health
Department:
Health
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH MEMO DECEMBER2018

INJECTABLE ARTESUNATE

THE PREFERRED TREATMENT FOR SEVERE MALARIA

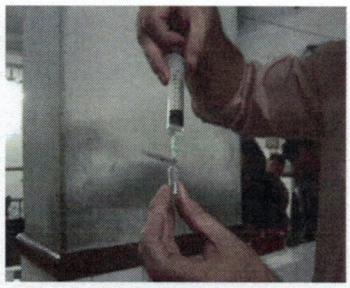
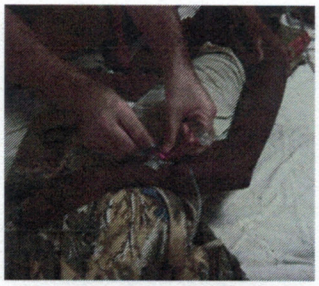
The Department of HealthSouth Africa recommends that intravenous artesunate is the parenteral antimalarial medicine of choice for the treatment of severe malaria in both children and adults. This is in line with the World health Organization's strong recommendation based on high quality evidence that "intravenous artesunate should be used in preference to intravenous quinine for the treatment of severe *P. falciparum* malaria in adults and children".

Intravenous quinine should only be used as an alternative antimalarial medicine for the treatment for severe malaria in facilities without prompt access to intravenous artesunate.

ADVANTAGES OF INTRAVENOUS (OR INTRAMUSCULAR) ARTESUNATE OVER INTRAVENOUS (OR INTRAMUSCULAR) QUININE:

- Severe malaria case fatality rates reduced by 39% in adults and 24% in children when treated with injectable artesunate rather than injectable quinine
- More cost effective
- Simpler dosage regimen and simpler to administer
- Better safety profile
- No dosage adjustment needed in renal or hepatic impairment

DOSAGE REGIMEN: **Intravenous (or intramuscular) ARTESUNATE**	**Adults and children weighing ≥20kg:** 2.4 mg/kg at 0, 12 and 24 hours then daily until patient is able to tolerate oral treatment, when a full 6-dose 3-day artemether-lumefantrine treatment should be given. **Children weighing <20kg:** 3 mg/kg at 0, 12 and 24 hours then daily until patient is able to tolerate oral treatment, when a full 6-dose 3-day artemether-lumefantrine treatment should be given. No dosage adjustment is needed for renal or hepatic impairment

ADMINISTRATION:

- Administer 2.4mg/kg (or 3 mg/kg if <20kg) IV at 0, 12 and 24 hours then daily until patient is able to tolerate oral treatment.
- Dissolve 60 mg artesunate powder in 1ml five per cent sodium bicarbonate solution (supplied with the artesunate powder) and add 5ml five per cent dextrose (or 0.9% sodium chloride) to give a solution with a concentration of *10 mg/ml* for injecting as a bolus into an IV cannula.
- Once reconstituted, artesunate solution is not stable and should be administered within 30 minutes; solution not administered within 30 minutes should be discarded.
- At least three IV doses (at 0, 12, and 24 hours) should be given for severe malaria before switching to oral therapy can be considered.
- Patients should then complete a full course (six doses) of artemether-lumefantrine.

PRE-TRANSFER TREATMENT

Intramuscular artesunate can be used as pre-transfer treatment at the same mg/kg doses mixed to a concentration of *20mg/ml*.

SAFETY

Artesunate has excellent safety and tolerability. Common adverse events include gastro-intestinal disturbance (nausea, vomiting, anorexia) and dizziness. Rare events include haematological disorders (neutropenia, reduced reticulocyte count, anaemia, eosinophilia), elevated AST and transient ECG abnormalities without reports of significant clinical effects. Delayed haemolysis starting >1 week after artesunate treatment of severe malaria in hyperparasitaemic patients has been reported. The WHO describes this post-treatment haemolysis as a predictable event related to the life-saving effect of artesunate and recommends that **hyperparasitaemic patients must be followed up carefully to identify and treat late-onset anaemia**. Hypersensitivity reactions occur very rarely. Animal studies have documented neurotoxicity and teratogenicity, but there is no evidence of similar effects in humans.

For drug queries contact the NICD Hotline: 0828839920