

Rectal artesunate beneficial in young children with severe malaria, but may be harmful in older children, adults

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Researchers from the Cochrane Infectious Diseases Group, hosted at LSTM, conducted an independent review of the effects of pre-referral rectal artesunate for people with severe malaria, published in the *Cochrane Library* today.

The review follows a large trial of rectal artesunate in 2009 which led the World Health Organization to recommend its use.

Severe malaria is a serious medical condition caused by infection with the Plasmodium parasite. It is treated by giving injections of antimalarial drugs, which need to be started as quickly as possible to reduce the risk of death and brain damage. In some [rural areas](#) where malaria is common, injections are unavailable and people often die before reaching hospital. In these areas rectal artesunate could feasibly be administered by volunteers without formal healthcare training, to start treatment before transporting the patient.

The Cochrane review authors searched extensively for other trials, but only the single trial from 2009 directly assessed pre-referral treatment. This trial enrolled over 17,000 patients at various sites across Ghana, Tanzania and Bangladesh, and trained village volunteers to recognize the symptoms of [severe malaria](#), administer rectal artesunate, and refer all patients to hospital.

At the African sites, only children aged 6 to 72 months were enrolled and there were fewer deaths with rectal artesunate than with placebo. This expected finding was replicated in Asia, but complicated by the unexpected finding of more deaths with artesunate in older children (aged >72 months) and adults. The trial was well designed to minimize bias, but the number of deaths in the older age group was very low.

Consequently, there is the possibility that this finding occurred by chance but without further trials neither the trial authors, nor the review authors were able to reliably explain this finding.

Joseph Okebe, the lead author of the review said: "In rural areas without access to injectable antimalarials rectal artesunate probably reduces deaths in young children. However, the low quality evidence that it is harmful in [older children](#) and adults must be taken into account when formulating national policies on pre-referral treatment."

More information: Okebe J, Eisenhut M. "Pre-referral rectal artesunate for severe malaria." *Cochrane Database of Systematic Reviews* 2014, Issue 5. Art. No.: CD009964. [DOI: 10.1002/14651858.CD009964.pub2](#).

Provided by Liverpool School of Tropical Medicine

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