

# **NHS** Children's Acute Transport Service



## Clinical Guidelines

# Malaria

### Document Control Information

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## Summary

- *Plasmodium falciparum* is usually responsible for severe disease
- Incubation period 7 days or more
- Cerebral malaria has 25% mortality
- Travel history should be attained. Malaria may coexist with other infectious diseases such as haemorrhagic fevers

## Clinical recognition

- Non specific flu-like symptoms
- Fever
- Headache
- Vomiting/diarrhoea

## Complications

- Cerebral malaria is the most life threatening form: Seizures, coma, encephalopathy (usually under 3yrs)
- Bleeding tendency: DIC – consider bacterial infection
- Haemolysis and anaemia
- Hypoglycaemia (also occurs with Quinine)
- Renal failure
- Pulmonary oedema
- Jaundice

## If Malaria is confirmed collect clinical data regarding severity:

- Organ involvement/failure (particularly U&E/ LFT / Coag / FBC / gas)
- Parasite count

## Medical management

- Supportive measures for fever, respiratory and circulatory compromise
- Check blood sugars regularly and act accordingly
- Treat seizures as per APLS protocol
- Start IV Artesunate (if not stocked locally, start IV Quinine whilst awaiting Artesunate)
- Cover with high dose ceftriaxone is indicated

- Insert urinary catheter and monitor fluid input/output

Notes:

IV Artesunate: 2.4mg/kg IV at hour 0,12 and 24, and every 24 hours thereafter.

IV Quinine dihydrochloride: loading dose of 20-mg/kg in 5% dextrose or dextrose saline over 4 h. Followed by 10 mg/kg every 8 h for first 48 hours.

- Children on IV quinine require ECG monitoring
- Contact ID team for advise on length of therapy

#### **Indications for transfer to PICU/NICU:**

- All children with parasite count > 10%
- < 5 yrs of age + parasite count > 5%
- Cerebral malaria (low GCS or AVPU)
- Incipient organ failure
- Intubated cases

#### **Conference call with CATS + ID consultant at GOSH/SMH for options appraisal:**

- CATS transfer to PICU/NICU
- Local team transfer to ID ward
- Remains at local with ID advice

#### **Indications for management at referring hospital:**

- Low Parasite count and no shizonts
- Normal FBC + Chemistry
- Well children, older children, semi-immune children
- Treatment has already started

The decision for transfer to an ID ward must be led by the consultant at the referring hospital, CATS consultant and ID consultant. This will be most effectively organised by conference call with those individuals.

#### **Transport considerations**

- CATS standard operating procedures apply

**Management of children awaiting CATS transfer:**

- Supportive management of respiratory and circulatory system
- Do not delay starting antimalarials
- Start IV Artesunate, if Artesunate is not available start IV quinine
- Monitor blood sugars
- Start high dose IV ceftriaxone as antibiotic cover