somerset Hospital when it opened in August 1862 (see p. 661 of this issue of the *Journal*).

subject was stressed at a Staff Round at Groote Schuur Hospital in May 1961.¹ The entire range of the clinico-pathological spectrum was sometimes seen among these patients in the course of 2 or 3 months, viz.:

1. First attacks of rheumatic fever in patients spending months in bed waiting for their erythrocyte sedimentation rates to become normal.

2. Relapses of rheumatic fever, sometimes occurring a few months after a previous admission.

3. Chronic rheumatic heart disease with variable degrees of disability and invalidism.

4. Young pregnant women with rheumatic heart disease, some with signs of pulmonary congestion or congestive cardiac failure.

5. Subacute bacterial endocarditis superimposed on rheumatic heart disease.

6. Arrhythmias due to rheumatic heart disease.

7. Rheumatic heart disease complicated by pulmonary infarction or by embolism to the legs.

8. Patients with progressive cardiac invalidism in spite of valvotomy, and bedridden patients awaiting admission to a chronic-sick home, or awaiting invalidity grants.

Patients with these conditions are of course familiar to doctors everywhere, but their presence assumes a starker significance when they are seen in a short space of time in the framework of a moderate-sized (277-bed) regional hospital in the Cape.

Under the age of 5 years, gastro-enteritis takes its toll in morbidity and mortality. Above the age of 40 years, one is familiar with the high incidence of coronary-artery disease, hypertension, diabetes mellitus and malignant disease in the medical wards. But, *between the ages of 5 and 40 there is little doubt that the most important disease is rheumatic fever and its relapses and cardiac sequelae, constituting an ever-present unsolved problem.* In this period of childhood, adolescence and adulthood, rheumatic fever is rivalled in seriousness only by pulmonary tuberculosis — and that is at least notifiable and usually curable unless diagnosed in too advanced a stage.

However, the seriousness of rheumatic fever as a major public health problem in the Cape Peninsula does not appear to have received the full recognition it warrants, presumably because the illness is so rarely fatal during the acute attack and owes its importance to the cardiac sequelae which may follow years later. The gravity of the situation in adolescence is highlighted by figures from the USA which indicate that *rheumatic fever and its resulting heart disease is the leading fatal disease between the ages of 5 and 18.*³

Dr. H. Bloomberg, Medical Officer of Health of Brakpan, has recently succeeded in bringing the public health importance of this disease forcibly into focus, indicating the comparative scarcity of accurate data on it in South Africa, and outlining the procedures adopted in combating it by the Brakpan municipality.⁴ He has fully summarized the present state of knowledge concerning rheumatic fever, the role of streptococcal infections, and the problems of chemoprophylaxis.

By and large, in most municipalities and in most hospitals, the prophylaxis of rheumatic fever is not the responsibility of any one clearly defined group, clinic, or person, and is not being implemented with an attempt at 'obsessive perfection'.

From our initial survey of the position, it appears inescapable that if doctors at a hospital wish to see the objective of partial control realized, they must be prepared to interest themselves not only in the medical aspects of

rheumatic fever, but in the sociological factors involved in securing the cooperation of the patients and in maintaining that cooperation. The doctors, the medical social workers, and the hospital social workers, will have to strive continually to better their organization in order to initiate and maintain this much-needed partial prophylaxis. Consideration of these factors led to the introduction of the 'Rheumatic Fever Service' at Somerset Hospital during the first half of 1962.*

THE AIMS OF THE RHEUMATIC FEVER SERVICE

1. An assessment of the magnitude of the problem of rheumatic fever and its relapses and sequelae, as encountered at the hospital during 1961, followed by retrospective studies (with follow-up examinations) for the past 5 or 10 years.

2. An assessment of possible familial, nutritional, and socio-economic factors concerned in the incidence of the disease, as seen in the affected patients.

3. An assessment of the future efficacy of the Rheumatic Fever Service as a useful measure in partially controlling the relapses from 1962 onwards, as compared with the known past history of the disease at the hospital and in medical literature.

Rheumatic Fever Instruction Cards

Bilingual cards are being issued in the first instance to the two groups of patients receiving long-term penicillin prophylaxis, viz: (a) patients who have an attack of rheumatic fever from 1962 onwards; and (b) patients, under the age of 40 years, presenting with rheumatic heart disease from 1962 onwards, whether or not they recall having had rheumatic fever in the past.

There is also a reminder on the card that the patient should show it to a doctor, health clinic, or hospital before dental extractions, and before confinements, in order that a medical practitioner can institute attempted prophylaxis against subacute bacterial endocarditis.

Method of Prophylaxis

In the first instance, oral tablets of phenoxymethyl penicillin (or potassium phenoxymethyl penicillin), 250 mg. twice daily, are being used in long-term prophylaxis against recurrent streptococcal throat infections and attacks of rheumatic fever. It is true that Feinstein *et al.*⁵ found injections of benzathine penicillin superior to potassium penicillin G, 200,000 units daily by mouth; but our trial is commencing with oral penicillin tablets for the following reasons: (a) phenoxymethyl penicillin is not affected by gastric acidity, and is therefore much better absorbed than penicillin G tablets; (b) some patients object to the moderate discomfort which may be produced by intramuscular benzathine penicillin injections, and this may encourage some to default in their attendance; (c) serious (and extremely rarely fatal) anaphylactic reactions are not unknown after oral penicillin, but, unless more data accumulate, they are possibly even rarer than after intramuscular injections of penicillin; (d) the patients are instructed, verbally and in writing, to increase the dosage promptly to 1 tablet (250 mg.) 4 times a day for

* Since 1 June 1962, Dr. A. Samie has been assisting in the work of the Rheumatic Fever Service.

10 days should an intercurrent 'sore throat' occur. This procedure will unavoidably lend itself to 'overtreatment' of 'sore throats', but is being tried as an alternative to the inherent delays in clinical and bacteriological diagnosis and therapy which might otherwise occur.

The one obvious disadvantage is the uncertainty whether patients will in fact take their oral tablets regularly, and attempts are being made to reinforce 'motivation' by means of personal interviews, and by means of group therapy.

The Medical and Nursing Staff

The Rheumatic Fever Service is held once a week, on a morning when members of both the University and the non-University medical staff are present at the General and Medical Outpatient Departments of Somerset Hospital. Every effort is made to arouse and maintain interest in the importance of attempting partial prophylaxis against rheumatic fever. The subject is mentioned at clinical evenings,⁶ and at interdepartmental meetings. Close liaison is maintained with the paediatric services to prevent children discontinuing prophylaxis when they are too old to remain under the paediatricians' supervision.

Coordination of Intra- and Extra-hospital Preventive Services

Cooperation of the family's general practitioner, the nearest health clinic, a responsible member of the family, school medical officers, and school principals or teachers, is likely to become necessary to help ensure that prophylaxis is not neglected through apathy, ignorance, or forgetfulness.

The most important point is obviously the fact that the incidence of first attacks of rheumatic fever in a community can only be reduced by widespread practical measures to diagnose and treat streptococcal pharyngitis; this appears to be a problem which towns, regions, hospitals, the medical profession and the laity have not yet

adequately combined to solve. However, every effort will be made to institute full-scale and vigorous application of known information to try to lessen the recurrence rate of rheumatic fever materially and to diminish the sequelae. Any effort appears worth while if there is even a chance of obtaining a 10% reduction in the number of patients from a particular institution who might otherwise be destined for cardiac surgery in 1982 or 1992.

SUMMARY

1. Knowledge of rheumatic fever is limited, but there is also a barrier to the useful application of available knowledge concerning antibiotic prophylaxis against recurrences.

2. The Rheumatic Fever Service has been introduced into the New Somerset Hospital in the year of its clinical centenary. It represents an attempt to contribute towards partial control of a most important disease in the age group 5 - 40 years.

3. Oral phenoxymethyl penicillin, 250 mg. twice daily, is being used as the initial prophylactic agent. It is administered regularly, and the patients are instructed to increase the dose whenever pharyngitis occurs.

4. The future efficacy of the Rheumatic Fever Service will be assessed in comparison with the previous natural history of the disease.

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