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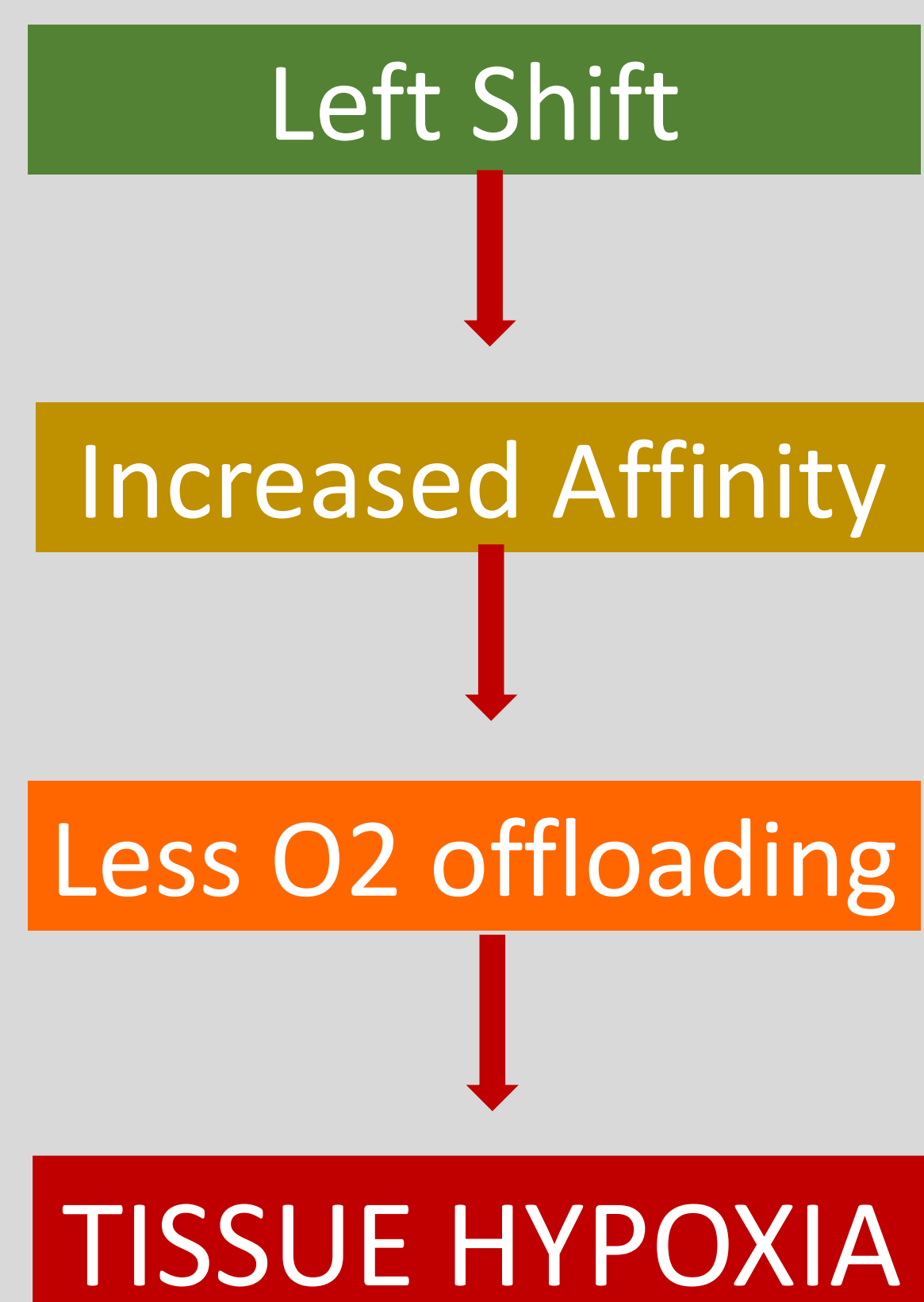
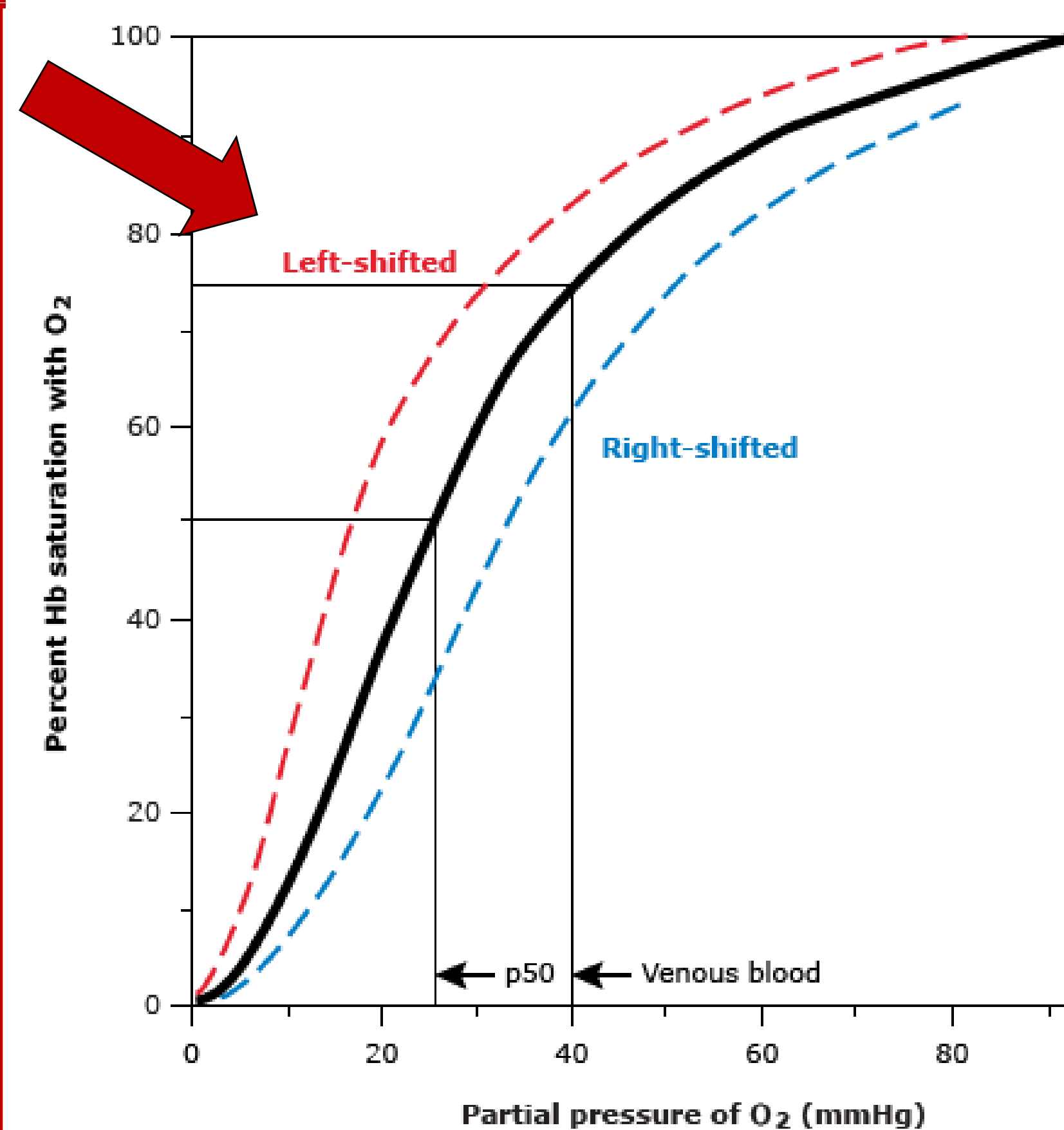
Case: Background

- 23 year old G1P0 at 36w4d with lower extremity edema, HTN, and dyspnea
- SpO2 in the mid 80s, despite O2
- IOL for preeclampsia
- ABG PaO2 >100 mmHg, MetHgb 14.8%
- Blood appeared chocolate brown



Methemoglobinemia

- Abnormal hemoglobin, O2 cannot bind normally
- Left shift of dissociation curve → tissue hypoxia
- Congenital or acquired
 - Acquired: antibiotics, nitrites, local anesthetics



Differential Diagnosis

Methemoglobinemia

- Hypoxia
- Cyanosis
- Somnolence
- Brown blood

Malaise
Headache

Dyspnea
Seizures

Pre-Eclampsia

- Hypertension
- Proteinuria
- Renal failure
- Liver injury
- Edema

Case: Methemoglobin Levels

Time	Level
Admission	14.8%
Hour 4 (epidural)	14.0%
Hour 8	13.9%
Hour 12	14.1%
PPD 1	13.7%
PPD 2	13.3%

Case: Management/Labor Course

- Arterial line placed
 - Symptomatic dyspnea, preeclampsia
 - Unreliable SpO2
 - Ensure adequate fetal oxygenation
- Maternal fetal medicine, anesthesiology, pulmonology consultation and collaboration
- Early epidural placement, bupivacaine + fentanyl
- Trended methemoglobin levels with local anesthetic running, did not require change in dose/drug
- Plan was to hold methylene blue treatment unless MetHgb levels rose, or clinical status deteriorated
- Uncomplicated delivery, referred for outpatient workup of presumed congenital methemoglobinemia

Teaching Points

- Physiology of pregnancy may unveil previously undiagnosed conditions
- Management must also include fetal wellbeing
- Employ multidisciplinary approach whenever possible
- Monitor closely during intrapartum period, as physiologic conditions may change rapidly/frequently
- Adequate postpartum follow-up is important

Treatment

- Discontinue exacerbating medications
- Severe cases → MetHgb levels > 30%
 - Methylene blue, vitamin C
 - Exchange transfusion, Hyperbaric therapy

