Atypical posterior reversible encephalopathy syndrome developing after bone marrow transplantation

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Background: Posterior reversible encephalopathy syndrome (PRES) was reversible syndrome presenting with consciousness change, headache, seizure and visual disturbance. PRES usually affect occipital and parietal lobe if the brain, but it rarely involving the other area of brain including brainstem, and cerebellum. We report a rare case of atypical PRES related with bone marrow transplantation. Case: 21 years old man who was given bone marrow transplantation due to severe aplastic anemia presented with both leg weakness and consciousness change. On neurologic examination, he had both leg weakness which was compatible MRC grade IV and confused mentality was noted. T2 weighted brain MRI showed increased signal intensity on bilateral occipital, parietal and frontal area. In diffusion MRI, vasogenic edema was suspected. EEG revealed continuous slow activity on both hemisphere and there was no epileptiform discharge. Systolic blood pressure did not exceed 150 mmHg. After conservative care including intravenous hydration, consciousness was recovered to alert again and weakness also fully recovered. Cortical atrophy was detected on brain MRI which was done after 6 month later. Discussion: The global incidence and prevalence is still unknown and underlying pathophysiology is also still under debate. Conditions at risk for PRES area following: pregnancy, BMT, immune suppressive agent including cyclosporine and Tacrolimus, autoimmune disease, post cancer chemotheraphy. Transplantation related PRES is well recognized and the incidence is up to approximately 16% with higher dose regimen. The typical location of lesions of PRES is parietal or occipital lobe region. Radiologically atypical PRES is including deep white matter lesion, cerebellum or brainstem lesion and unilateral lesion. Partially reversible PRES is considered clinically atypical PRES. This patient had a lesion that invaded both anterior and posterior circulation and causes brain atrophy on brain MRI..