

Tuberculosis in Kenya

SIR,—In his article (January 13, p. 67) Dr. W. S. Haynes credits me with making a sweeping and ridiculous assertion and then states that all subsequent work contradicts this assertion. I have never stated that the African never recovers from his primary tuberculous infection; on the contrary, in the article to which he refers I several times mentioned the finding of healed primary tuberculous complexes in Africans at necropsy (Davies, J. N. P., *E. Afr. med. J.*, 1947, 24, 352). What I did state was that, based on 3,000 necropsies, "while there is evidence that a few cases may heal a primary complex there is no case of anything other than a primary complex being healed. It would appear that the vast majority of cases of tuberculosis in Uganda are those which have failed to overcome their primary infection." Stott (1950) appears to have the same situation in his cases in Nakuru prison.

Dr. Haynes appears to think that pathologists in East Africa base their opinions on tuberculosis solely on the study of patients dying of tuberculosis. This is quite incorrect; tuberculous patients form only a small proportion of the cases coming to necropsy at this hospital. In those who do not die of tuberculosis, tuberculous lesions, chronic phthisis, unsuspected tuberculosis, and healed phthisis are extremely rarely seen, and, though a few healed primary complexes are seen, they are not frequently met with and not in proportion to the high incidence of positive tuberculin reactors in the community at large. This contrasts with experiences elsewhere (Todd; 1927; Carnes, 1942). When this article was written the likelihood of such a high incidence of tuberculin reactors in adults in Uganda was suspected from the work of Connolly (1941) in the adjacent Nyanza province of Kenya, and this has now been confirmed for Uganda. But if there are many cases of chronic tuberculosis perambulating about Uganda, as Haynes supposes is the case in Kenya, why are they so rarely seen clinically or at necropsy? How is it that they do not die of accidents, of other infections, or of surgical conditions?

The situation at Mulago Hospital is apparently similar to that met with by Stott at Nakuru. Either, broadly speaking, an African shows no evidence of tuberculous infection (other than perhaps a positive tuberculin test) or he is extremely ill and dies with a fulminating type of the disease with glandular involvement, and in many cases with evidence of direct progression of the disease from a Ghon focus.

Dr. Haynes's whole argument is based on his assumption that a positive tuberculin test has the same significance, at the same level of sensitivity, in Africans as in Europeans. He did attempt to exclude false positive reactions due to leprosy. But there are other acid-fast bacilli to be considered, such as those causing skin ulceration described by MacCallum (1948), or those which cause skin lesions with false positive tuberculin reactions in cattle (Daines, 1938). There is the possible effect of malaria on the tuberculin reaction, to which Makari (1947) drew attention. These are only a few of the points that should be considered in discussing tuberculosis in East Africa. Work is in progress at this hospital which will, it is hoped, advance our knowledge further and answer some of these questions. I consider that much further work is needed in East Africa before we can begin to tackle this very important disease, and until it is done there is little profit in discussion. The purpose of this letter is not to initiate such discussion but to protest against a flagrant misrepresentation of my views.—I am, etc.,

Kampala, Uganda.

J. N. P. DAVIES.

REFERENCES

- Carnes, W. H. (1942). *Bull. Johns Hopk. Hosp.*, 70, 101.
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 Stott, H. (1950). *E. Afr. med. J.*, 27, 379.
 Todd, T. R. R. (1927). *Edinb. med. J.*, 34, 127.

Free Burial

SIR,—During the last year we have had four cases of distress caused by the death of a person whose relatives were unable to meet the expenses of burial. As doubtless you know, provision was made under the National Assistance Act of 1948 to meet such cases, but we find that there are many who are not aware that local authorities will provide free burial.

I have discussed this matter with the local burial superintendent and also with my bureau committee, and we think that doctors may care to give this information to relations, when making out the burial certificate, where it seems there may be difficulty in finding the funeral expenses.—I am, etc.,

Citizens' Advice Bureau, Sussex.

R. FORDE.

POINTS FROM LETTERS

Megaloblastic Anaemia and Syphilis

Dr. P. H. BIRKS (Doom Dooma, Upper Assam) writes: The article by Henry Foy, Athena Kondi, and A. Hargreaves on the treatment of a case of megaloblastic anaemia with penicillin (February 24, p. 380) stimulated the imagination. I was disappointed to find no mention of a Kahn test. This surely nullifies the whole article. In Assam it is not uncommon to find syphilis a major stress factor in megaloblastic anaemia.

Sharp Edges and Boiling

Mr. JOHN FOSTER (Leeds) writes: . . . Physical injury to sharp-edged instruments by boiling is unquestionable. Naturally the effect of this is of very much more account in ophthalmic surgery than in general surgery. See my papers in *Proc. R. Soc. Med.*, 1946, 39, 460, 835.

Mitosis Prevented by Waste Products

Dr. R. L. WORRALL (Sevenoaks, Kent) writes: Your otherwise comprehensive leading article on mitosis (April 14, p. 803) omits the significance of waste products as inhibitors of cell division. If a living cell is considered as a steady state system, in dynamic equilibrium with its environment, all its activities are seen to depend upon a sufficiently free exit of waterborne waste products, particularly carbon dioxide and nitrogenous compounds. . . . The importance of carbon dioxide in this respect is evident, for if the carbon dioxide concentration in a growing (bacterial) culture is sufficiently increased, with the gas under slight pressure, cell multiplication is inhibited to an extent varying with the organism concerned. Tissue culture of mammalian cells also indicates the validity of the above conclusion, that the mutual proximity of cells tend to check their growth by more or less flattening out the local concentration gradients of waste products around each cell, thus reducing the diffusion rates of the waste products away from the cell surface. Tissue culture cells only multiply when they have migrated outwards from the periphery of the culture and have thus become sufficiently separated from one another. . . . Elsewhere I have put forward the view that the autonomy of cancer cell growth is due to the heritable resistance of cancer cells to carbon dioxide concentrations which limit the growth of normal cells.

Chlorophyll as a Deodorant

Dr. ANNA M. HERDMAN (Edinburgh) writes: With reference to a question asked on this subject (April 7, p. 772), a recent case may be of interest. My patient, a woman aged 72 years, was suffering from advanced carcinoma of the pharynx. Her breath was so offensive that the nurses were nauseated when attending to her. I prescribed tablets of chlorophyll and yeast, two thrice daily. After the second day of taking these tablets the disgusting odour went completely, and did not return as long as they were given regularly.

Early Expert Witnesses

Mr. L. A. PARRY (Hove) writes: . . . Sir Sydney Smith mentions (March 24, p. 599) some famous medico-legal cases of old times. I should like to add one to this list, as it is the first case I have been able to trace of murder by poison in which medical witnesses were called to prove the cause of death. It is that of Mary Blandy, tried at Oxford in 1752 for poisoning her father with white arsenic. Dr. Anthony Addington and other medical practitioners gave evidence for the prosecution, but their testimony related to the clinical symptoms and the pathological findings, and no attempt was made to analyse the viscera, though many tests were known for the detection of arsenic and were actually employed in this case to determine the nature of the powder administered to the deceased. She was found guilty.