

00721 Haemolysis in patients treated with artesunate in severe malaria: experience of an intensive care unit

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Background: Artesunate is currently considered first-line treatment for severe malaria. Anaemia is classically associated with malaria and may concern to parasite direct destruction of erythrocytes or quinine haemolysis effect, and more recent reports also suggest a delayed haemolysis process when artesunate is used. Once *Plasmodium spp.* parasites are killed by artesunate they are removed from erythrocytes by the spleen and 'cleaned' erythrocytes are released back into the circulation (pitting) with a shorter lifespan, which can explain prolonged haemolysis sometimes observed.

Materials/methods: We collected clinical and demographic data from clinical records of hospitalized *Falciparum* malaria patients who received intravenous artesunate at the Intensive Care Unit (ICU) of Infectious Diseases Department at Centro Hospitalar Universitário São João.

Results: Since January 2017, 17 patients (16 males) with severe *Falciparum* malaria were admitted to our ICU and 15 were treated with intravenous artesunate.

All patients returned from Africa and although 4 of them initiated prophylaxis, none of them took it correctly. The median time between appearance of first symptoms and diagnosis was 5 days (IQR 2-9). All patients had infection by *Plasmodium falciparum*, with a median parasitaemia quantification of 8,4% (IQR 1-22). Artesunate was prescribed for 1 to 7 days (median time 2,9 days). Patients presented a median SAPS II of 29,9 (IQR 9-54) at admission; 4 patients needed renal support technique, 5 patients mechanical ventilation and 4 patients vasopressor support.

All patients developed anaemia (haemoglobin level: IQR 5,4 – 12,5 g/dL), already present at admission in 5 patients, and 7 received packed red blood cells (IQR 1 – 14 units). Minimal value of haemoglobin was observed after the first week in 8 of the patients and 4 of them had prolonged haemolysis with slow recover after 2 months of follow-up. All patients treated with artesunate survived.

Conclusions: Haemolysis was present in all patients. Late onset haemolysis is particularly worrisome and should be considered at discharge. Although severe in some patients, the general course was benign. Our study highlights the need of close monitoring of haemoglobin values, namely in the first month.