

attempted 7 days later, but no pus was obtained. The patient improved steadily and was discharged from hospital 40 days after admission symptom-free and with no signs except that the ECG was still abnormal, showing inverted 'T' waves in the limb leads and leads V3-V6.

He returned to hospital for review 1 month after discharge. He was feeling well and no abnormal signs were found. The electrocardiogram and radiograph of the chest were now both normal (Fig. 2C and Fig. 1C), as was the blood count. The ESR was 4 mm. per hour (Wintrobe).

When he was last seen 2 months after discharge from hospital he was quite well.

DISCUSSION

The patient presented with an amoebic abscess of the left lobe of the liver and a pericardial friction-rub. On the 11th day of admission the abscess ruptured into the pericardium.

The pericardial friction-rub was a significant finding, indicating that more serious pericardial complications were likely. This has also been the experience of other authors.^{1,3}

The electrocardiographic findings shortly after admission confirmed that pericardial involvement had already occurred.

I have, however, seen cases with friction-rub and similar electrocardiographic changes that recovered uneventfully on conventional treatment without showing any evidence of serious cardiac involvement.

There are too few records of successfully treated cases to indicate clearly what are the best methods. It is clear, however, that emetine or Chloroquin must be given to eradicate the amoebae in the tissues. One might argue that there is cardiac embarrassment and

for this reason emetine should be avoided, but I am not convinced that Chloroquin is as rapidly effective in tissue amoebiasis as emetine and would prefer the latter drug, at any rate up to a total dose of 6 gr. Chloroquin could be given simultaneously with, or after, the emetine.

Huard and Meyer-May⁴ recommend surgical drainage of the liver abscess and pericardium but, unless aspiration was technically very difficult because of thick pus or inaccessibility of the abscess, I should prefer to avoid surgery since the patient is gravely ill and the risk of secondary infection is greater than with aspiration. Both pericardium and liver abscess should be aspirated.

As with uncomplicated liver abscess it seems logical to give an intraluminal amoebicide such as diiodo-hydroxyquinoline to eliminate bowel parasites, when the patient has recovered from the acute episode.

In the case reported here recovery seemed complete, but the follow-up is short and eventual constrictive pericarditis may be a possibility. The remarkable absence of scarring in the liver following amoebic abscesses encourages one to think that the cure may be permanent.

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3. Kern, F. (1955): *Arch. Intern. Med.*, **76**, 88.
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ELECTRICAL APPARATUS FOR MEDICAL PURPOSES

A letter on this subject dated 15 December 1954 from the Postmaster General to the Registrar of the South African Medical and Dental Council was published in the *Journal*¹ on 19 March 1955. The Postmaster General has since addressed two further letters, dated 27 June 1956 and 21 August 1956, to the Registrar, who has sent them to the *Journal* for publication:

(1) 27 June 1956

With reference to my . . . letter of 15 December 1954, I have to inform you that the period allowed for the conversion of electro-medical equipment at present in use to new frequencies has been extended by one year to 1 January 1958.

1. Frequencies of Electrical Apparatus for Medical Purposes (1955): *S. Afr. Med. J.*, **29**, 287.

The tolerances applicable to the various frequencies are:

Frequencies	Tolerance
13,560 Kcs	± 0.05% of frequency
27,120 Kcs	± 0.6% of frequency
40.68 mcs	± 0.05% of frequency
2,450 mcs	± 50 mcs of frequency
5,850 mcs	± 75 mcs of frequency

(2) 21 August 1956

With reference to my . . . letter of 27 June 1956, it has now been decided that old apparatus may continue to be used indefinitely on a non-interference basis but if interference with radio reception is caused the owner will be requested to convert the apparatus to one of the new frequencies.

COST OF THE AMBULANCE SERVICE

Mr. J. M. Williams, Deputy City Treasurer, Cape Town, has addressed under date 11 July 1956, the following letter to the Secretary of the Medical Association of South Africa:

I have been requested by the Secretary for Health to communicate with you in connection with the high cost of running the ambulance service incurred by this Council as the controlling local authority for the conduct of the Cape Peninsula Local Authorities Ambulance Service.

While local authorities are responsible for the conduct of the ambulance service, the Department of Health accepts responsi-

bility for the cost of conveying indigent patients to and from hospital.

The ambulance service is not part of the free hospitalization scheme conducted by the Provincial Hospital Department, which is responsible only for the free treatment of patients when within its hospitals.

It is enquired whether the assistance of your Association could be enlisted to seek the cooperation of the medical profession to reduce the cost of the Cape Peninsula ambulance service, whose vehicles convey nearly 100,000 patients a year over a distance

of more than 800,000 miles per annum at an estimated net cost of over £90,000 during 1956, after deduction of fees from all who can pay.

I therefore ask if it is possible for you to circularize the members of the medical profession in an endeavour to reduce the number of patients conveyed to the minimum by requesting ambulances only in cases where patients cannot get themselves to hospital

by means of public or other transport, and then only in cases of necessity and emergency, bearing in mind that the great majority of patients conveyed are indigent, from whom the Council cannot obtain payment.

I thank you for any assistance which you may be able to render in this connection.

THE TOMLINSON REPORT

EXTRACT FROM THE SUMMARY OF THE REPORT OF THE COMMISSION FOR THE SOCIO-ECONOMIC DEVELOPMENT OF THE BANTU AREAS WITHIN THE UNION OF SOUTH AFRICA

PARAGRAPHS DEALING WITH VITAL STATISTICS AND HEALTH

The Commission, which consisted of Prof. F. R. Tomlinson (Chairman), Mr. M. D. C. de Wet Nel, M.P., Mr. C. W. Prinsloo, Mr. J. H. J. van Rensburg, Mr. G. J. Badenhorst, Mr. C. B. Young, Prof. C. H. Badenhorst, Prof. F. X. Laubscher (resigned and succeeded by Prof. J. H. R. Bisschop), Dr. J. H. Moolman, and Mr. F. H. Botha (Secretary), presented its report in typed form on 1 October 1954. The printed abridged report (the Summary), prepared by the Commission itself, was published in 1956.

The following extract is a copy of paragraphs dealing with vital statistics and health, which constitute little more than one-twentieth part of the text of the Summary.

IN PART I: A BROAD PERSPECTIVE

IN CHAPTER 7: THE POPULATION PROBLEM IN SOUTH AFRICA

I. GROWTH OF POPULATION

1. According to the census of 1951, the population of the Union of South Africa consists of 2,643,000 Europeans, 8,535,000 Bantu, 367,000 Asiatics, and 1,103,000 Coloured persons. The total population increased by 144 per cent, namely from 5,176,000 to 12,646,000, between 1904 and 1951. In consequence of their greater absolute numbers, the Bantu have contributed most to this increase, to wit, 5,044,000 in comparison with 1,526,000 in the case of Europeans, and 657,000 and 243,000 in the case of Coloured persons and Asiatics respectively. Of the four groups, only the Asiatics have increased in relative importance to any considerable degree. The numbers of Bantu and Coloured persons today represent more or less the same percentage of the total population as at the beginning of the century, 67.5 per cent and 8.7 per cent respectively. The European section has diminished slightly in numerical importance and forms 20.9 per cent of the total today in comparison with 21.6 per cent in 1904. There are about 3,229 Bantu, or taken as a whole 3,785 non-Europeans, for every 1,000 Europeans.

III. MORTALITY

6. On a comparison of mortality conditions among their population groups, the Europeans appear to be in the most favourable position, with a crude death-rate of less than 9 per 1,000 in 1952. This compares with 10.9 for Asiatics and 19.9 for Coloured persons. In the case of the Bantu for whom vital statistics are not available, it is estimated at between 27 and 32 per 1,000. The death-rates for the three first-named population groups all show a long term decline, while those for the Bantu probably only began to decrease in the most recent period.

7. The decline in mortality must be attributed mainly to a decline in deaths among children during their first year of life. Thus, the European infant mortality rate declined from 52.9 on an average during 1936-1941, to 34.6 in 1952, and that of Asiatics and Coloured persons from 93.1 to 71.3 and from 164.9 to 140.6 per 1,000 live births respectively. Among the Bantu, nearly one-fifth of the children born alive die before they reach their first birthday, as a result of the unhygienic customs and conditions under which they are born and grow up. Socio-economic progress thus reveals itself particularly in the saving of children lives, a

process which aggravates the burden of dependency in an under-developed community.

8. The average expectation of life at birth, obtained from life-tables, affords a more accurate indication of health conditions than the ordinary death-rate, which is influenced by the particular age and sex composition of a population. Such life-tables, based on the experience of the period 1945 to 1947, indicate that at birth the average European child has a probable duration of life of 66 years and an Asiatic, Coloured and Bantu child 50.3, 42.8 and 36.4 years respectively.

9. In comparison with the urban areas, living in the rural areas appears to be a cause of longer life, in the light of the lower mortality rates prevailing among rural Europeans, Asiatics and Coloured persons. This urban-rural differential is, however, diminishing. It is not impossible that the process of urbanization could have caused increased mortality—among Bantu at the beginning, but that the increasing utilization of medical facilities and improved living conditions, may have altered the differential in favour of the city.

IV. FERTILITY

10. The Coloured community, with an ordinary birth-rate of 45.5 per 1,000 on the average, for the period 1936 to 1952, is the most fertile. Among the Bantu, for whom vital statistics are not available, it has been determined indirectly that the rate, with a lower and upper limit of 43 and 47 per 1,000 respectively, probably does not differ much from that of the Coloured people. Then follow the Asiatics (Indians) with an average rate of 38.6 births per 1,000 during the period 1936 to 1952, while the Europeans reveal the lowest fertility rate; their birth-rate is lower than that of Asiatics by more than 12 per 1,000. Of all the ethnic groups, only the Europeans have experienced a secular decline in their birth-rate.

11. Because the Asiatics have a relatively low death-rate, their net natural increase over the entire period 1936-1952, at a rate of 25 per 1,000 on the average, was the highest. Then follow the Coloured people with a rate of 23.2 per 1,000 and the Europeans with 16.9. Since 1951, however, the Coloureds surpass all other groups. In spite of their high fertility, the rate of natural increase of the Bantu is only 15 per 1,000 as a result of the high mortality among them. The Net Reproduction Rate, which allows of a more accurate comparison of potential population growth, amounts to approximately 1.45 for Bantu, 1.54 for Europeans, 2.03 for Coloured persons and 2.12 for Asiatics.

12. An analysis of the age distribution of married women, indicates that the Asiatic population includes the largest relative number of potential mothers at the most fertile phase of life. In this respect, the Europeans are the worst off, while the Bantu and the Coloured people occupy an intermediate position. Moreover, marriage does not play so important a part in the process of propagation among the two last-named groups as among Europeans and Asiatics. Illegitimate births seldom constitute less than one-third of the total Coloured births, and it may be expected that the relative figure will also be comparatively high among urban Bantu.

13. Fertility differentials are found in respect of urban and rural communities and socio-economic classes. The European rural community is more fertile than the urban dwellers, while the