

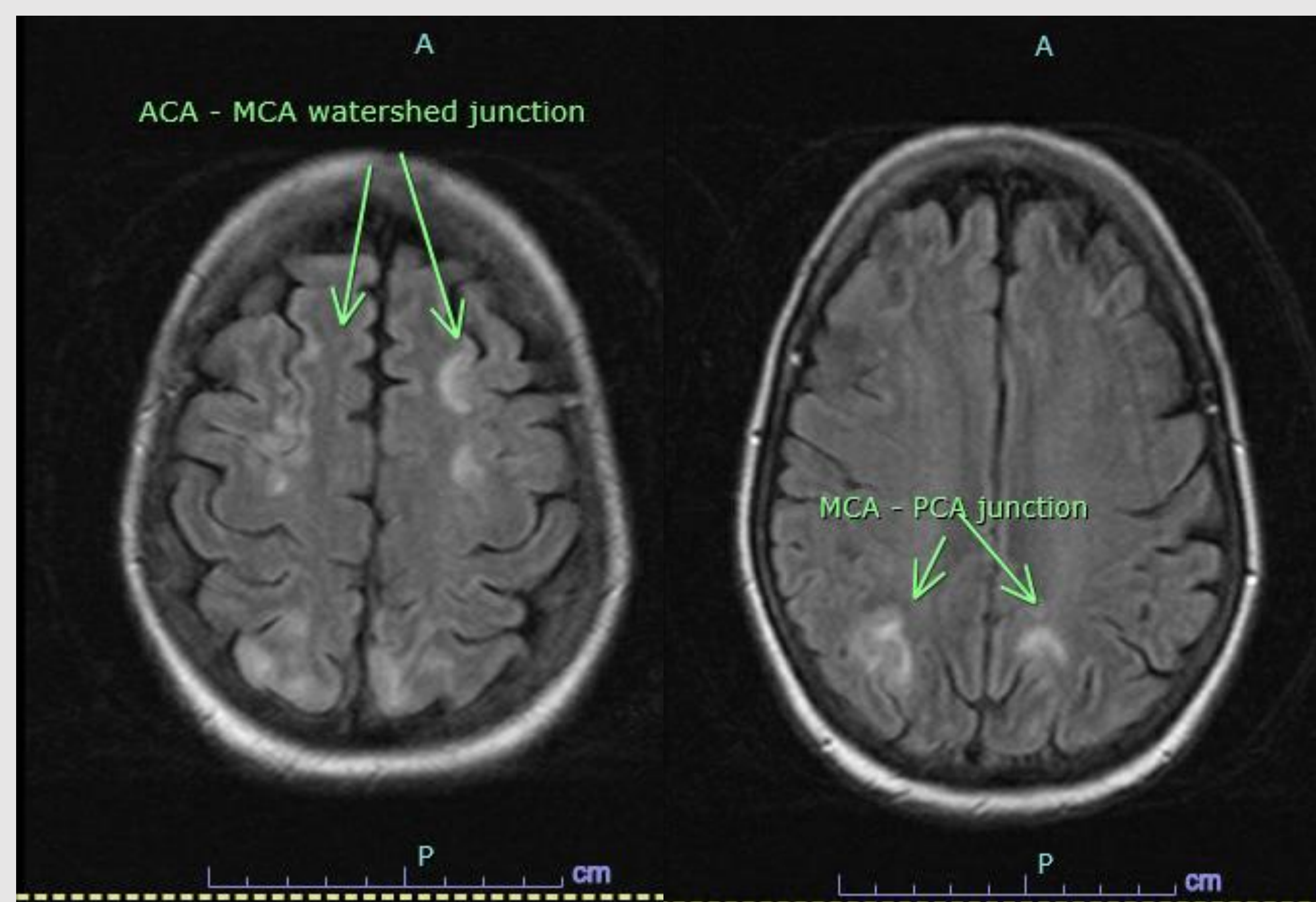
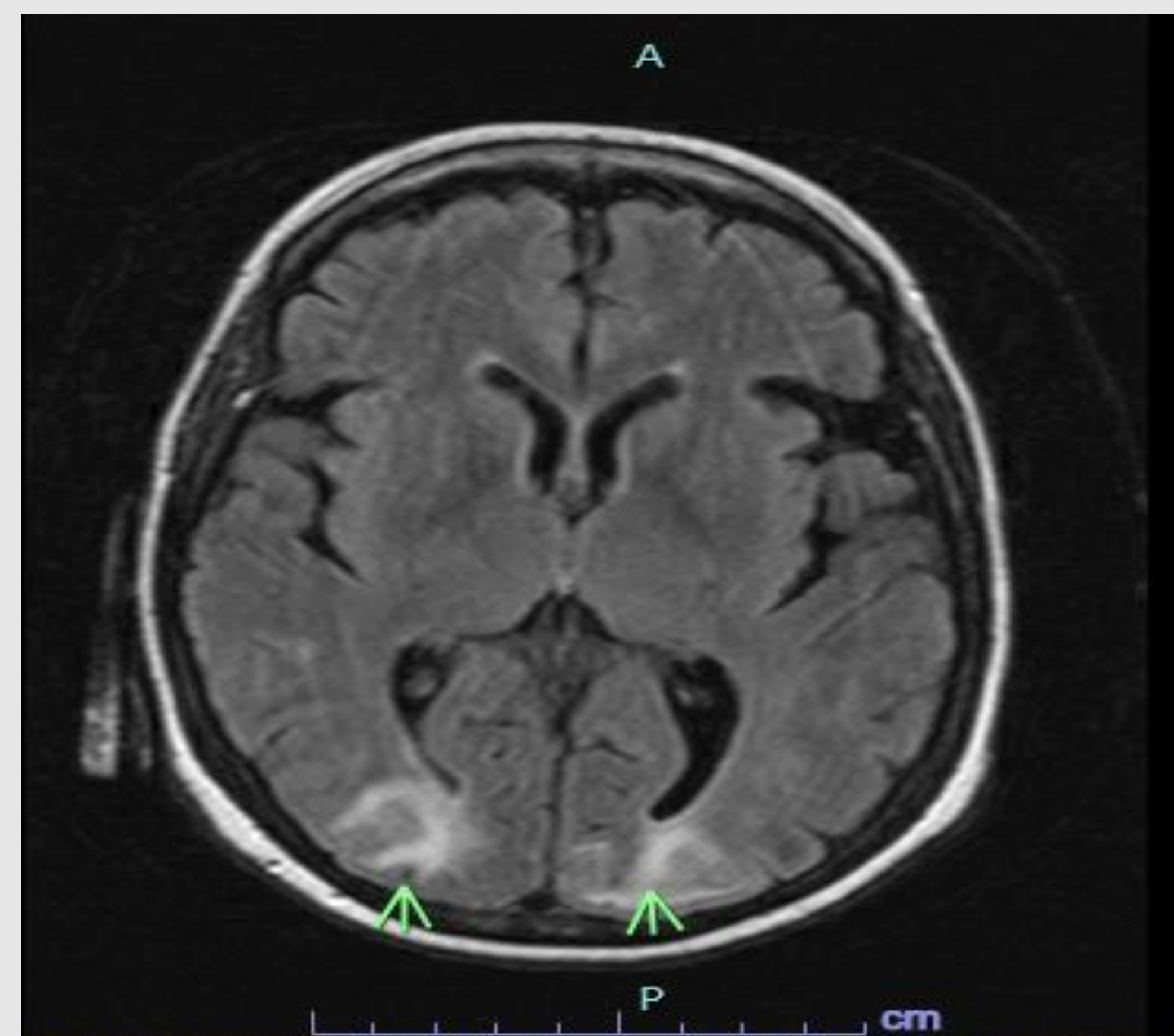
INTRODUCTION

- Persistent Reversible Encephalopathy Syndrome (PRES) is a clinical radiographic syndrome characterized by altered mental status, headaches, visual disturbances, seizures along with vasogenic edema in bilateral parieto- occipital lobes.
- We present a rare case of PRES associated with supratherapeutic lithium level.

CASE DESCRIPTION

- 54 year old lady with history of bipolar disorder presented with **altered mental status and generalized weakness**.
- Vitals were stable. Physical exam revealed tremors, myoclonus and hyperreflexia.
- Metabolic and infectious work up for encephalopathy was negative.
- She was found to have **supratherapeutic lithium level 3.0**
- Despite drug discontinuation and normalization of lithium levels she remained encephalopathic.
- Computerized Tomography(CT) scan of head was normal. Electroencephalogram ruled out seizures/post-ictal state.
- Magnetic Resonance Imaging(MRI) of the brain revealed **subcortical hyperintensities symmetrically distributed in the parietal and parieto-occipital region** highly suggestive of PRES.
- We report gradual and complete neurological recovery with conservative management.

RADIOLOGY



- Clockwise: Hyperintensities in bilateral occipital lobe, parieto-occipital and frontal lobe

DISCUSSION

- Lithium has a narrow therapeutic index with toxicity manifesting as tremors, myoclonus, lethargy in addition to gastrointestinal disturbance.
- PRES is now being identified as a sequela of lithium toxicity which persists despite normalization of the lithium level.
- PRES is a reversible form of neurotoxicity which often under diagnosed due to its close resemblance with Syndrome of Irreversible Lithium Effectuated Neurotoxicity(SILENT).
- The mechanism of lithium toxicity leading to PRES remains a mystery with very few case reports in literature.

CONCLUSION

- Persistent or new neurotoxicity despite normalization of lithium levels should prompt work up for rare entities like PRES or SILENT.
- No treatment algorithm has been proposed yet given the rarity of this condition.
- A conservative approach with tighter blood pressure control has shown favorable outcomes.

REFERENCES

- Fitzgerald RT, Fitzgerald CT, Samant RS, Kumar M, Ramakrishniah R, Van Hemert R, Angtuaco EJ. Lithium toxicity and PRES: a novel association. J Neuroimaging. 2015 Jan-Feb;25(1):147-9. doi: 10.1111/jon.12094. Epub 2014 Feb 26. PMID: 24571251.