Case Report

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# A Rare Case of Patient Forgetting His Native Language with the Diagnosis of "Posterior Reversible Encephalopathy Syndrome"

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## Abstract

"Posterior Reversible Encephalopathy Syndrome" is a reversible rare disease manifesting with a variety of neurological findings often accompanied by high blood pressures. Here we present a case of forty-nine years old male patient who was admitted to our emergency department with the complaint of having difficulty speaking his native language (Turkish) and later diagnosed with PRES Syndrome. Based on the interesting nature and rare occurrence of the case, the etiology, physical exam findings, and differential diagnosis of the disease are presented and discussed in light of the literature.

**Keywords:** Posterior reversible encephalopathy syndrome, emergency department, posterior leukoencephalopathy syndrome, hypertensive encephalopathy.

## Background

"Posterior Reversible Encephalopathy Syndrome" (PRES) is a syndrome referring to a disorder of reversible vasogenic brain edema. Clinical features include a variety of acute neurological symptoms from headaches to seizures. Renal failure, fluctuations in blood pressure, some cytotoxic drugs, autoimmune disorders, and preeclampsia or eclampsia are associated with PRES.

Pathophysiology of PRES is considered to be caused by endothelial injury related to the disorder of cerebrovascular autoregulation resulting in brain edema. Another hypothesis is blood-brain barrier dysfunction caused by a rapid increase of arterial blood pressure leading to hyperperfusion of the posterior brain and producing vasogenic edema. Its radiographic and clinical features are usually reversible and usually, the disease has a favorable outcome[1-4]. Neurological impairments such as encephalopathy, cognitive deficits, or coma may be presented[3]. At magnetic resonance imagining (MRI) of the brain, radiological findings referring to PRES are mainly located at the parietooccipital lobe, posterior frontal lobe, temporal lobe, and at some less common areas as well[4].

Diagnostic criteria of PRES have not been established but suggested criteria by Fugate et al. are neurological symptoms of acute onset, (focal) vasogenic edema on neuroimaging, and reversibility of clinical and/or radiological findings[5].

Our main goal to present this case is to attract the attention of emergency department staff and readers on the diagnosis since it is rare, interesting, and could be manifested with other various neurological and clinical deficits.

## Presentation of the Case

We report a forty-nine years old male patient who gets peritoneal dialysis treatment due to hypertension and chronic kidney failure was brought to our emergency department by his relatives because of his confusion started the day before, confusing his clothes, thinking his wife's shoes are his own, and losing the ability to speak his native language, Turkish, yet still able speaking English with his wife who is a native English speaker.

On admission, the patient's general condition was fine, conscious, oriented, cooperated, normal speech and motor output, comprehension preserved to a large extent, however, the patient was unable to follow complex commands, naming and repetition was impaired for both Turkish and English. The patient's other physical examination findings were normal. Blood pressure was 240/170 mmHg (mean arterial pressure: 193 mmHg) and other vital signs as pulse, fever, partial oxygen saturation and respiratory rate were normal. Metabolic causes of encephalopathy such as uremic encephalopathy were excluded in the differential diagnosis regarding the patient's laboratory values were at his baseline values. (e-gfr: 4,31 mg/lt/24h, BUN: 58, Glucose: 102, Na:134 mmol/L).

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Computerized brain tomography and diffusion-weighted magnetic resonance scan performed at the time of patient's admission, intracranial hemorrhage, and stroke were excluded, no acute pathological finding was observed.

Intravenous Esmolol therapy was initiated because of continuous hypertension since normal blood pressure goals could not be achieved by antihypertensive therapy given. Nephrology department consultation was requested for further treatment options. The patient was transferred to peritoneal dialysis treatment in the emergency department and peroral Captopril was added to intravenous Esmolol treatment. The patient's blood pressure was gradually reduced to 155/100 mmHg at the end of the 24th hour.

Bilateral hyperintensities observed mainly in the occipitoparietal, cerebellar, and brain stem in conventional brain magnetic resonance imaging performed the next day following admission founded to be compatible with PRES.

## Outcome and follow-up

After blood pressure was regulated, the patient's confusion regressed, his ability to speak in his native language (Turkish) and his neurological condition was restored.

The patient's clinical findings were resolved after the 24th hour of his admission. The patient was admitted to the Nephrology department for further examination and treatment. He was clinically asymptomatic on the 3rd day of his admission and discharged without any neurological deficit.

## Discussion

We report this PRES case since its unusual clinical features make it both rare and interesting.

Our patient was admitted to our clinic with the complaint of confusion, disarranging his clothes, thinking his wife's were his own shoes, and losing the ability to speak his native language Turkish, yet speaking English with his native English speaking wife. He was suffering from hypertension and in his brain MRI occipitoparietal, cerebral, and bilateral hyperintensities in the brainstem were detected. He was discharged to home with full recovery following hospitalization and advanced treatment in the nephrology department following ours.

The differential diagnosis of PRES is broad, and history might be limited. Venous sinus thrombosis or subdural, intracerebral or subarachnoid hemorrhage, autoimmune encephalitis, and metabolic encephalopathies such as deranged serum glucose, sodium (including central pontine myelinolysis), uremia, or drug toxicity (for example cyclosporine) can also have similar progressive symptoms[3].

Other than MRI, diagnostic tools such as EEG and lumbar puncture are found to be useful[5]. Seizures are a common feature of PRES, however, our patient did not have any seizure episodes and clinically recovering so, no further testing was ordered.

Various neurological findings related to the etiology of PRES have been reported in the literature, yet our case presented with an unusual symptom of not being able to speak his native language and being able to speak the foreign language (English) he spoke with his wife at home. After excluding the clinical findings such as hemorrhagic and ischemic stroke and uremic encephalopathy, PRES syndrome should be considered in the differential diagnosis in hypertensive patients with the presence of similar symptoms.

In the beginning, although his main complaint was the inability to speak his native language seems shocking, it is not known whether the dominant language has changed in the bilingual process, although the patient's native language is Turkish. Therefore it was observed that the patient, who had limited cognitive status in general, actually had difficulties at naming and repetition in speaking both languages, yet probably because of him speaking English every day with his wife recently, he received a low score in naming Turkish words[2-3].

## Conclusion

After ruling out uremic encephalopathy, hemorrhagic and/or ischemic cerebrovascular events among patients who admitted to an emergency department with hypertensive emergencies, inability to speak their native language, and impaired speaking ability, the diagnosis of PRES, should be kept in mind though it is a rare case.

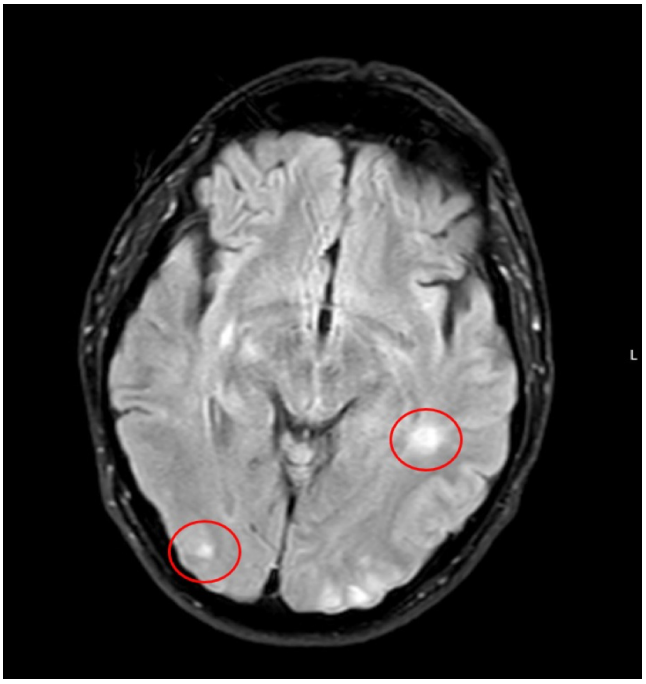

**Figure 1:** Fluid-attenuated inversion recovery image of brain MRI showing bilateral occipito-parietal white matter hyperintensities.

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