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RHABDOMYOLYSIS AND PLASMODIUM FALCIPARUM MALARIA: A CASE REPORT

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INTRODUCTION

Rhabdomyolysis in Plasmodium falciparum malaria is reported occasionally in the literature;the pathogenetic mechanism is not clearly understood. We describe a case of severe malaria complicated with rhabdomyolysis.

CASE REPORT

Fiora, a 6-year old girl, born in Italy, presented fever 6 weeks after visiting her relatives in Cameroun during school holidays. No chemioprophylaxis was performed.

HISTORY

She was transferred from another Hospital to our Paediatric Department on suspicion of acute renal failure in multi-cystic kidney. Aftere **6 days of hight fever (Central Temperature >39°C), she began to have vomiting, olyguria, myalgia and generalized weakness, soft tissue swelling localized on the calves and feet, and darkened urine.**

ON ARRIVAL

At the clinical exam the child was lethargic, suffering, no meningeal signs or neurological deficit were present.
She presented feet edema and skin blisters (FIG.1), 3 cm hepatomegaly without splenomegaly. Vital signs were: Sp O2 100%, HR 148/min, BP 92/68 mmHg, Body temperature 39 °C.
The travel history induced us to perform immediately malaria diagnostic tests. The Rapid Diagnostic Test (RDT) and the blood smear examination (light microscopy thin and thick smear) confirmed diagnosis of Plasmodium falciparum malaria. The other blood exams revealed: Serum Hemoglobin 8.5 g/dl, White Blood Count 18.200 /mmc, Platelets count 49.000/mmc, C-reactive Protein 10.75 mg/dl, creatinine 1.51mg/dl and urea 46 mg/dl.

Creatine Phosphokinase (CPK), sign of muscle injury, was very high at admission (8178 ng/ml) and reached values greater than 25.000 the following days. Urine myoglobin was 1884 ng/ml, red blood cells were absent in urine. Thus the **final diagnosis was acute renal failure induced by rhabdomyolysis in severe Plasmodium falciparum infection.**

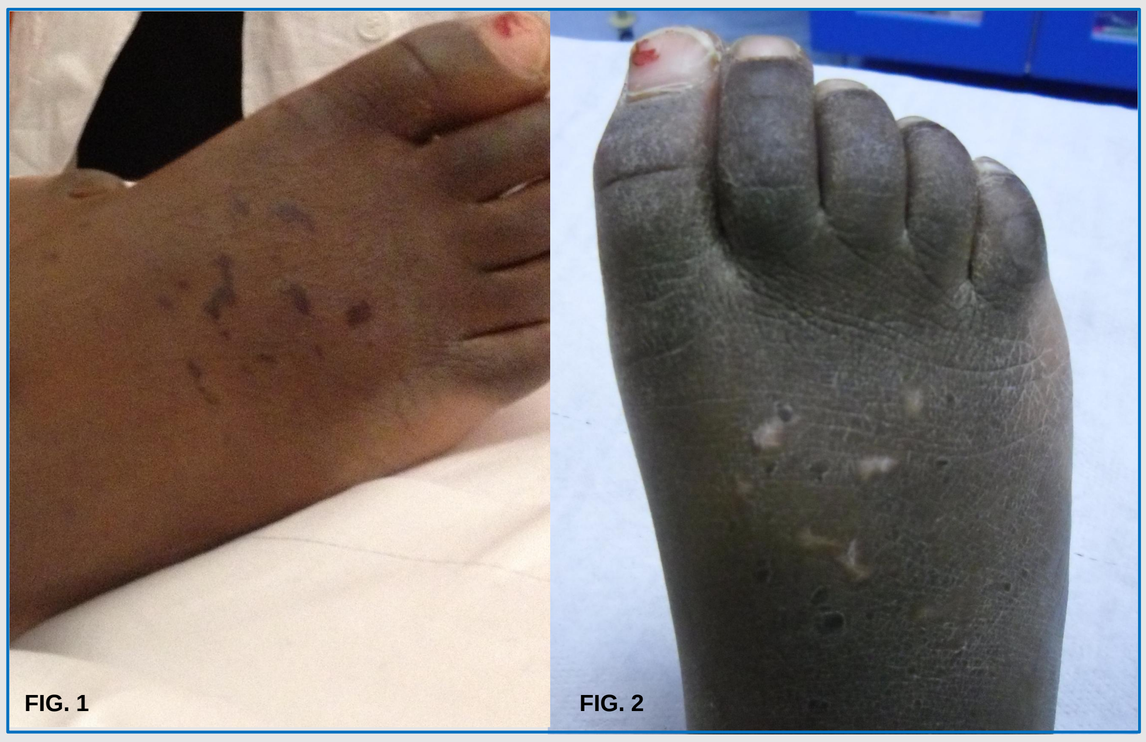

FIG. 1

FIG. 2

The treatment with artemisin derivatives together with a proper hydration led to a rapid resolution of parasitemia and acute renal failure.
CPK values decreased to normal range after 2 months. The child presented neurological sequelae with moderate impairment in walking, not yet resolved. We suppose that decreased tissue perfusion led to muscular tissue injury with ischemia and necrosis (FIG.2) and peripheral nerve injury.

CONCLUSION

Rhabdomyolysis is an unfrequent malaria complication. Its origin is unclear. Severe myalgia, darkned urine, swelling soft tissues in malaria patients are paradigmatic sympthoms of rhadomyolysis. A determinat role in skeletal muscle damage is played by red cells sequestration in muscle capillaries and parasite's toxins. In our young patient the delayed diagnosis could have influenced the severity of this rare complications of the disease.

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