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APHERESIS RED CELL EXCHANGE/TRANSFUSIONS

In a patient treated in Manchester, parasitemia was virtually eliminated over eight hours by a 3.5 liter exchange blood transfusion (Plasmodium Falciparum Hyperparasitemia: Use of Exchange Transfusion in Seven Patients and a Review of the Literature).

Several cases of severe babesiosis refractory to appropriate antibiotic therapy have been reported to respond promptly and dramatically to red blood cell (RBC) exchange transfusion.

Asplenic patients, however, generally have a more severe course of illness, with hemolytic anemia, acute renal failure, disseminated intravascular coagulation, and pulmonary edema. Primary therapy is with antibiotics including clindamycin and quinine, with RBC exchange transfusion reported to be effective in severe cases.

The RBC exchange transfusions succeeded in reducing significantly the level of parasitemia, dramatically improving the condition of an extremely ill patient. Our report adds to the small but growing literature on severe Babesia infection in humans, and provides further evidence to support the use of RBC exchange transfusion to treat severe babesiosis. Its single great advantage over antibiotic therapy is its rapid therapeutic effectiveness (Treatment of Babesiosis by Red Blood Cell Exchange in an HIV-Positive Splenectomized Patient).

There was rapid clinical improvement after the whole-blood exchange transfusion.

In cases of severe babesiosis, prompt institution of whole-blood exchange transfusion, in combination with appropriate antimicrobial therapy, can be life-saving. In patients with progressive babesiosis, early intervention with exchange transfusion, along with appropriate antimicrobial therapy, should be considered to speed clinical recovery. (Fulminant babesiosis treated with clindamycin, quinine, and whole-blood exchange transfusion.

However, asplenic patients may have a much more serious clinical course. In these patients, symptoms may include hemolytic anemia, acute renal failure, disseminated intravascular coagulation, and pulmonary edema.

RBC and plasma exchange subsequently cleared the organism from his RBCs and avoided further hemolysis, as well as the overwhelming septicemia that can occur in splenectomized and immunocompromised hosts.



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Furthermore, autoimmunity to RBCs and hemolytic anemia is a documented complication of babesiosis in humans. Patients with parasitemia greater than 10%, or with any associated renal or hemostatic anomalies would benefit from plasma exchange as well as RBC exchange. (Therapeutic Apheresis for Babesiosis)

Platelet count had decreased to $42 \times 10^9/l$, which prompted manual examination of a peripheral smear. Pleomorphic, intraerythrocytic ring forms characteristic of Babesia parasites were noted.

PCR results may or may not be positive, depending in part on the specimens available for testing and the presence/level of parasitaemia. (Transmission of Babesia microti by blood transfusion in Texas).

Therapeutic apheresis is proven for the following diagnoses ... Babesiosis (RBC exchange)

Therapeutic apheresis is proven for the following indicates based on the ASFA's assignment of category I or II grade 1A or 1B for these indications ... Babesiosis (RBC exchange). The ASFA considers that apheresis is an accepted first-line therapy for the following conditions ... Babesiosis (RBC exchange) (Apheresis – Health Insurance Co).