

356

Transplant-Acquired Food Allergy Following Cord Blood Transplantation in Adult Patients

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Background: The development of new food allergy after allogeneic hematopoietic stem cell transplantation (transplant-acquired food allergy: TAFA) has been sporadically reported. Most of such cases were considered as the passive transfer of food allergy through allogeneic hematopoietic stem cell transplantation (HSCT) from donors already allergic to specific allergens. Although cord blood donors are basically considered lacking the known food allergy, there have been some cases of TAFA following cord blood transplantation (CBT). Therefore, we have retrospectively evaluated the adult patients who developed food allergy after cord blood in a single institute.

Patients and Methods: Among the patients who underwent CBT for hematological diseases at Keio University Hospital (Tokyo, Japan), patients survived longer than 30 days after CBT with donor cell engraftment were selected from the institutional database. Medical information about food allergy was retrospectively collected from the medical records of each patient.

Results: Of the 51 evaluable patients, 3 patients experienced episodes of new food allergy, in whom food allergy was definitely diagnosed based on the results of radioallergo-sorbent test and/or the retry test. The characteristics of three patients at transplant are as follows: Case 1, 55-year old male with myelodysplastic syndrome; Case 2, 57-year-old male with Sezary syndrome; Case 3, 19-year-old female with aplastic anemia. All patients received CBT following fludarabine-based reduced-intensity conditioning regimens and received cyclosporine A or tacrolimus with or without short-term methotrexate for graft-versus-host disease prophylaxis. At 10 months after CBT, Case 1 developed severe reactions after ingesting egg-containing meal, including skin rash, shortness of breath, and loss of consciousness. He was successfully treated with steroid and epinephrine. At 6 months after CBT, Case 2 repeatedly experienced the episodes of severe reactions after ingesting buckwheat noodle, including fever, diarrhea, vomiting, and hypotension. He was successfully treated with massive hydration. At 5 months after CBT, Case 3 repeatedly experienced gastrointestinal symptoms such as vomiting and diarrhea after ingesting egg-containing food. At each episode, she recovered without any interventions.

Conclusion: Although the incidence is low, acquisition of new food allergy has been observed within one year after CBT. By accumulating the cases, the epidemiology and clinical feature of TAFA following CBT should be further evaluated.

357

Recovery of Endogenous IgG Production Following Rituximab Treatment after HSCT

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Rituximab is a monoclonal antibody to the CD20 antigen expressed on B lymphocytes. Several recent reports suggest that rituximab may be used to treat complications of SCT including GVHD and EBV reactivation. The long term consequences on IgG recovery aren't well studied. This is a

retrospective analysis of allogeneic pediatric SCT patients treated with rituximab at Loma Linda University from 2004 to 2013. We treated 23 patients with rituximab following allogeneic SCT (11 MUD, 7 MSD, 3 Cord) for post-transplant EBV reactivation alone (4), cGVHD alone (4) in combination with thrombocytopenia (9), hemolysis (4) or EBV reactivation (2). During and at end of rituximab therapy all patients required IVIG monthly or more frequently (4) to maintain serum IgG levels >500mg/dl. We examined the length of time from end of rituximab therapy to recovery of endogenous IgG production. The influence of cGVHD, EBV infection, type of stem cell graft, and number of doses of rituximab, on the pace of recovery of endogenous IgG production was evaluated. Those treated for cGVHD plus any other indication (n=19) received a median of 11 doses of rituximab (range 4 to >30). Among these patients, 11 of 14 whose cGVHD resolved and came off immune suppression recovered the ability to produce IgG completely (9) or partially (2, defined as decreasing frequency of IVIG infusions to maintain IgG>500mg/dl). Median time to recovery was 14 months (range >4 to 50 months) after last dose of rituximab. For patients who continued to require immune suppression for cGVHD, only 1 of 5 recovered IgG production (13 months from last dose) and the other 4 continue to require IVIG at least monthly for >3 years after the last dose of rituximab. There were 4 patients treated with 2-4 doses of rituximab for EBV reactivation early after SCT. Only 1 has completely recovered IgG production. The other patients remain dependent on IVIG a median of >39 months since end of rituximab therapy.

We found no relationship between age of patient or duration of rituximab therapy on the time interval between end of rituximab therapy and onset of endogenous IgG production. Recipients of MUD grafts had a non-significant increase in failure to recover endogenous IgG production, but when the impact of therapy for cGVHD was taken into account the type of stem cell graft lost significance.

Ability to recover endogenous IgG production following treatment with rituximab after SCT depends on successful treatment of cGVHD and in this group of patients requires about 1 year from end of therapy. Among those treated with rituximab whose cGVHD does not resolve and in those with early EBV reactivation, loss of IgG production persists at least several years. In this later group, failure to recover IgG production may be due to other factors separate from rituximab therapy.

358

Nitazoxanide Is Effective Therapy for Norovirus Gastroenteritis after Chemotherapy and Hematopoietic Stem Cell Transplantation (HSCT)

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Norovirus is a major cause of nonbacterial gastroenteritis and is a self-limited in immunocompetent patients. However, in immune compromised pts it causes prolonged infection, GVHD and sepsis due to mucosal breakdown. Supportive care is the current therapy as attempts to treat with ribavirin or oral immunoglobulin have failed. We report our experience treating norovirus gastroenteritis occurring in 14 patients (pts) after (11) and prior (3) to HSCT with Nitazoxanide.

From Nov 2012 to Dec 2013, 14 pts (2 receiving chemotherapy, 2 auto HSCT and 10 allo HSCT) developed norovirus gastroenteritis. Ages ranged from 1 to 21 years (median 10) diagnoses included ALL/AML (6), aplastic anemia (2), Wiskott