

A CLINIC CASE OF TROPICAL DISEASE



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MOZAMBIQUE
ESIM, 2010

HISTORY



- 37 year old female who presented with 2 days of fever, anorexia, malaise and bitter taste in the mouth.
- After 1 day developed altered mental status with incoherent speech and fixed gaze.
- Past medical history: hypothyroidism on levothyroxine, hepatitis A during childhood.
- Born in Chile, lived in Mozambique for 20 years before moving to Canada for 1 year. Returned to Mozambique 11 months prior to admission.

Physical examination



- T 39°C, HR-112/min, BP-95/60, RR-28/min.
- Bad general state, mildly dyspneic, mild jaundice.
- Cardiac and pulmonary exams otherwise normal
- Diffuse Abdominal pain on palpation.
- Glasgow coma score: (3/4 + 3/5 +6/6) 12/15, pupillary reflexes normal, fixed gaze, cranial nerves normal, no neck stiffness, no photophobia, normal strength and sensation throughout body.

Fisrt analysis



HEMOGRAMME

- WBC – 11.800, Nø-9.110, Lø-1.760
- Hgb – 8.9
- Plat – 24.000

BIOCHEMISTRY

- Urea- 12.6mmol/L (2.5-7.2)
- Creat-97.4µmol/L (53-115)
- AST – 467U (10-42)
- Total Billir-118µmol/L (3.4-17), direct Billir-89
- LDH – 3360 (91-180)

Other Analyses



- **Urinalysis (3 days after admission)**
 - Densid-1020, pH-6.0, Prot 1+, Hgb-3 +, bil and urobil negative, , hialin cast, other parametros are normal.
- **Gasimetria**
 - pH 7.44, HCO₃ 20.4, K-4.3(3.5-5.5), PCO₂ -30 (35-48), lact – 3.0 (0-1.3).
- **HIV negative (Determine)**
- **Blood smear: Plasmodium falciparum 4+**

Hospital Course



- Started Quinine at outpatient clinic, then transferred to Maputo Central Hospital (HCM) because worsening mental status.
- In HCM, was started Quinine and Doxycycline
- On hospital day 2 she worsened clinically with decreased level of consciousness to 9/15, oliguria (urine output 100ml/day), worsening anemia and thrombocytopenia, and increased vomiting.
- Started on dopamine (renal dosing) and metoclopramide; received transfusions of RBCs and Platelets; artemisina added to malaria treatment regimen. Malaria smear 1+ on hospital day 3.
- Started on hemodialysis on hospital day 4.

DIAGNOSTIC



- SEVERE FALCIPARUM MALARIA
 - CEREBRAL MALARIA
 - RENAL FAILURE
 - HYPERPARASITEMIA

	10/6	11/ 6 (2)	12/6	14/6 (1)	15/6 (3)	17/6	18/6 (4)	23/6	Ref
WBC	11.8	14.3	21.8	35.7	17.2	15.5	16.4	7.7	
Nø	9.11	12.3	18				12.2		
Lø	1.74	1.13	2.13				2.1		
Hgb	8.9	8.0	10.2	9.9	7.3	9.2	10.3	10.7	
Plat	24	55	46	53	70	39	145	323	
urea	12.8	22	38	50.5	35	31.2	22.2	12.8	2.5-7.5
creat	97.4	253	495	701	587	641	582	472	53-115
LDH	3360		3000	800					91-180
TOT BIL	118		115	28					3.4-17
Urine output	800	525	430	100	30	110	117	1800	ml/24 h
Glasgow	12/15	11/15	12/15	11/15	15/15			15/15	

Hospital Course (continued)



- Mental status improved after first session of hemodialysis and she received hemodialysis 4 times and after that she became polyuric.
- Dopamine was stopped on hospital day 3.
- Remained afebrile after hospital day 3.
- Transferred out of ICU on hospital day 8.
- Discharged from hospital on hospital day 13.
- She refused another hemodialysis session but now renal function is normal.

Patogenesis of falciparum Malaria



Exposition
of PfEMP1



Aglutination
Citoaderence
Roseting

Receptores on Venules
and Capillres
(ICAM-1, Condroitin
sulphate B, CD36)

Patogenesis of falciparum Malaria (cont.)



Changes in transport properties
exposing cryptic surface
antigens
inserting new parasite-derived
proteins

Alters the
RBC
membrane

RBC shape
more irregular,
more antigenic,
and less
deformable.

KEY POINTS



- Plasmodium falciparum are the most dangerous of all malarie parasites.
- Patients with hyperparasitemia and severe manifestations need to admit on ICU.
- Special attention for people coming from non-endemic areas.
- Use a combination of anti-malaric drugs in treatment of severe malarie.



OBRIÇADA
PELA
ATENÇAO

