

# Children abnormalities on brain MRI

Sally Emad-Eldin\*

*Diagnostic and Intervention Radiology Department, Cairo University Hospitals, Egypt*

## Editorial

For a variety of childhood hematologic malignancies as well as to treat congenital disorders in which these functions are diminished or missing, bone marrow transplantation (BMT) is used to restore hematologic and immunologic competence. High doses of chemotherapy, often combined with total-body irradiation, are used to prepare the patient for BMT. Infection, vascular problems, therapy-induced cytotoxicity, graft versus host disease (GVHD), and return of preexisting diseases are the most prevalent and clinically important consequences. Because CNS consequences can be catastrophic, early diagnosis is critical for successful management and a good prognosis. CT and MRI scans are useful for early diagnosis, which increases the chances of a successful treatment.

The hospital's ethics committee approved the trial. This prospective study comprised 33 patients who were referred to our institution's MRI unit between July 2010 and December 2013 for neurological CNS symptoms that necessitated MRI imaging investigation.

BMT that is allogeneic. There were ten females and 23 men, with ages ranging from three to eighteen years (mean 11.8  $\pm$  5.1 years). All of the patients received allogeneic BMT from related donors who were HLA matched. Severe aplastic anaemia (n=7), Fanconi anaemia (n=4), beta thalassemia (n=8), severe combined immunodeficiency (SCID) (n=1), chronic myelogenous leukaemia (n=1), acute myelogenous leukaemia (n=1), severe combined immunodeficiency (SCID) (n=1), severe combined immunodeficiency (SCID) (n=1), chronic Two MRI machines were used: a 3-TMR scanner (Gyrosan Intera, Philips medical

systems, Netherlands) and a 1.5 T MR scanner (Signa, General Electric, USA). Sagittal and axial T1WI, T2WI, and FLAIR images in the axial plane were part of the MR imaging protocol. After injecting 0.1 mol Gadopentetate dimeglumine-DTPA (Magneo) into the axial, coronal, and sagittal planes, contrast T1WI was acquired in the axial, coronal, and sagittal planes.

The underlying disease, type of donor and transplant, and comorbidities all influenced the conditioning strategy for each patient. Cyclosporin A (CsA) was used with one of the following drugs to prevent GVHD: methotrexate or a corticosteroid. CsA serum concentrations of 200 ng/mL were set as the goal. From the first day of their stay, all patients were given antibacterial, antiviral, and antifungal prophylaxis. In 1266S In FLAIR images, PRES lesions were found and their distribution in anatomical regions was calculated. The frontal, parietal, occipital, and temporal lobes, as well as the corpus callosum, basal ganglia, and cerebellum, were recognised as anatomical regions. There was no evidence of gadolinium enhancement. On FLAIR, the most commonly afflicted regions were the parieto-occipital region (3/16 (18.75%), posterior parietal region (3/16 (18.75%), and posterior parietal region (3/16 (18.75%). MRI diagnosis of the patients in relation to the chronology of BMT. Six patients (18.2%) out of the 33 patients in the research had abnormal MRI brain results, and these patients had nonrepetitive neurological symptoms. Twenty-seven patients (81.8%) had a positive MRI result. Allogeneic stem cell transplantation has been linked to a higher rate of CNS problems than autologous or syngeneic stem cell transplantation (3). CNS problems are reported to affect 11–65 percent of BMT recipients (90 percent at autopsy), and these CNS issues may be the primary cause of death in 9–17 percent of cases (1,5,6). Immediate and extensive diagnostic work-up.

**\*Address for Correspondence:** Sally Emad-Eldin, Diagnostic and Intervention Radiology Department, Cairo University Hospitals, Egypt, E-mail: sallyemad@hotmail.com

**Copyright:** © 2021 Emad-Eldin S. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Received** 08 July 2021; **Accepted** 15 July 2021; **Published** 23 July 2021

**How to cite this article:** Sally Emad-Eldin. "Children abnormalities on brain MRI." *J Transplant Technol Res* 11 (2021): 182.