

**Abstract Type : Poster**

**Abstract Submission No. : PO-1294**

## **Oral Cyclophosphamide induced Posterior reversible encephalopathy syndrome in Rapidly progressive glomerulonephritis**

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**Case Study:** Posterior reversible encephalopathy syndrome (PRES) is a clinical condition that manifests many neurological symptoms with typical features on Magnetic resonance imaging (MRI). We report a case of PRES occurring after 2 doses of oral cyclophosphamide in rapidly progressive glomerulonephritis (RPGN).

A 73-year-old man was admitted to our hospital because of persistent nausea and general weakness despite dialysis. Laboratory tests revealed proteinuria (++) , hematuria (++++ ) and high C-reactive protein level (CRP). Also, myeloperoxidase anti-neutrophil cytoplasmic antibody (MPO-ANCA) was positive. We performed renal biopsy and bronchoscopy. Renal pathology findings and bronchoscopy findings were compatible with crescentic glomerulonephritis and diffuse alveolar hemorrhage. We diagnosed with microscopic polyangiitis and started high dose intravenous methylprednisolone plus therapeutic plasma exchange (TPE). After 1 week, symptoms were improved and CRP was decreased. So TPE was stopped and steroid was decreased to 30 mg per day, and oral cyclophosphamide 2mg/Kg per day was added. Two days later after oral cyclophosphamide therapy, he developed generalized tonic-clonic seizures and suddenly hypertension. We examined Brain MRI and electroencephalogram (EEG). MRI revealed multifocal high signal intensity in both parietooccipital lobes, temporal lobes, cerebellum and pons on T2 flare. The EEG showed frequent short bursts of a bilateral polymorphic delta to theta slow waves of medium to high amplitude, mixed with short attenuated periods. Seizure resolved with phenytoin, blood pressure control, and hemodialysis. The cyclophosphamide was suspected to induce PRES and not readministered. After 5 days, the EEG showed restored to a normal background and no apparent abnormal slow activity or seizure related change.