

Artesunate Induced Autoimmune Hemolytic Anemia - Not Uncommon

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Abstract: *Complicated malaria caused by plasmodium falciparum is very common in India. Among all complications Hemolytic anemia is one of the important complications to classify malaria as severe. Hemolytic anemia is of varied reasons like severe parasitemia, use of primaquine in G6PD deficiency and rarely parenteral antimalarials like Quinine and Artesunate. Parenteral Artesunate is the recommended first line drug in complicated malaria due to its relatively less complications compared to Quinine, but not absolutely safe.¹ Artesunate is documented in literature as an offending agent for Delayed autoimmune Hemolytic anemia. So far only 18 cases of post artemesin in delayed hemolytic anemia were reported worldwide according to CDC literature from 2012.²*

Keywords: Artesunate, Autoimmune Hemolytic Anemia

1. Case Report

A 9years old female child presented with Acute febrile illness, Altered sensorium, Respiratory distress, Anemia, Dark coloured urine & Hepatosplenomegaly. Peripheral smear showed plasmodium falciparum with P. I>10% with no evidence of hemolysis. Child was treated with parenteral Artesunate and blood products as required. Despite of 7days of Parenteral antimalarials and clearance of parasite in peripheral smear child continued to have fever spikes. Workup for focus of fever is carried out in terms of bacterial sepsis and inflammatory syndrome which were negative, On day9 of antimalarials as the child became severely anemic with impending cardiac failure ongoing hemolysis was suspected and workedup. All markers of hemolysis were elevated with a positive DCT. So possibility of Artesunate induced hemolytic anemia AIHA was considered and child was started on oral prednisolone. Child became afebrile and Hb was stabilized with in 48hours. Followup DCT was negative hence prednisolone was tapered over few weeks and stopped.

few weeks of follow - up to suspect and diagnose hemolytic anemia.

References

- [1] Sinclair D, Donegan S, Isba R, et al. Artesunate versus quinine for treating severe malaria. *Cochrane Database Syst Rev* 2012; 6: CD005967
- [2] CDC. Published reports of delayed hemolytic anemia after treatment with artesunate for severe malaria—worldwide, 2010–2012. *MMWR* 2013; 62: 5–8

2. Investigations

Investigations on the day of Admission	Investigations on Day 9 of admission
CBP: HB: 7.6 mg/dl	CBP: HB: 4.2gm/dl
Platelets: 1, 34000/cumm	Platelets: 2, 00, 000/cumm
TSB: 1.1mg/dl	TSB: 2.4mg/dl
Peripheral smear: Positive for plasmodium ring forms, Parasitic index>10%	Peripheral smear: Presence of Fragmented andnucleated RBCs With schistocytes
No evidence of hemolysis	No Hemoparasites
Urine dipstick: positve	Reticulocyte count: 6%
Urine microscopy: No RBC	LDH: 191 IU/lt

3. Conclusion

Post artemesinin delayed hemolytic anemia is a rare cause of Autoimmune hemolytic anemia which can cause severe morbidity and mortality if not suspected and treated. Children on artesunate should be monitored closely for next

Volume 13 Issue 1, January 2024

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