

Grand Rounds

“Will I ever see my baby again?”



Rick Blodi
August 2019

Patient Presentation

CC

Acute, painless bilateral vision loss

HPI

- 18 yo WF 2 weeks post-partum presented as transfer to ULH from outside hospital
- Woke up at 4:30 AM to breast feed with normal vision. Went back to sleep
- Woke up at 6:30 AM “completely blind”
- “Will I ever see my baby again?”



History (Hx)

Past Ocular Hx: contact lens wearer

Past Medical Hx: **2 wks post-partum
(uncomplicated, vaginal, epidural)**

Fam Hx: Unremarkable

Meds: None

Allergies: Nexium, omeprazole

Social Hx: No smoking, drugs, or alcohol

ROS: +Nausea, vomiting



External Exam

	OD		OS
VA	LP		LP/HM?
Pupils	4→3mm	No rAPD	4→3mm
IOP	16 mmHg		17 mmHg
EOM	full		full
CVF	Unable		Unable



Anterior Segment Exam

PLE	OD		OS
External/Lids	WNL		WNL
Conj/Sclera	White and quiet		White and quiet
Cornea	Clear		Clear
Ant Chamber	Formed		Formed
Iris	Flat		Flat
Lens	Clear		Clear

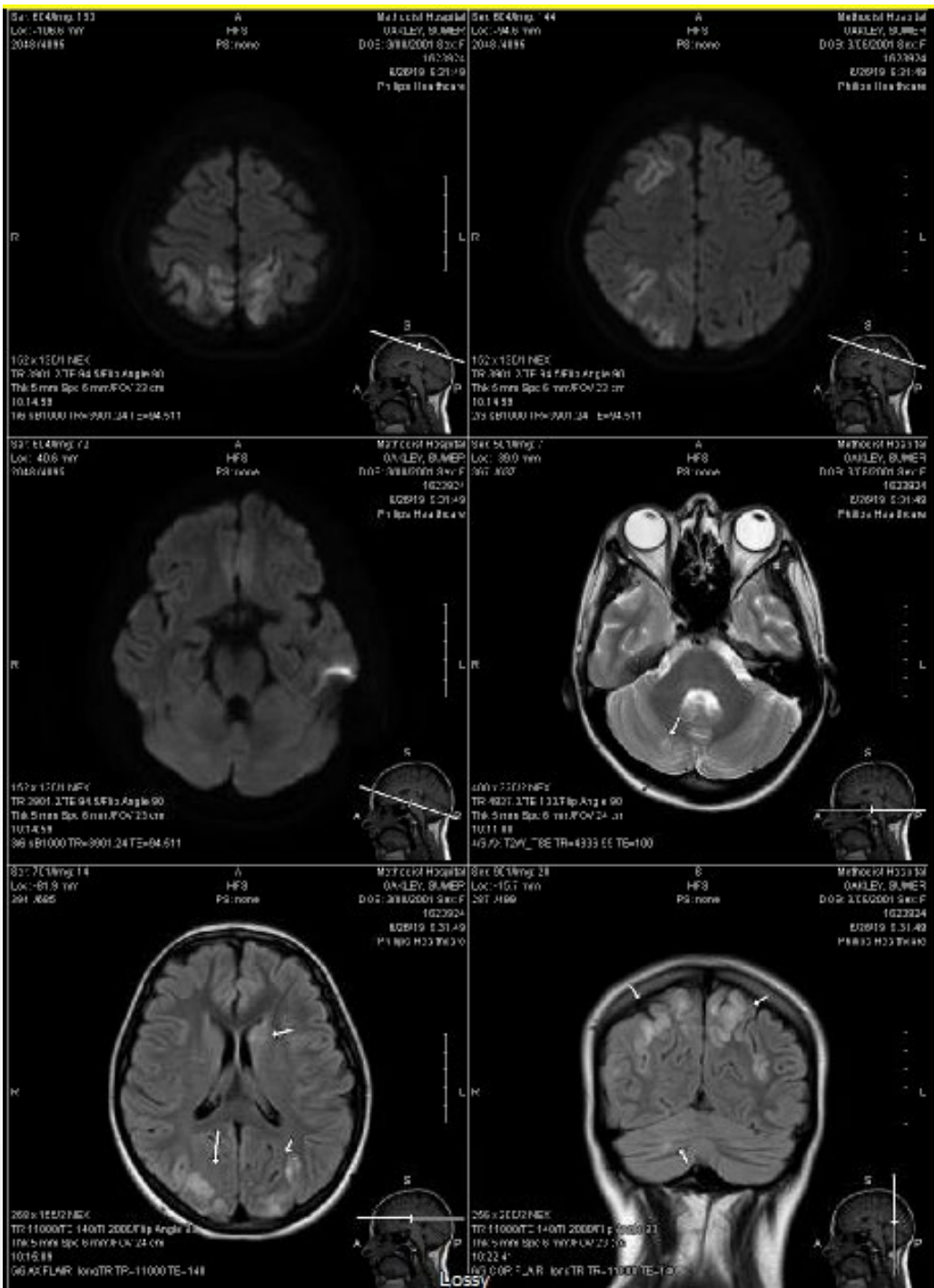


Posterior Segment Exam

Fundus	OD		OS
Optic Nerve	Pink and sharp, without pallor or edema		Pink and sharp, without pallor or edema
Macula	WNL		WNL
Vessels	WNL		WNL
Periphery	WNL		WNL

CT Head from outside hospital - Normal





MRI



Hospital Course

- Several episodes of hypertension
- Suffered seizure on the night of admission
- Received Ativan, Mg, and Keppra
- Was 20/20 OLU



Assessment

- 18 yo WF with acute, bilateral, painless vision loss with subsequent seizure. Benign eye exam. MRI notable for abnormal hyperintensity changes of bilateral occipital and posterior parietal as well as in the cortical area in right hemisphere
- Differential diagnosis:
 - Eclampsia
 - Posterior Reversible Encephalopathy Syndrome
 - Pituitary apoplexy
 - Central Serous Retinopathy
 - Venous Sinus Thrombosis
 - Posterior Circulation Stroke
 - Intracranial hemorrhage
 - Infective encephalitis
 - Autoimmune encephalitis
 - Toxic/metabolic encephalopathy



Posterior Reversible Encephalopathy Syndrome

- Fast onset
- Most common symptom
 - Headache
 - Altered mental status
 - Seizures
 - Visual disturbances
- Associated w **HTN**, transplantation, eclampsia, others



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A Reversible Posterior Leukoencephalopathy Syndrome

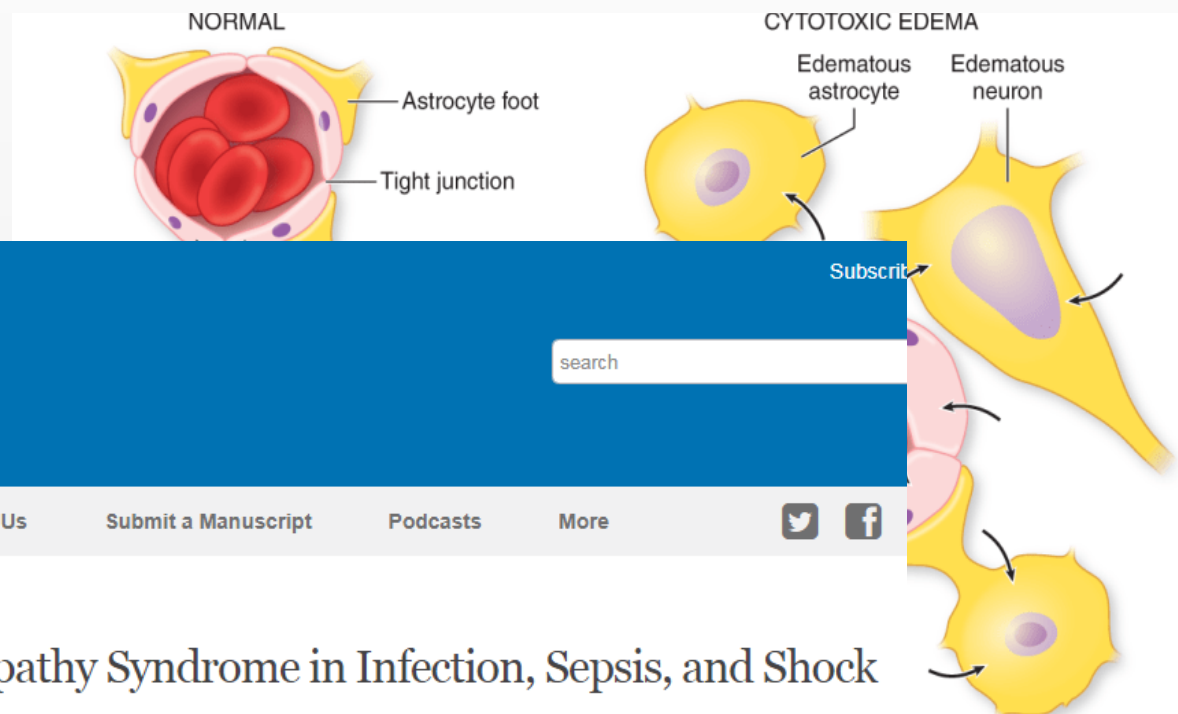
Judy Hinchey, M.D., Claudia Chaves, M.D., Barbara Appignani, M.D., Joan Breen, M.D., Linda Pao, M.D., Annabel Wan February 22, 1996

Catherine Lamy, M.D., Jean-Louis Mas, M.D., and Louis R. Caplan, M.D.

N Engl J Med 1996; 334:494-500

PRES Pathophysiology

- Underlying pathology is cerebral edema
- Controversial – two theories
 1. Severe HTN causes interruption of brain autoregulation
 2. Systemic inflammatory state causes endothelial dysfunction



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Research Article | BRAIN

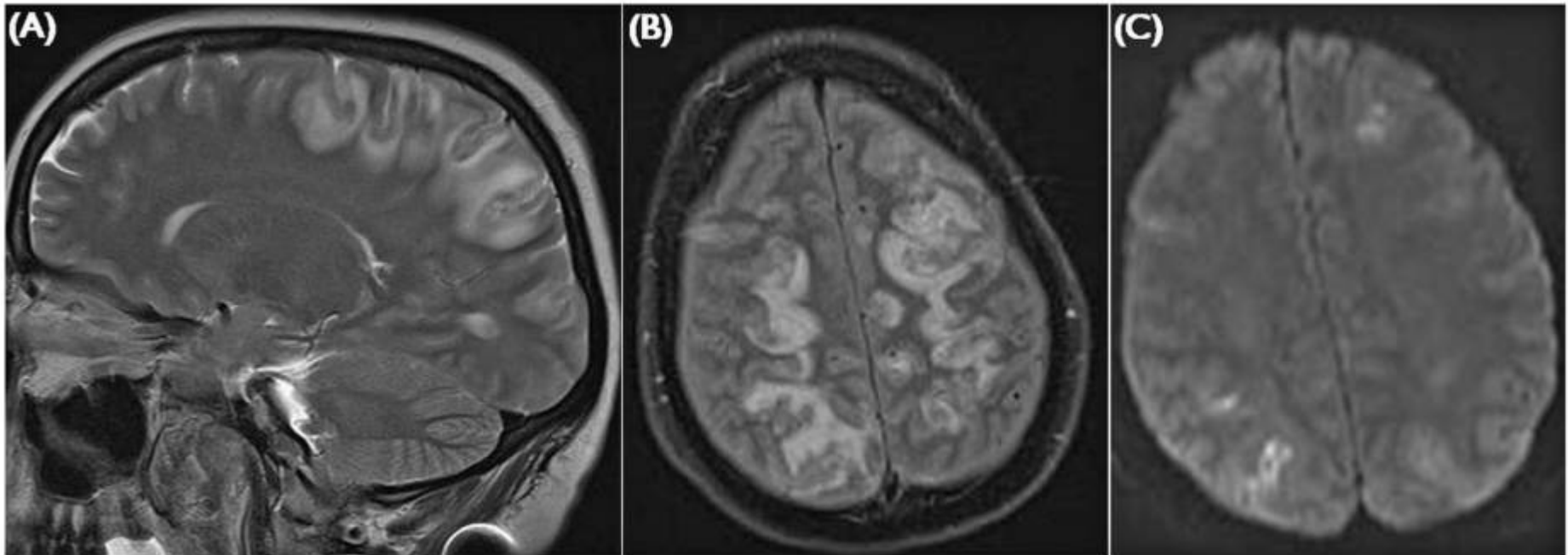
Posterior Reversible Encephalopathy Syndrome in Infection, Sepsis, and Shock

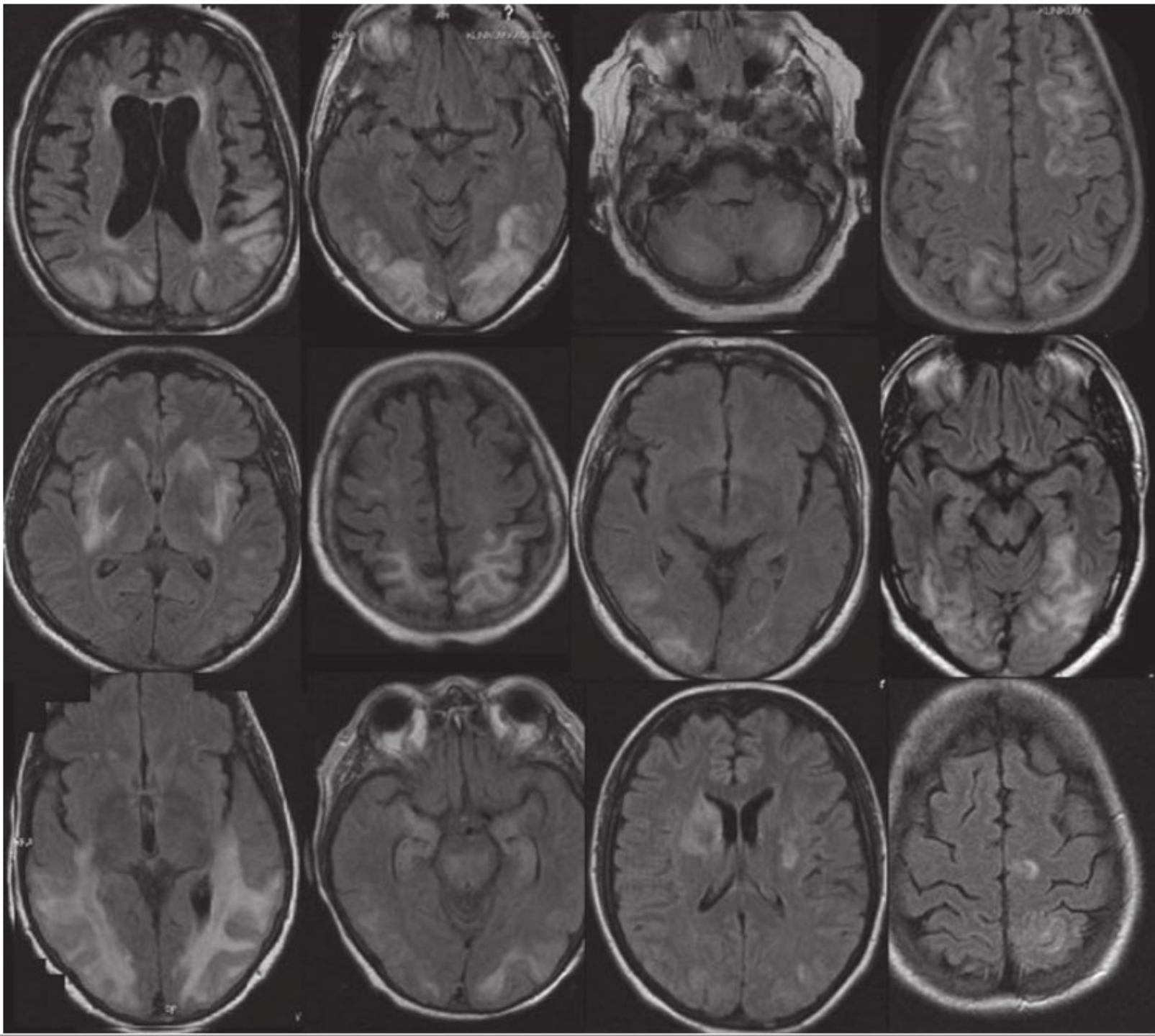
W.S. Bartynski, J.F. Boardman, Z.R. Zeigler, R.K. Shadduck and J. Lister

American Journal of Neuroradiology November 2006, 27 (10) 2179-2190;

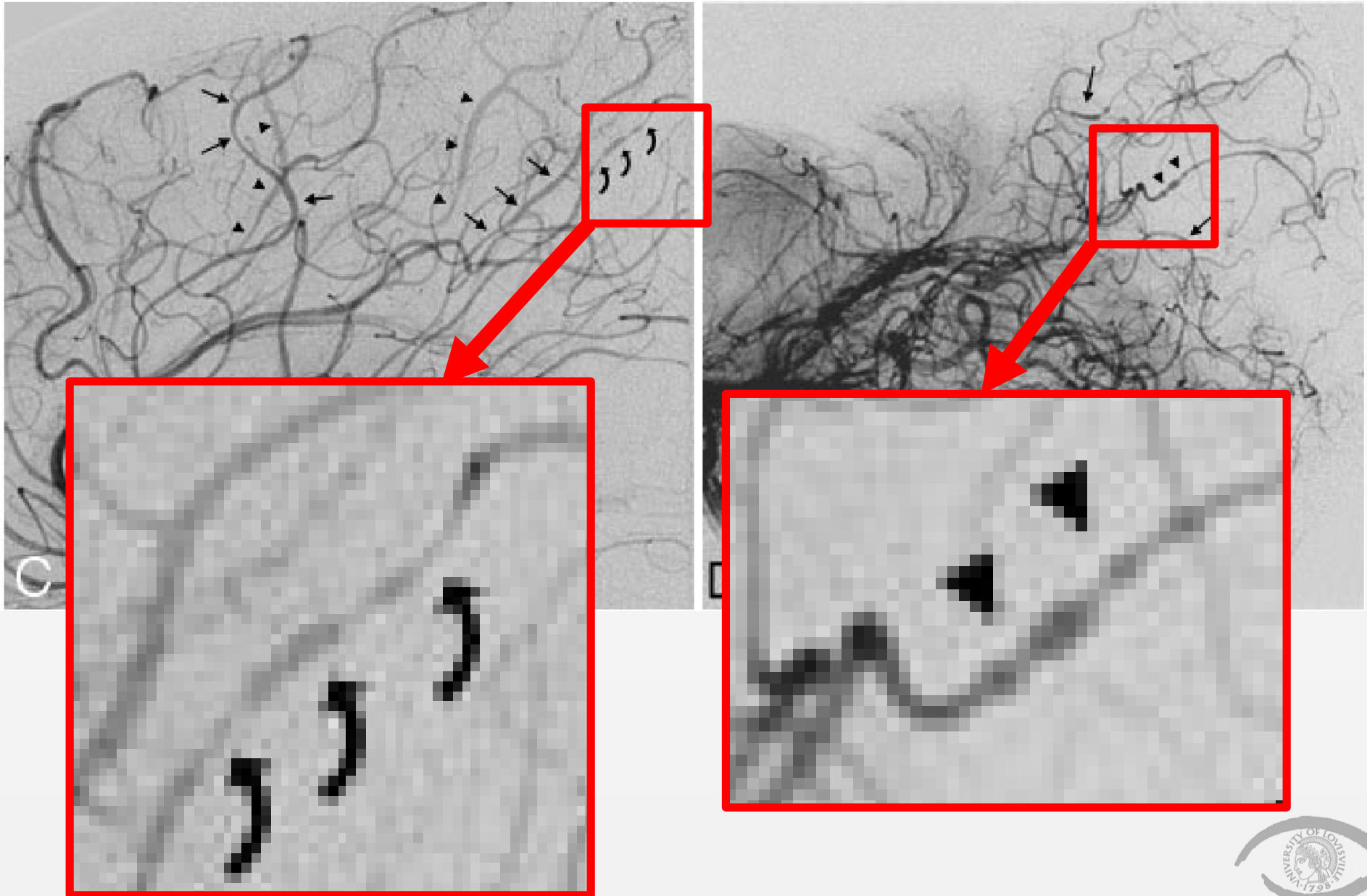
PRES Workup

- CT can be normal
- MRI: T2-hyperintense vasogenic edema of white matter in cerebral posterior regions
- EEG to identify subclinical seizures
- LP: r/o infection or subarachnoid hemorrhage





Catheter Angiography

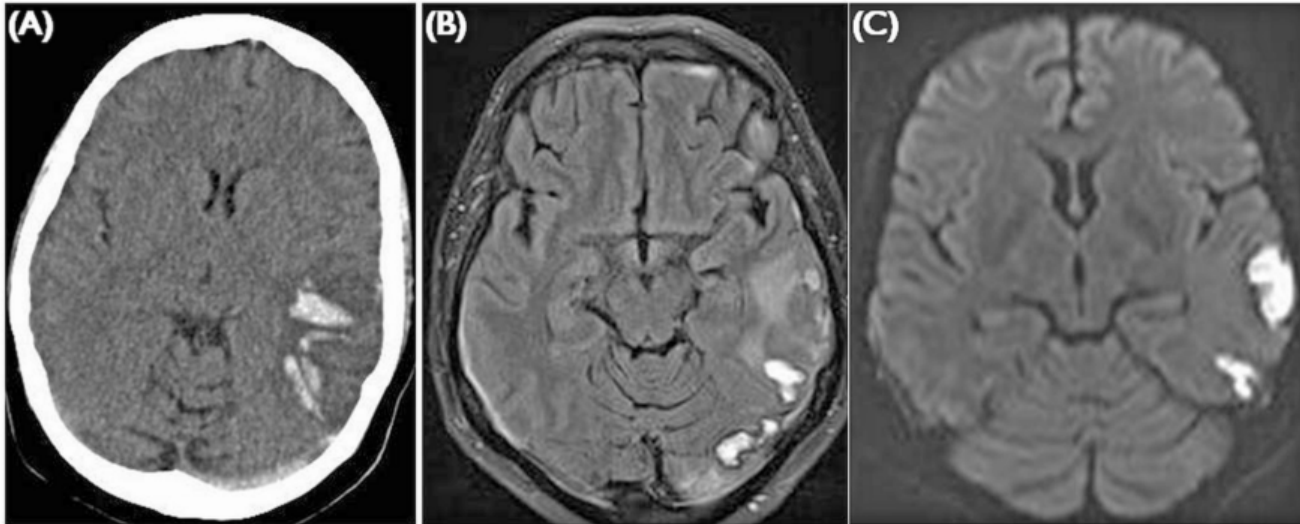


PRES Management

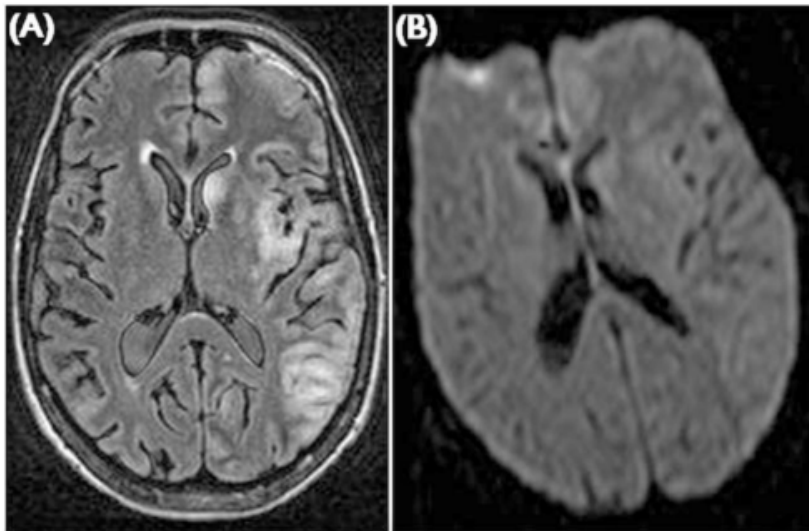
- Aggressive blood pressure management
- Withdrawal of offending drug
- Delivery in eclampsia
- Antiepileptics for seizures
- Ventilation for obtunded patients
- Corticosteroids?
- Prognosis: typical recovery within 8 days
- Recurrence in 4% of pts



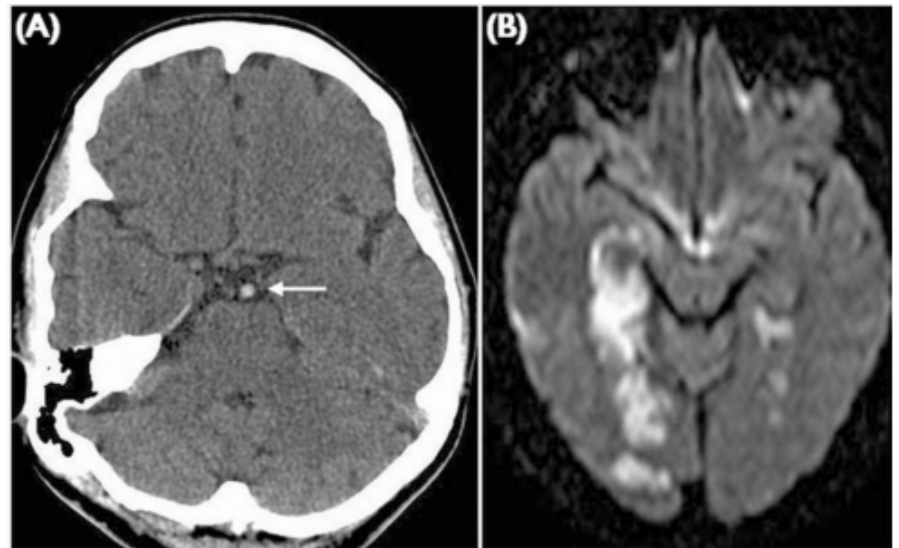
Rule out other causes



Venous Sinus
Thrombosis



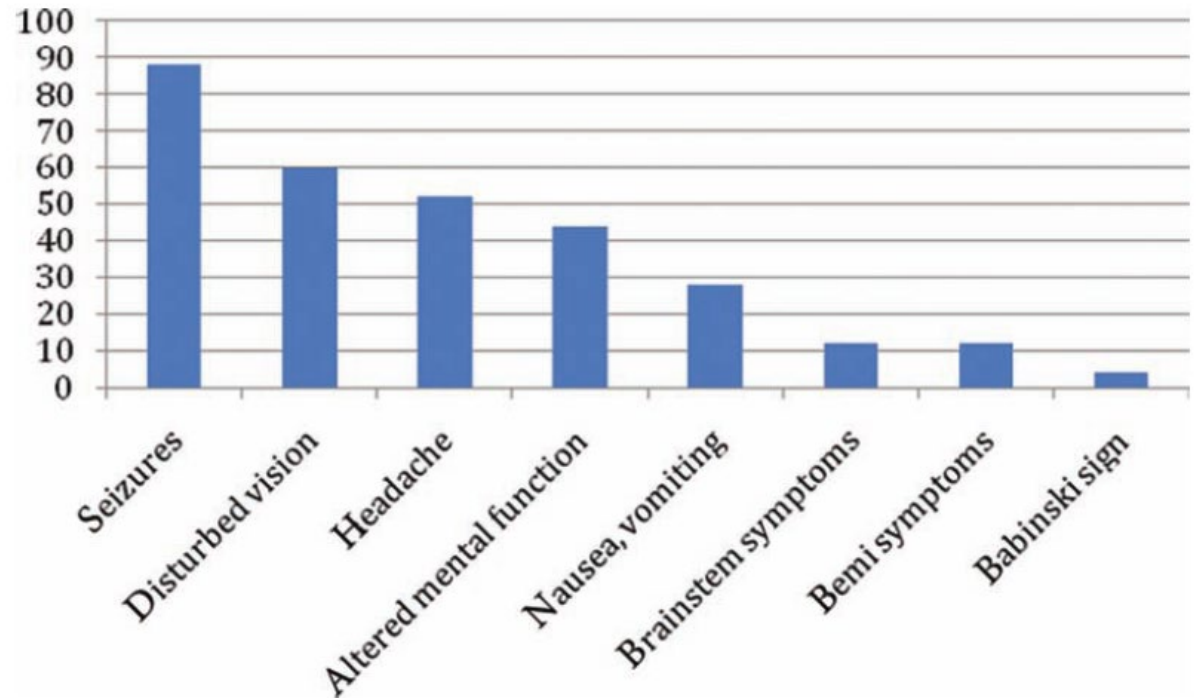
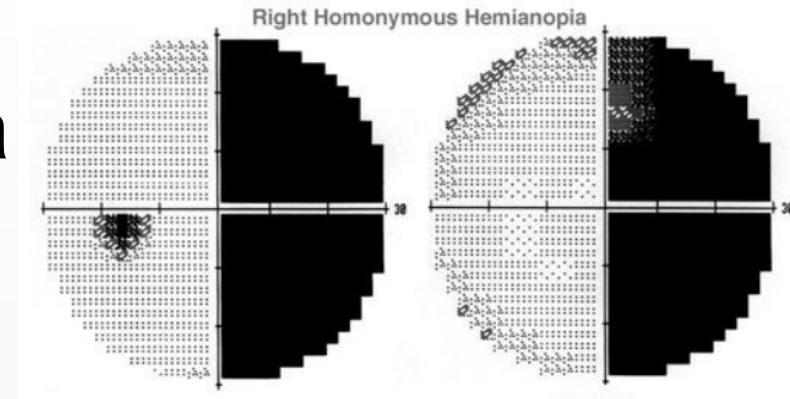
Herpes simplex encephalitis



Basilar artery thrombosis

PRES Visual disturbances

- Blurred vision
- Homonymous hemianopsia
- Cortical blindness
- Visual hallucinations
- Photopsias
- Fundus and pupils normal



Conclusions about PRES

- Fast onset, headaches, seizures, vision changes
- Association with HTN, eclampsia, others
- MRI shows bilateral, posterior edema
- Treat underlying cause
- Broad differential. Important to rule out other causes
- Important for ophthalmologists to be aware of!



References

- Hobson EV, Craven I, Blank SC. Posterior reversible encephalopathy syndrome: a truly treatable neurologic illness. *Perit Dial Int.* 2012;32(6):590–594. doi:10.3747/pdi.2012.00152
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