

Spontaneous peripheral gangrene following severe cerebral malaria

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A 30-year-old Ethiopian female developed spontaneous gangrene of the distal phalanges of the right index and middle fingers and the distal phalanges of the great, second and middle toes of the right foot following cerebral malaria. Until now, there has been only five such cases of peripheral gangrene associated with 'cerebral' malaria reported in literature and all these were all from Southeast Asia.

Case report

A thirty-year-old Ethiopian woman presented to the Orthopaedic Department of the Black Lion Hospital with apparently spontaneous gangrene of the distal parts of the right index and middle fingers and of the distal phalanges of the great, second and middle toes of the right foot. She gave a history of sudden onset of a severe febrile illness during July 1998, nine weeks prior to her arrival in Addis Ababa. She had attended her local Health Centre where she had been admitted and treated for cerebral malaria.

Unfortunately, no records of the laboratory findings or treatment given were available. However she had been living in an area where malaria is particularly prevalent during the rainy season of June to August. Some five days after her treatment had been started, she lost consciousness and was in a coma for the following six days. She remained at the Health Centre for a total of 24 days before being referred to a district hospital. After a short stay at home, she reported to the Black Lion Hospital

where on examination, she was found to be in a satisfactory general condition. There was no evidence of any systemic disease and no suggestion of poisoning or application of tourniquets. Her peripheral pulses were normal. Examination of her hands and feet revealed well demarcated gangrene of the distal phalanx of the right index finger and distal half of the distal phalanx of the right middle finger. The distal phalanges of the great, second and middle toes of the right foot were also gangrenous. (Fig. 1, 2, 3). The gangrenous parts were removed. The wounds healed satisfactorily by secondary intention. After discharge, the patient was lost to follow up.

Discussion

It is now well known that spontaneous peripheral gangrene may follow severe acute febrile illnesses¹. Although the association of gangrene and malaria was mentioned by Jones in the 19th century², review of the literature revealed only five reported cases and none of these was from Africa. Shubhakaran, Kumawat and Kocher, in 1998, reported on bilateral gangrene of the feet in association with falciparum malaria. This was also associated with atrial fibrillation after quinine therapy³. In 1995 Jain, Srivastave and Singhal from India reported a case of gangrene of the foot in association with falciparum malaria⁴. Two Thai children who developed gangrene of the feet and toes associated with cerebral malaria were reported in 1991⁵. Another adult case was reported in 1987 by Sharma⁶. Although our case lacked laboratory confirmation,

there is hardly any doubt that the patient under review had cerebral malaria and that this was the cause of her peripheral gangrene. It is therefore highly likely that gangrene complicating malaria does occur in Africa.

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References

- 1 Remi Adesanya C, Parry E H O, Larbi E B. The heart and circulation. In: E H O Parry Principles of Medicine in Africa 2nd ed. Oxford University Press, 1984 : 694.
- 2 Riley H D Jr, Jones J. An elderly clinical investigator. South Med J 1987; 80 : 623 - 9.
- 3 Kochar S D K, Kumawat B, Kochar S K. A patient with falciparum malaria and bilateral gangrene of the feet who developed arrhythmia / ventricular fibrillation after quinine therapy. QJM 1998 ; 91 : 246.
- 4 Jain D, Srivastavo S, Singhai S S. A rare presentation of falciparum malaria JAPI 1995; 43:582.
- 5 Chittichai P, Chierakul N, Davis T M. Peripheral gangrene in non-fatal paediatric cerebral malaria: a report of two cases in Southeast Asia. J Trop Med Pub Health 1991; 22: 190-4.
- 6 Sharma S N. Cutaneous gangrene in falciparum malaria: Unreported manifestation. JAPI 1987; 35: 150-2.