Anaphylactic Reaction to Intravenous Artesunate: A Case Report.
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Abstract: Artesunate is a water soluble hemisuccinate artemesin derivative, highly effective antimalarial agent used as first or second line treatment in severe falciparum malaria. It is relatively safe with convenient dosage and easy administration. Common adverse effects to artesunate include nausea, vomiting, anorexia. Toxic effects include neutropenia, anemia, hemolysis allergic reactions and severe allergic reaction.6,7 Anaphylactic reaction to artesunate is extremely rare.8-10 A case of anaphylaxis to intravenous artesunate in a 40 year old male patient, which was successfully managed, is presented here.

CASE REPORT
A 40 year old male patient was admitted with complaints of high grade fever with rigors and chills since 3 days, generalized weakness since 2 days and decreased urination (oliguria) since 1 day. There was no history of anaphylaxis to any drug. On examination patient was conscious, temperature was 101.5°F, Pulse rate 112/min, BP 120/80 mm Hg. Respiratory rate 16/min. He appeared anemic with no icterus and pedal edema. His cardiovascular, respiratory system and airway examination was normal. Abdominal examination revealed hepatosplenomegaly. Laboratory profile revealed Hb 8.1 gm/dl, TLC 11800/mm3, Platelet count 170000/mm3, FBS 82 gm/dl, Blood urea 48 mg/dl, Serum creatinine 3.4mg/dl, Serum bilirubin 1.7mg/dl, SGOT 38 IU/L, SGPT 53 IU/L, Serum sodium 137 mmoL/L, Serum K 3.7 mmoL/L. Peripheral blood film with Giemsa stain revealed asexual forms of P. falciparum with a count of 5600/mm3. In view of above clinical and laboratory findings a diagnosis of severe falciparum malaria with renal failure and anemia was made. Subsequently he was started on IV artesunate 2.4 mg/kg body weight. Immediately following artesunate administration he started complaining of difficulty in breathing, itching all over the body with bluish discoloration of hands and feet. His physical examination at this time revealed peripheral cyanosis, cold clammy skin, feeble pulse and hypotension (systolic BP 90 mm Hg with no recording of diastolic BP).

A diagnosis of artesunate induced anaphylaxis was made for which the patient was put on injection adrenaline (1:1000) in a dose of 0.01 ml/kg SC at 20 min interval for 2 doses and injection hydrocortisone 5 mg/kg given, IV along with 2 liters of normal saline. The patient started improving given, IV along with 2 liters of normal saline. The patient started improving after single intravenous injections of artesunate in a 40 year old male patient in view of its rarity.

DISCUSSION
Artesunate, a hydrophilic derivative of artemisin, is the drug of choice for severe falciparum malaria.9 Advantages of artesunate include its rapid action, small dosage and lesser toxicity.6 Severe allergic reactions to oral artesunate have been reported.10 But anaphylaxis to intravenous artesunate is extremely rare in spite of its wide spread use.6,8 Our patient had no past history of exposure to artesunate. As falciparum malaria is prevalent and artesunate is being used as first line anti malarial drug therapy in our country, prior exposure to artesunate cannot be ruled out. A skin sensitivity test done in this patient before he was discharged was in favour of artesunate anaphylaxis. Anaphylaxis is an Ig E mediated type I hypersensitivity reaction. Positive skin test differentiate anaphylaxis from “anaphylactoid reactions” which are not mediated by allergen Ig E interaction. In anaphylactoid reaction, symptoms are confined to urticaria without cardiovascular compromise.8 Only very few cases of artesunate anaphylaxis have been reported in Indian literature.1 It is the first rare case report from this part of the country to the best of our knowledge.

CONCLUSION
The present case is being highlighted in view of creating awareness among the physicians for the development of extremely rare life threatening anaphylactic reaction following the administration of artesunate given in patients of falciparum malaria. The possibility of anaphylactic reaction to artesunate should always be kept in mind prior to its administration in regions where malaria is endemic.

REFERENCES