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Piperacillin Induced Immune Hemolytic Anemia: A Case Report

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Abstract:

Drug Induced Immune Hemolytic Anemia is a rare reaction to certain medications. It is a type II delayed hypersensitivity reaction in which a drug covalently binds to the plasma membrane of red blood cells providing a target (e.g., penicillin-coated RBCs) for detection of certain drug antibodies. As the offending drug attacks the RBC, it leads to hemolysis, which is characterised by decreased RBC count, decreased hemoglobin level and elevated total bilirubin, direct bilirubin and lactate dehydrogenase levels. Numerous drugs such as Cefotetan, Ceftriaxone, Piperacillin, Beta lactam inhibitors, Oxaliplatin, carboplatin, rifampin, diclofenac, cimetidine, sulfamethoxazole, and trimethoprim exhibit drug induced hemolytic anemia, where Cefotetan contributes the major proportion of DIHA. We report a case of DIHA from antibiotic Piperacillin. A 49-year-old female was admitted to the hospital with Emphysematous Pyelonephritis complicating the antibiotic therapy intravenous Piperacillin-Tazobactam. On follow-up we found fluctuations in RBC count, haemoglobin, total bilirubin and direct bilirubin levels. Patient tested positive for Coomb's direct antiglobulin test towards piperacillin. The patient was diagnosed with Piperacillin Induced Immune Hemolytic Anemia with laboratory evidence. Physician shifted antibiotic treatment from Piperacillin-Tazobactam to Meropenem. Identification and immediate withdrawal of Piperacillin-Tazobactam is the mainstay of treatment for patients with Piperacillin Induced Immune Hemolytic Anemia. It is essential to discontinue the causative agent and avoid re-exposure.

KEY WORDS:

Drug Induced Hemolytic Anemia, Hypersensitivity reaction, Piperacillin Induced Hemolytic Anemia, Coombs Direct antiglobulin test.

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