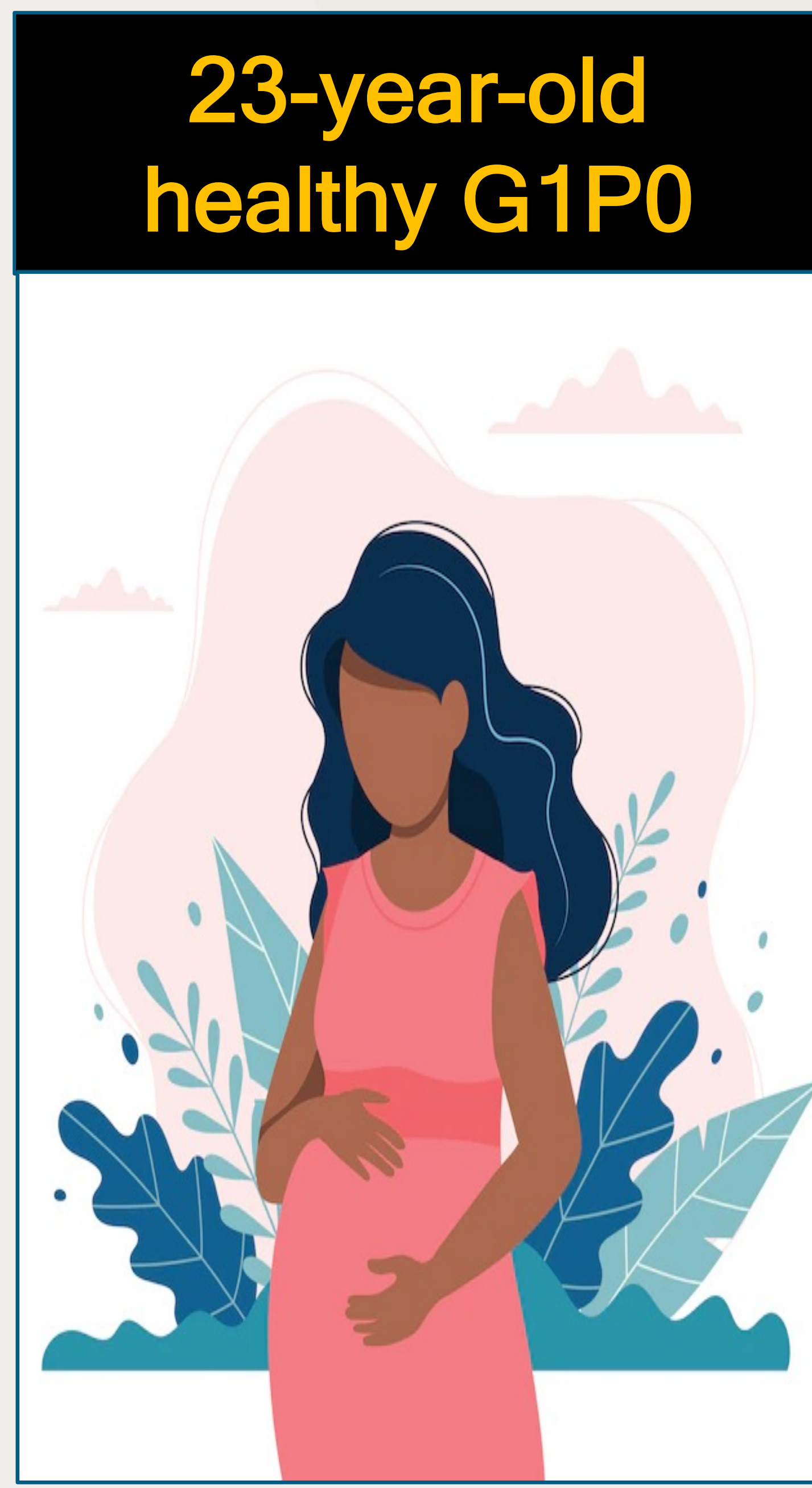


Spontaneous Rupture of an Invasive, Nonresectable Buccal AVM During Pregnancy: Prenatal Management and Anesthetic Implications



Ashley Lewis MD, Britany Raymond MD, Kaitlyn Brennan DO
Obstetric Anesthesiology Division, Vanderbilt University Medical Center



23-year-old
healthy G1P0

18w0d

PRESENTS WITH PROFUSE
ORAL BLEEDING

- Stabilized: MTP & emergent intubation (awake fiberoptic)
- Imaging: Buccal AVM
- Intervention: embolization of the left internal maxillary artery

2nd Trimester

WORKUP AND PREPARATION

Consults:

- High-Risk Ob Anesthesia
- Neurosurgery
- Ethics
- Palliative

Imaging: Pulmonary & Uterine

Postpartum

FOLLOW UP

- Serial imaging
- Follows with ENT and Neurosurgery
- No definitive treatment to date

- Massive transfusion protocol initiated
- Repeat embolization of the left internal maxillary artery
- Extubated, Discharged POD#6

POD#2

REBLEED

37w0d

SCHEDULED CESAREAN DELIVERY

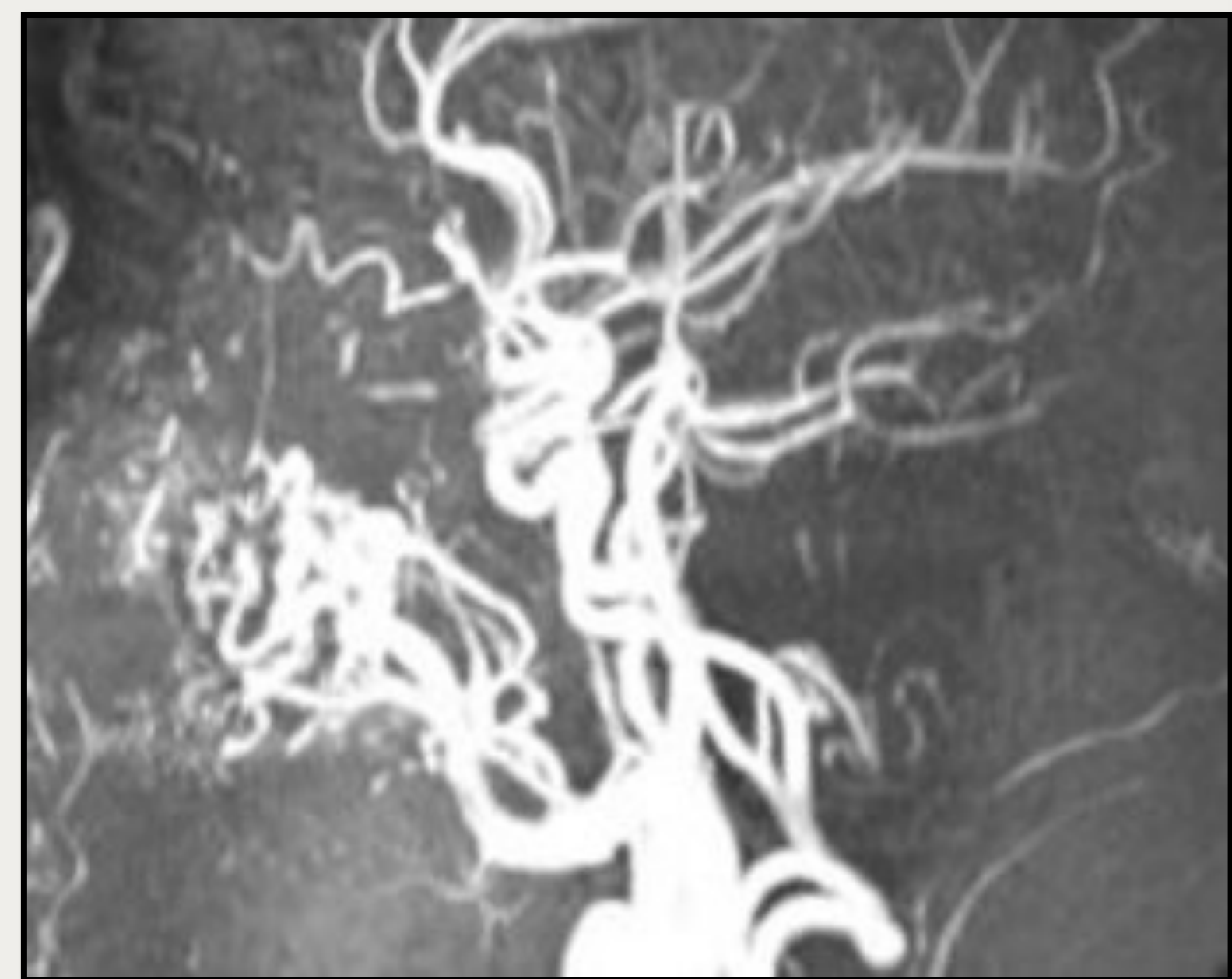
WHAT ARE AVMs?

Arterial venous malformations (AVMs) are a rare congenital type of vascular malformation resulting from developmental vascular defects.

HOW ARE AVMs AFFECTED BY PREGNANCY?

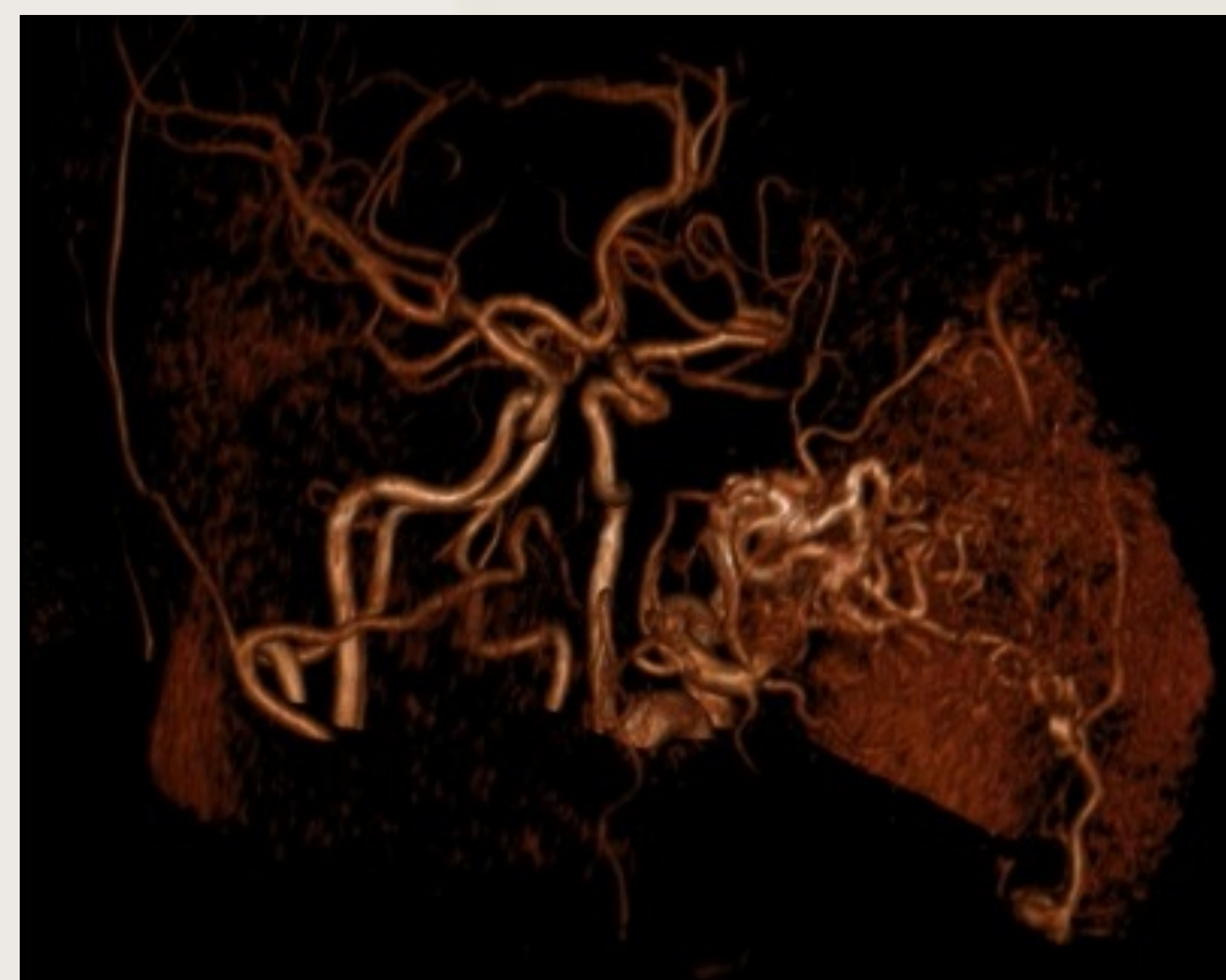
Pregnancy is a risk factor for expansion or bleeding due to the hormonal and physiologic changes of pregnancy.¹ Symptomatology changes based on the location.

HOW IS DIAGNOSIS CONFIRMED?



IMAGING:

- Doppler
- CT
- MRA
- Angiogram



ASSOCIATED PATHOLOGY



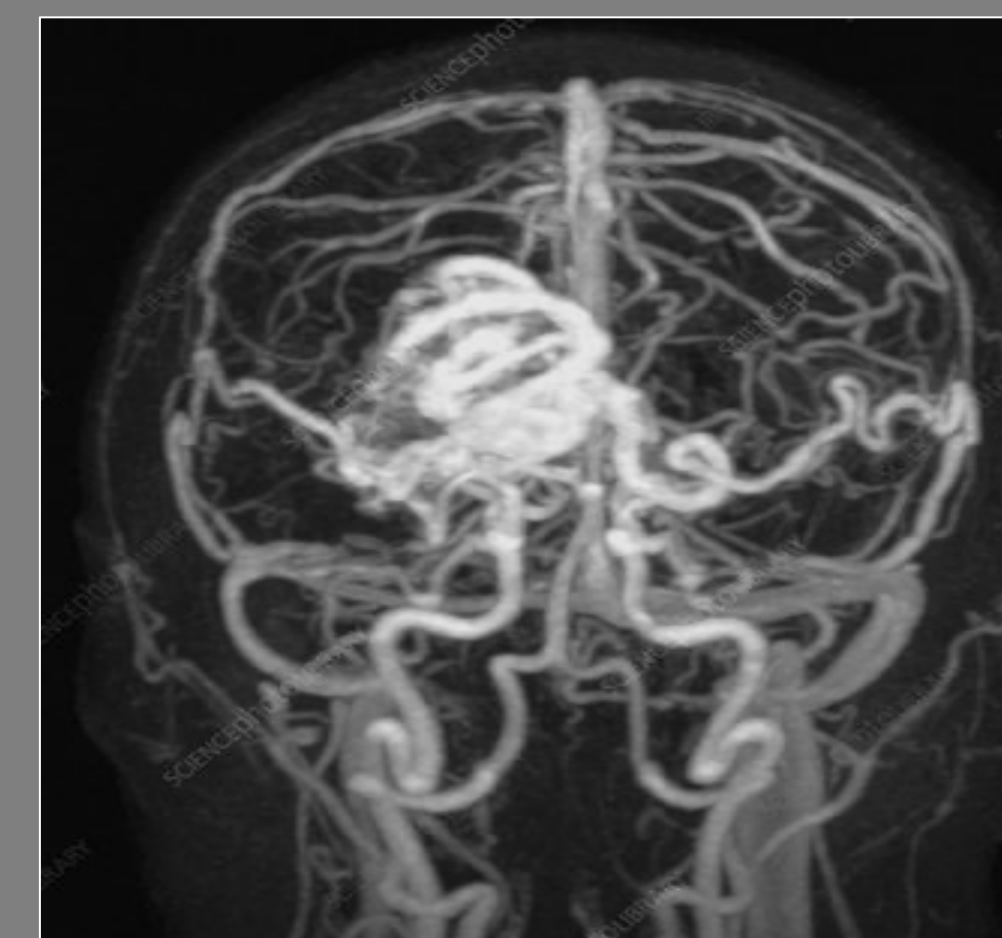
SPINAL AVMs

Spinal AVMs are exceedingly rare.² Spontaneous or traumatic rupture may lead to spinal-epidural hematoma.



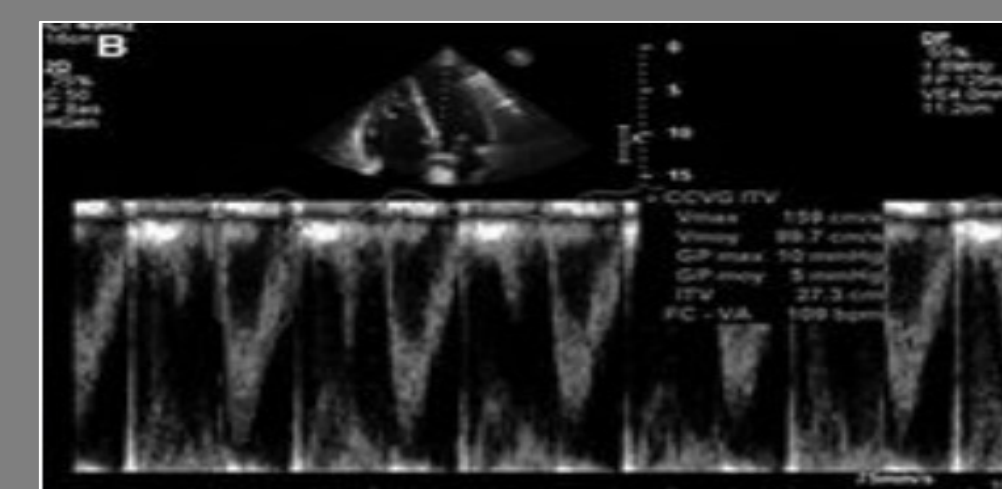
PULMONARY AVMS

Presence of a concurrent pulmonary AVM confers markedly increased risk. Patients with an AVM in a non-pulmonary location should be screened for the presence of pulmonary AVMs during pregnancy.⁴ PAVMs may result in paradoxical embolic stroke, brain abscess, migraines. Definitive treatment recommended in the 2nd trimester.³



INTRACRANIAL AVMs:

Most common type. May result in stroke, seizure, & neurologic deficit.



HIGH OUTPUT HEART FAILURE

LEARNING POINTS: MANAGEMENT OF AVM DURING PREGNANCY

Prenatal Management

IMAGING

- Cerebral
- Pulmonary
- Uterine

TREATMENT

- Medical therapy
- Embolization
- Resection

Anesthetic Management

Neuraxial Anesthesia

Spinal Imaging
is NOT recommended⁴

Neuraxial anesthesia
is not contraindicated

General Anesthesia

Aim to attenuate the
sympathetic surges
associated with
tracheal
intubation/extubation

Avoid hypertension

Prepare For Bleeding

PREVENTATIVE

- salt sinus rinse

ACTIVE BLEED:

- Oxymetazoline-soaked combat gauze to tamponade
- Secure the airway
- Notify ENT, OMFS, Trauma, OB/MFM, Neurosurgery

