ANAPHYLAXIS TO PLATELETS ASSOCIATED WITH ANTIBODIES TO IGA IN A NON-DEFICIENT IGA PATIENT

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Background: 17-year-old male with Ewing's sarcoma developed hypersensitivity to platelet transfusions. He tolerated his first packed red blood cell (pRBC) transfusion. Weeks later, he developed pruritus and a forearm hive after his next pRBC transfusion. Subsequently, he received multiple pRBC infusions, which he tolerated. He also tolerated his first platelet transfusion. During the next platelet transfusion, however, he developed urticaria with pruritus. Despite premedications, he developed pruritus, urticaria, and coughing minutes into his third platelet transfusion. He received epinephrine, and symptoms resolved. Platelet infusion with premedications was re-attempted later that day, and he reacted with similar symptoms. He again was given epinephrine with resolution of symptoms. None of the blood or platelet products had been washed. This case is important in understanding the mechanism of anaphylaxis to blood products.

Materials/Methods: The protocol established by the American College of Radiology was used as we were unable to find a protocol for prevention of anaphylaxis to blood products. In addition, all futre blood products were washed.

Results: Patient tolerated subsequent platelet/blood transfusions after following the protocol listed above along with washed blood products.

Conclusions: IgE or IgG anti-IgA antibodies are often implicated in severe anaphylactic reactions during pRBC or platelet transfusions in IgA deficient patients, as both blood products contain IgA, but this phenomenon remains quite rare. Upon consultation, we ordered an anti-IgA antibody titer by ELISA, IgA level, and a serum tryptase concentration. No clinical testing is available to assess IgE antibodies against IgA. Our patient exhibited an elevated IgG antibody (247 U/mL) to IgA despite having a normal serum IgA level of 137 mg/dL. In a previous report, IgG against IgA was present in 3 out of 142 non-IgA deficient women. The report did not mention whether any of these 3 individuals had reactions when given blood products or IVIG. At least one case of underlying systemic mastocytosis has been unmasked by anaphylactic reactions to platelet transfusions, but the serum tryptase level in our patient was normal. We cannot completely account for his ability to tolerate most pRBC transfusions, but the higher plasma concentration in platelet preparations may serve as a contributing factor. We therefore present a rare case of anaphylaxis after platelet transfusions in a non-IgA deficient patient who has antibodies against IgA.