A RARE CASE OF APLASTIC ANEMIA IN A RENAL TRANSPLANT RECIPIENT – A CASE REPORT (Abstract no: WCN-AB-2883)

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Introduction:

Aplastic anemia is a rare, serious blood disease characterized by failure of the bone marrow to produce mature blood cells. There is destruction of hematopoietic stem cells in the marrow that is often caused by an autoimmune reaction. Patients with aplastic anemia are treated with immunosuppressants & resistant cases can be successfully treated with hematopoietic stem cell transplantation (HSCT). We report here a rare case of aplastic anemia in a renal transplant recipient.

Case Report:

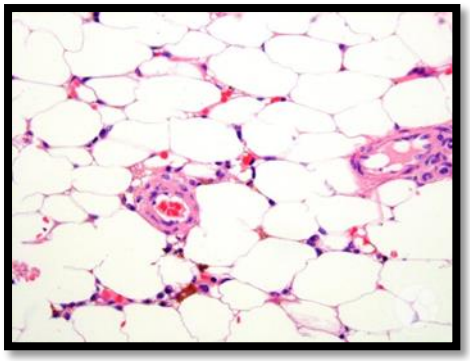
A 10 year old Maldivian girl, who developed ESRD at the age of 3 years (hypo-dysplastic kidneys), underwent living related renal transplantation at our centre at 5 years' age. The child was on immunosuppression with Tacrolimus, Mycophenolate mofetil (MMF) & Prednisolone. She had been doing well for over 4 years after renal transplantation, apart from a few episodes of UTI. Graft function was stable. She had an episode of diarrhea, CMV infection and AKI in January 2024. MMF dose was reduced, & she was treated with IV Gancyclovir for 3 weeks followed by oral Valgancyclovir prophylaxis. Renal function recovered completely.

The child developed dengue fever in July 2024, & she was hospitalized & treated for the same. A week following hospitalization, the child had drop in all her blood counts. She also had shock & AKI, which was treated in the Maldives, & recovered. MMF & Valgancyclovir were stopped in view of pancytopenia. However, the child had severe pancytopenia requiring packed cell & platelet transfusion. She was also treated for sepsis & GI bleed.

She was brought to our hospital in view of persistently low blood counts, cough & loose stools. Graft function was stable, & all cultures were negative. A febrile neutropenia panel detected only EBV infection. CSF study was normal, & imaging showed evidence of right sided pneumonia on CT chest. CT brain, neck & abdomen were normal. CMV DNA was barely detectable, & parvovirus B19 PCR was negative. BK virus was detectable in urine and in blood. However, there was no evidence of nephropathy. The child had extremely low Hb, WBC & platelet counts requiring multiple transfusions.

She was treated with broad spectrum IV antibiotics, anti-fungals, and with IV steroids. MMF was withheld & Tacrolimus dose was reduced. Strict barrier nursing was provided. Her bone marrow study showed severe pancytopenia with only 10% marrow cellularity. There were no atypical cells. G-CSF, Romiplostim and Eltrombopag were started & doses were optimized. She also received IVIg. She was treated with antibiotics for her pneumonia & diarrhea (suspected pseudo-membranous colitis).

The child continued to have pancytopenia requiring regular packed cell & platelet transfusions. Infections were treated with broad spectrum antibiotic cover. A HSCT was considered, with one of the parents as prospective donor. However, after over 4 weeks of marrow failure, her WBC counts improved to the normal range, & her infections recovered. The child is currently asymptomatic, with stable WBC, platelet counts & renal function. She is now off transfusions, and her graft renal function is normal.



Hypo cellular bone marrow

Conclusion:

This child had a very unusual cause of bone-marrow failure, probably secondary to dengue/ EBV infection. With appropriate supportive treatment, she is making good recovery. More studies are required on dengue fever causing bone-marrow failure & aplastic anemia in renal transplant recipients.

References:

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