

# Cerebral Venous Thrombosis

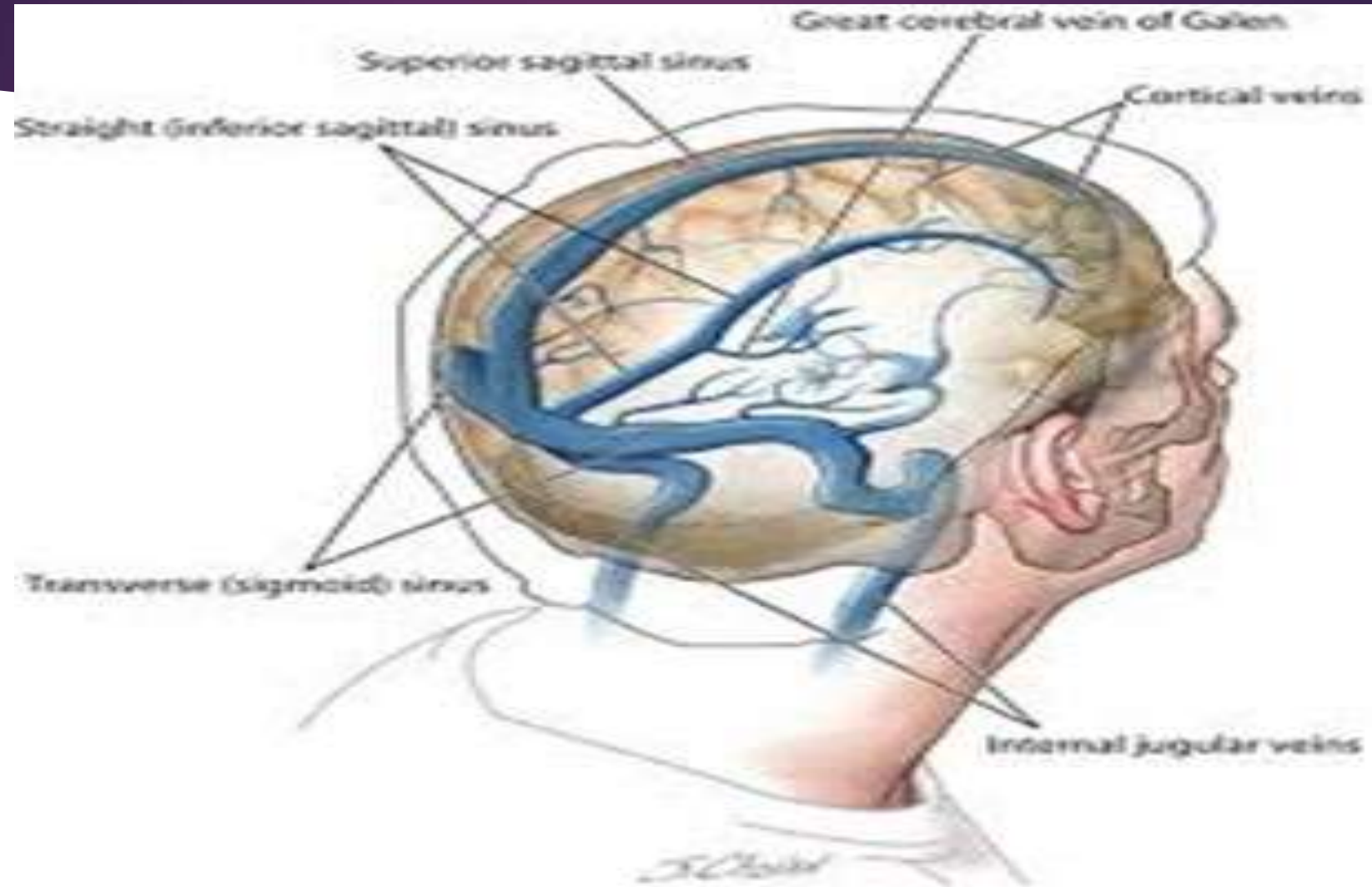



# JOIN THE MOVEMENT



**WORLD STROKE DAY**  
**OCTOBER 29TH**

**#1in4** adults will  
have a stroke, but  
being active can  
help decrease  
your risk.



- 
- ▶ less frequent,
  - ▶ younger patients
  - ▶ female predominance,
  - ▶ non-apoplectic onset
  - ▶ wider spectrum of clinical presentation syndromes,

- ▶ more difficult diagnosis,
- ▶ multiple risk factors
- ▶ vascular risk factors for arterial are not risk factors for CVT
- ▶ has a different treatment,
- ▶ much more favorable outcome

# Common associated conditions of CVT

## Women-specific risk factors

- ▶ Oral contraceptives
- ▶ Pregnancy
- ▶ Puerperium
- ▶ Hormone replacement therapy

## Genetic thrombophilia

- ▶ Protein S, C and anti-thrombin
- ▶ deficiencies, factor V Leiden,
- ▶ prothrombin mutations

# Acquired prothrombotic diseases

## Neoplastic diseases

- ▶ Myeloproliferative neoplasms
- ▶ Leukemia
- ▶ Solid neoplasms
- ▶ Meningioma

## Inflammatory diseases

- ▶ Antiphospholipid syndrome
- ▶ Systemic lupus
- ▶ Inflammatory bowel disease
- ▶ Nephrotic syndrome

# Acquired prothrombotic diseases

## Infections

- ▶ Head and neck
- ▶ Ear, mastoid, sinus, nose, face, skull

## Systemic

## Diagnostic and treatment procedures

- ▶ Chemotherapy, central venous catheter
- ▶ Lumbar puncture, neurosurgery

## Emerging risk factors

- ▶ Anemia
- ▶ Obesity



▶ Acute

▶ Subacute

▶ Chronic

▶ Headache

▶ Seizure

▶ Blurred vision

▶ Faint

▶ Focal sing

▶ Dizziness , vertigo



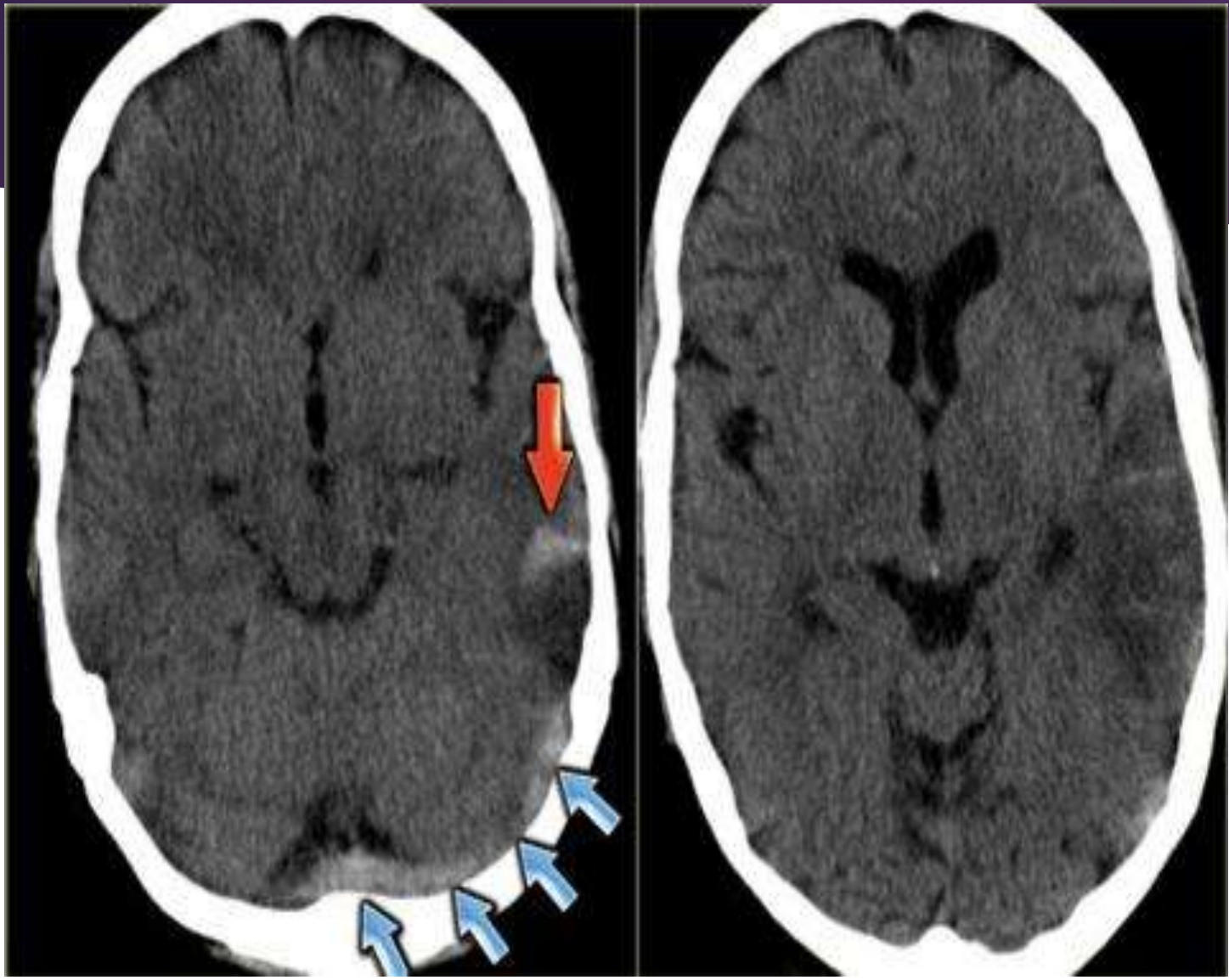
# Diagnosis

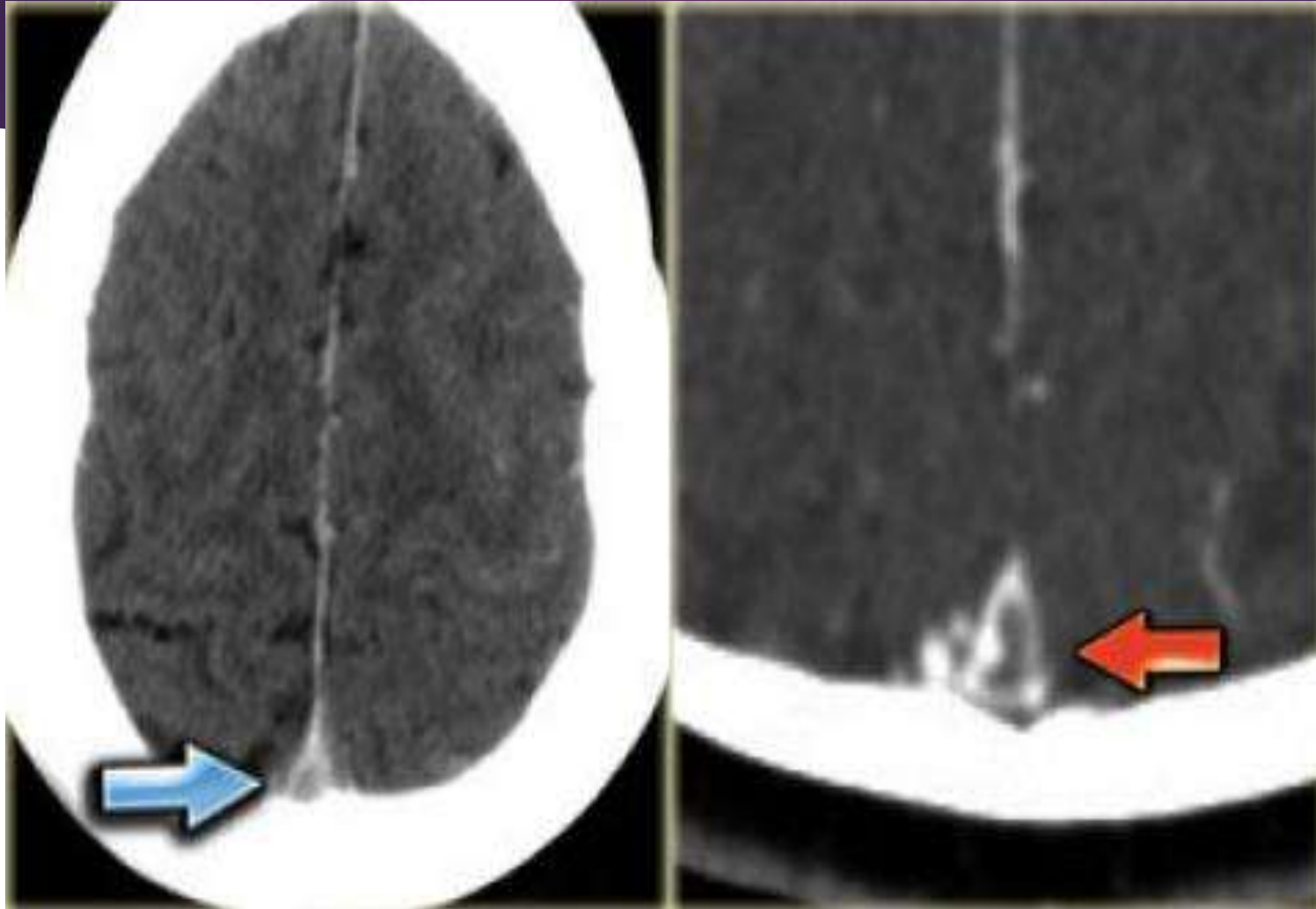
Diagnosing CVT in the emergency setting can be challenging

# Spiral brain CT scan

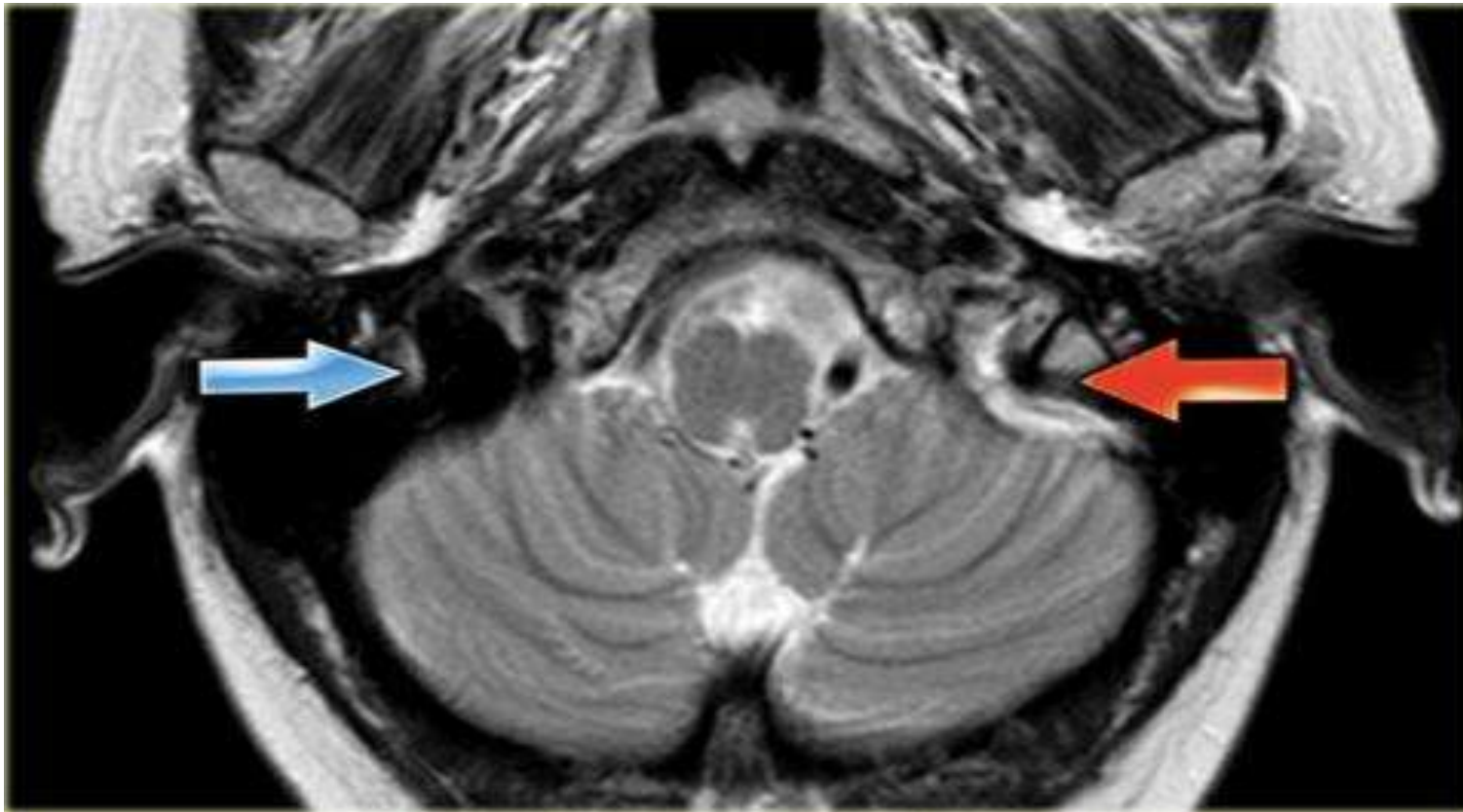
- ▶ Delta empty sign
- ▶ Dense triangle
- ▶ Cord sign

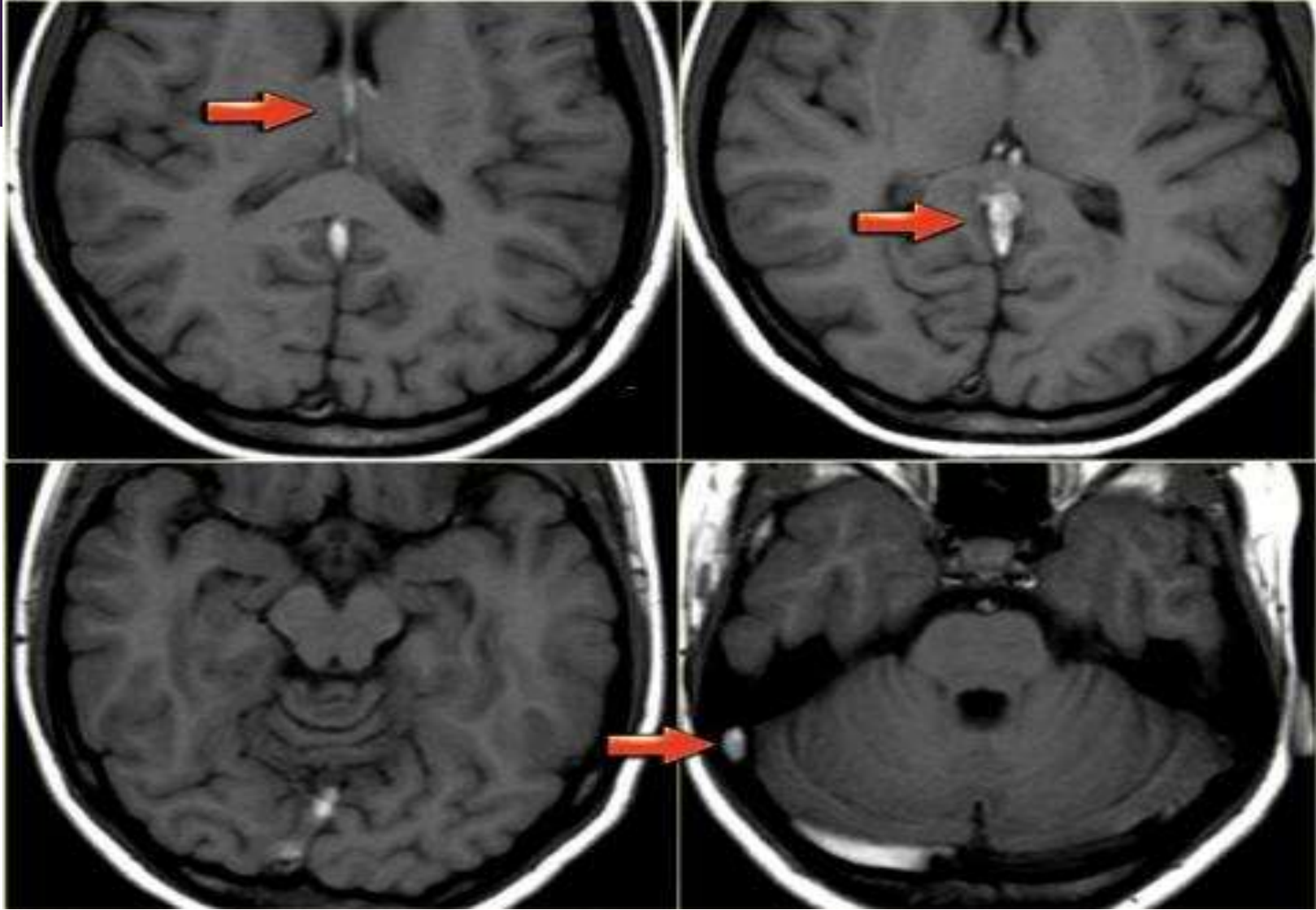






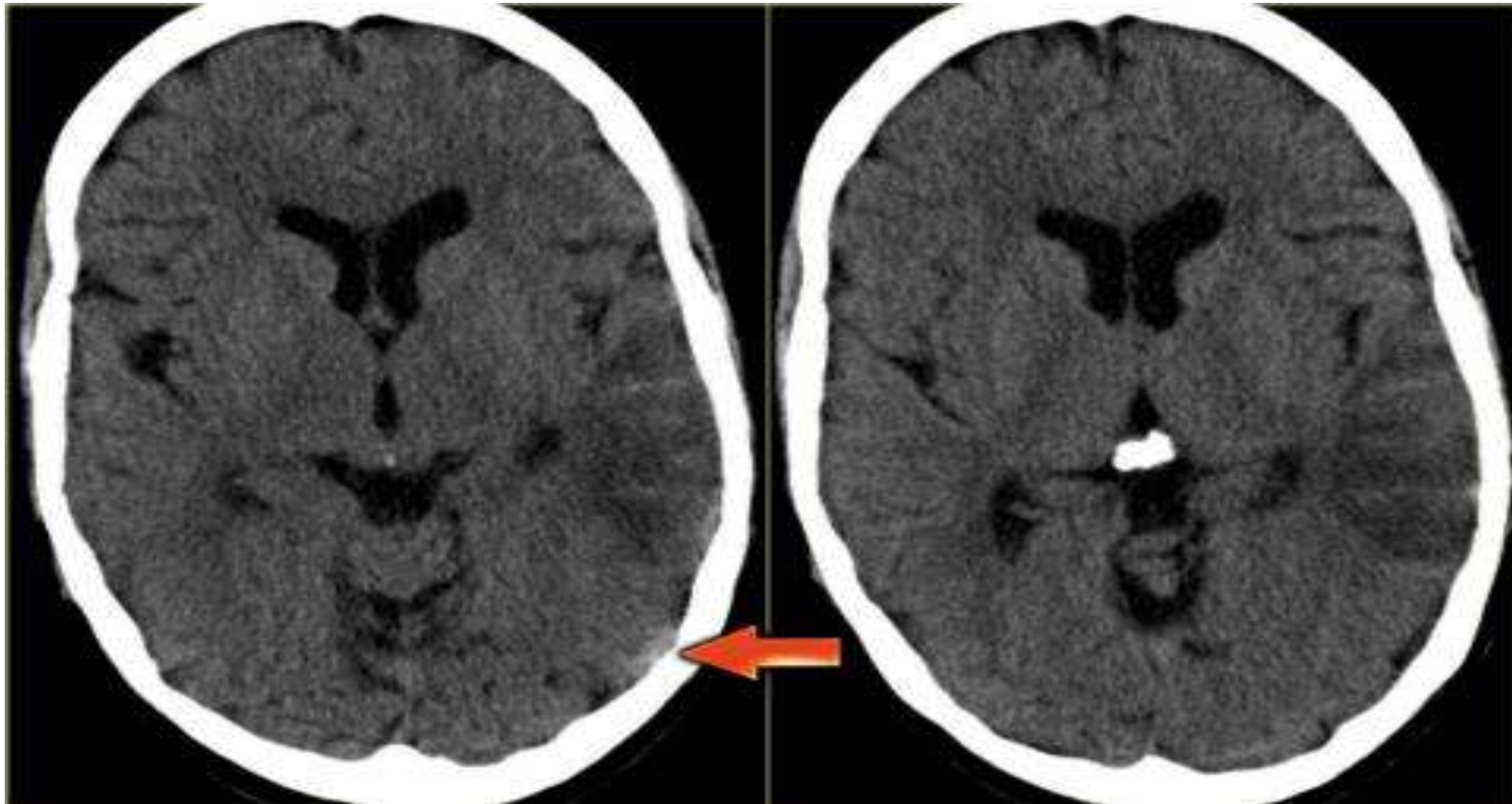
flow void



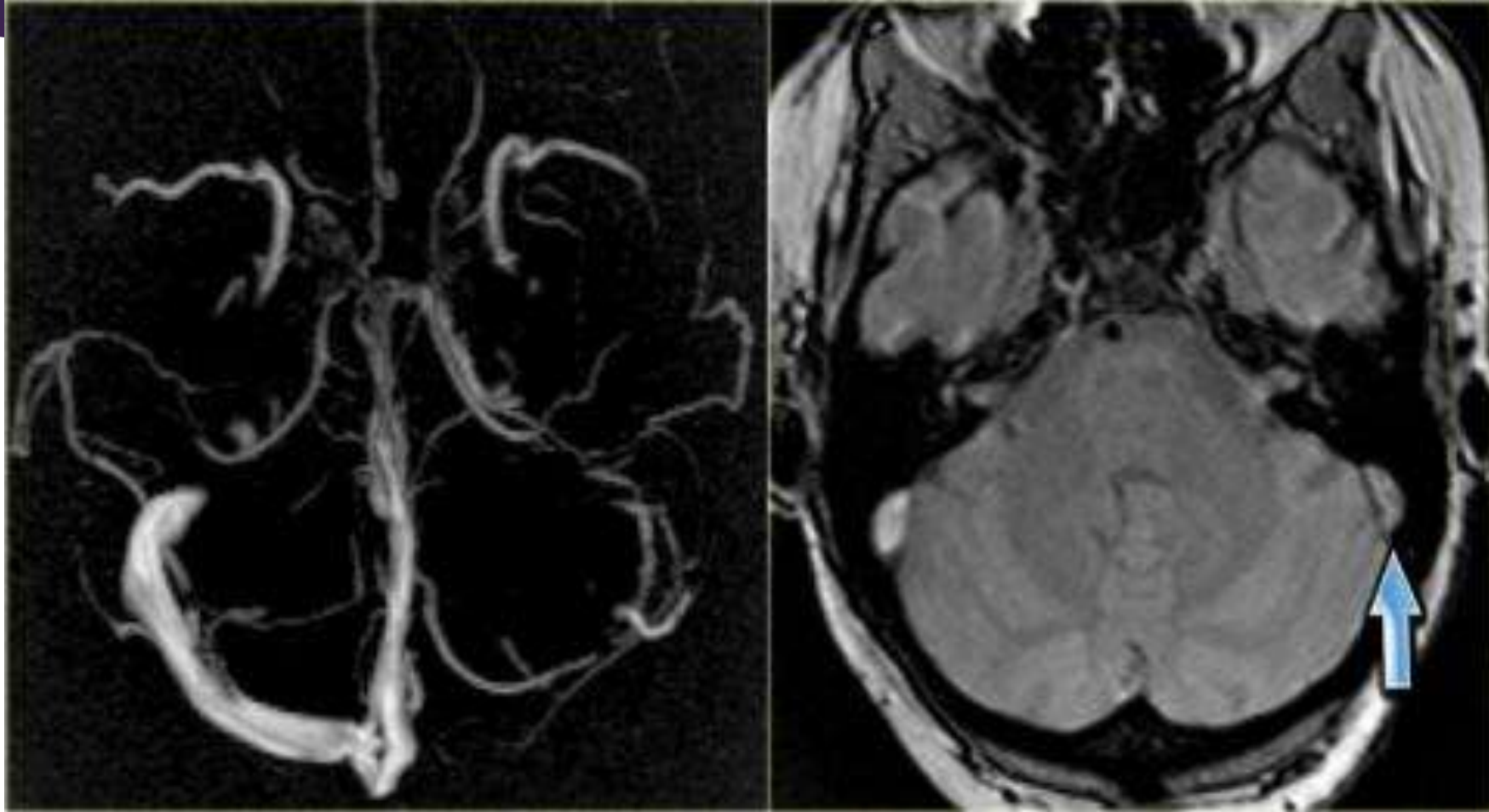


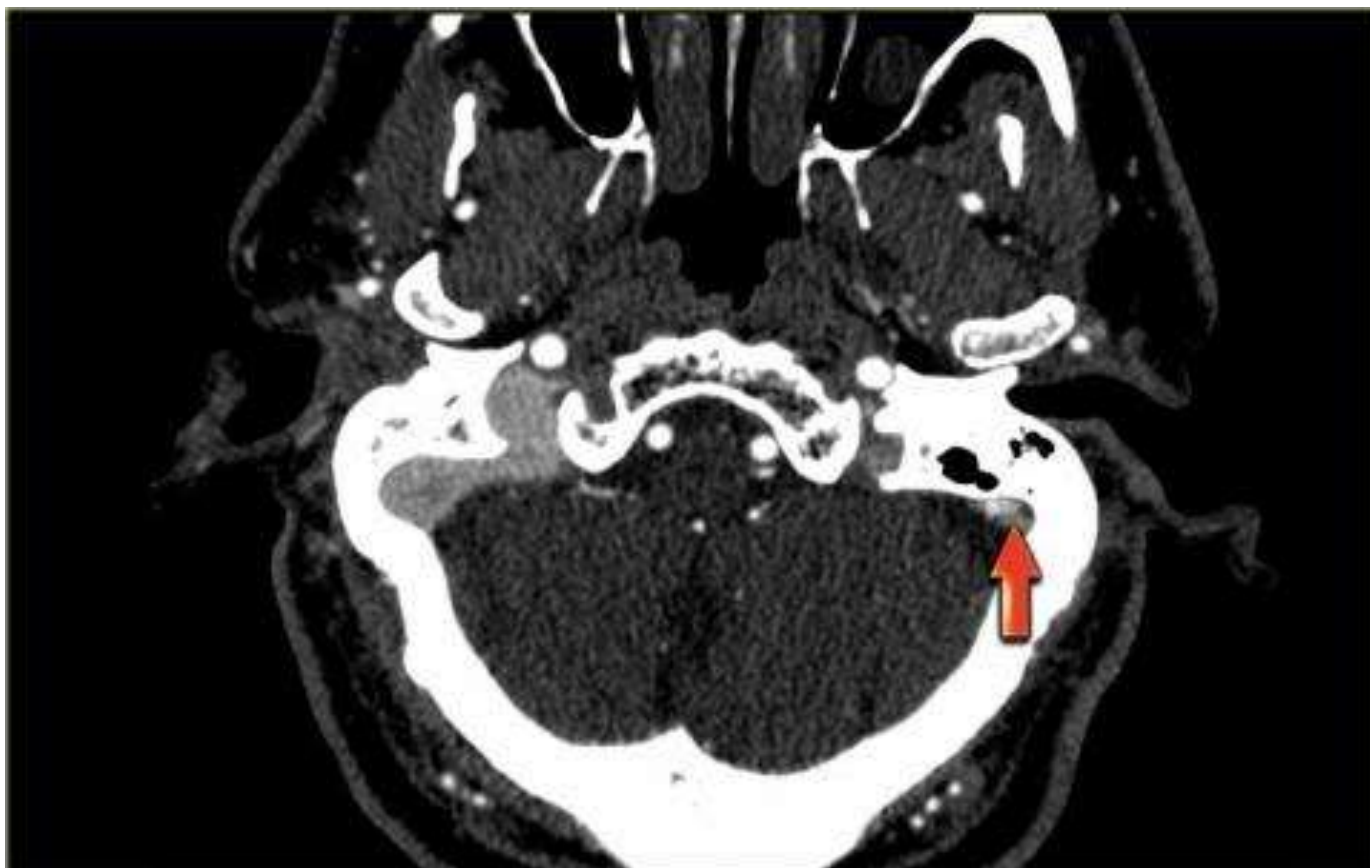


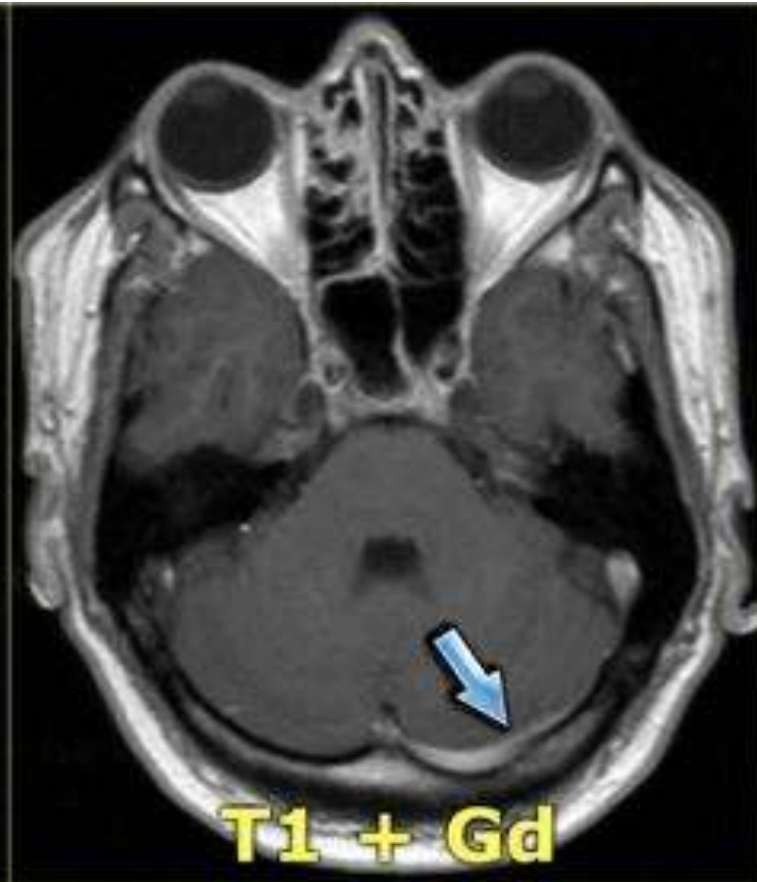
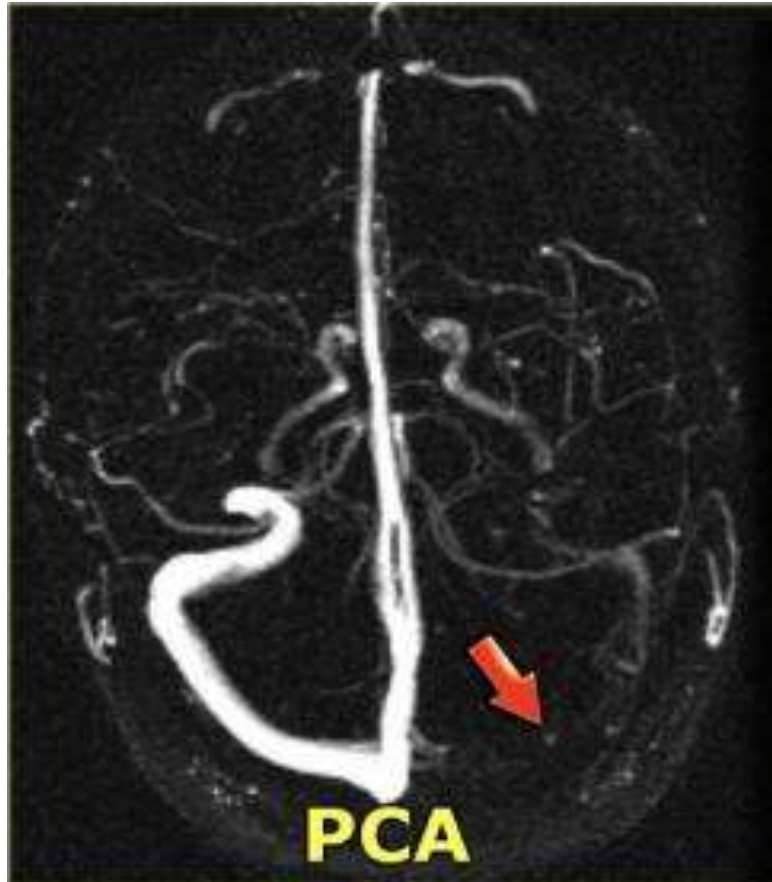
# Vein of Labbe



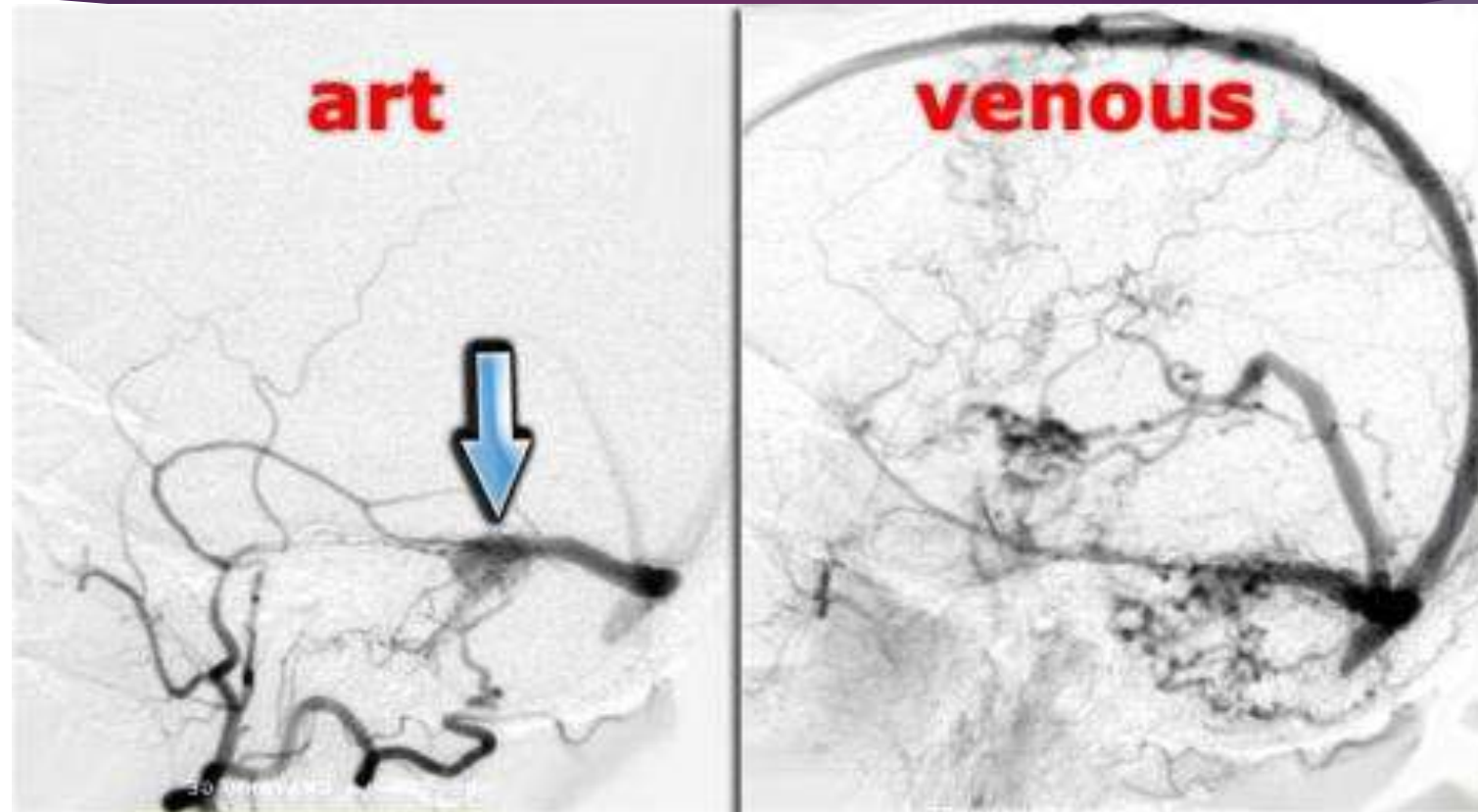


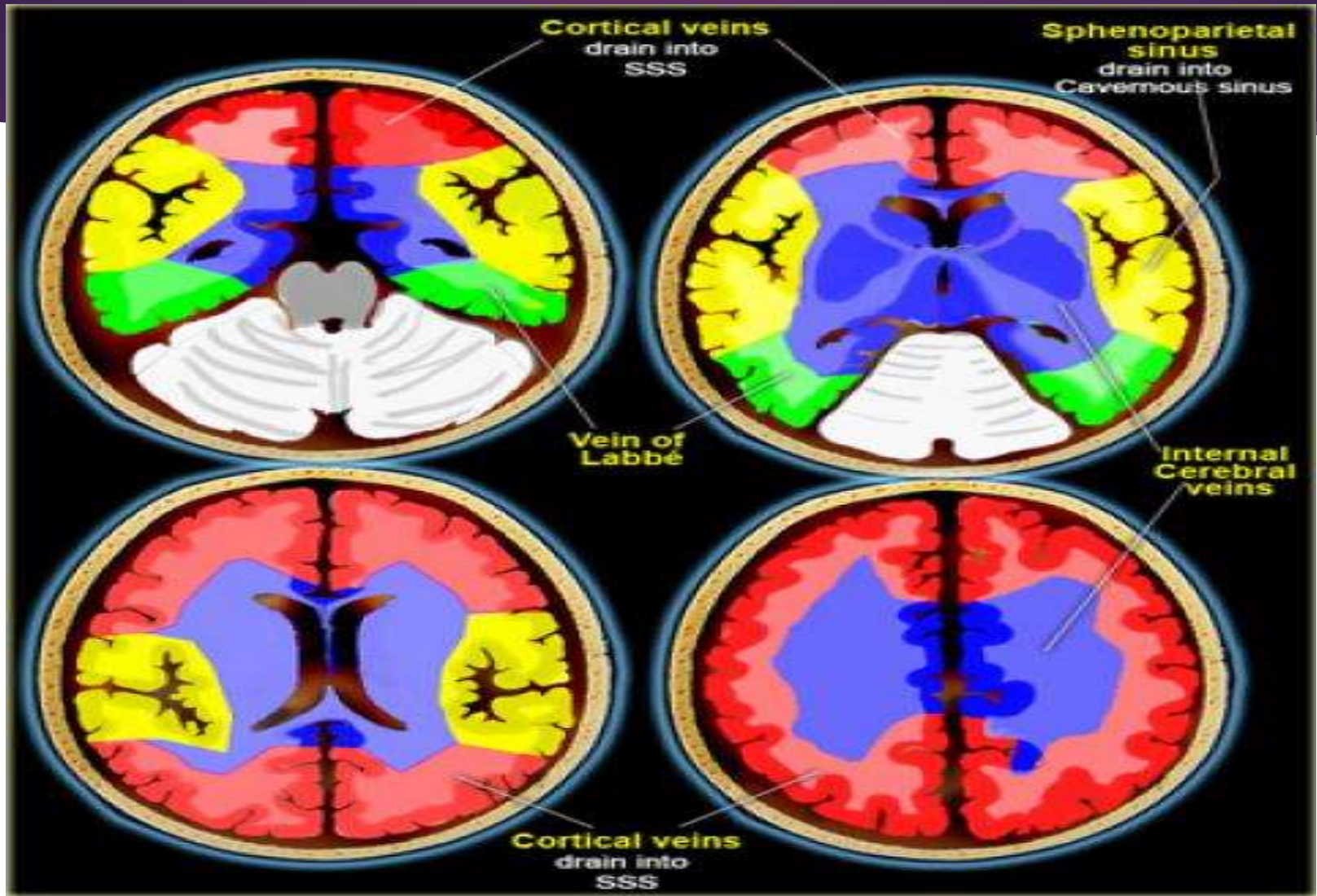






# Dural Venous Fistula





## When to think of venous thrombosis

Direct sign of thrombus	Dense clot sign
	Cord sign
	Empty delta
	Loss of normal flow void on MR
Venous infarction	Bilateral - <i>parasagittal</i> <i>bithalamic</i>
	Temporal lobe infarction
	Cortical edema or hemorrhage
	Peripheral lobar hemorrhage
Clinically	Seizures
	Headache
	Loss of consciousness

# Treatment

- ▶ Acute phase : IV Heparin / LMWH
- ▶ Consider : hematoma enlargement

# Treatment

- ▶ Maintenance : warfarin (vitamin K antagonists)  
NOAC or DOA

3-12 months

- ▶ If genetic causes / active cancer /  
antiphospholipid syndrome





# Pregnancy and CVT

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## Asian Study of Cerebral Venous Thrombosis

Mohammad Wasay, MD, FRCP, FAAN,\* Subash Kaul, MD,† Bindu Menon, MD, DM,‡

Alper I. Dai, MD,§ Mohammad Saadatnia, MD,¶ Abdul Malik, MD,||

Ahmed Khalifa, FRCP,# Afshin Borhani-Haghighi, MD,\*\*

Manmohan Mehndiratta, MD, FRCP,†† Maria Khan, FCPS,‡‡

Nimalendu Bikash Bhowmik, MD,§§ and Safia Awan, MSc\*

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*Background/Objective:* Most of the studies and registries related to cerebral venous thrombosis (CVT) are reported from European countries and the United States. The objective of the present study is to identify risk factors, presentation, and outcome of

