



# Stabilization of the Critically Ill Infant

**Dina Wallin, MD**  
March 10, 2026



The image features a white background with several clusters of vibrant green tropical leaves. In the top-left corner, there is a small sprig of a palm-like leaf. The right side of the image is dominated by a dense arrangement of various leaves, including large, deeply lobed monstera leaves and several feathery palm fronds. The bottom-left corner also shows a portion of a large, lobed leaf. The text is centered on the left side of the page.

A 15-day-old is brought in for poor feeding and fast breathing.

Afebrile, HR 190, RR 70, sat 97% on RA, pale but awake



# Take-away points

Resuscitate first,  
diagnose later.

Bad is bad, regardless of  
age.

Before you think  
zebra, feed the  
horse.





# Goal

To improve initial evaluation and stabilization of critically ill infants, with a focus on high risk diagnoses.



The slide features a white background with decorative tropical elements. In the top left, there are large, dark green monstera leaves. In the top right, there is a palm frond. On the left side, there is a Bird of Paradise flower with orange and blue petals and green bracts, surrounded by various green leaves. In the bottom right corner, there are more monstera leaves.

# Objectives

After attending this session, learners will be able to:

- Apply a **systematic approach** to the critically ill infant
- Explain **prioritized stabilization** of these patients
- Describe subtle presentations of several **high risk diagnoses**



1

# Systematic Approach

A decorative border of various tropical leaves, including Monstera and palm leaves, surrounds the central text. The leaves are in shades of green and teal, with some showing natural holes and patterns.

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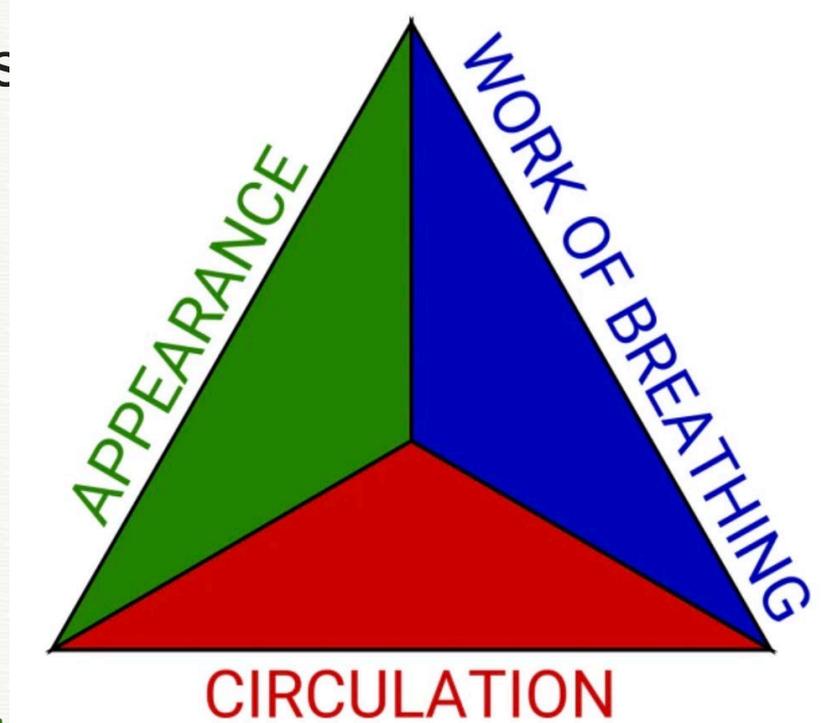


# Important diagnostic categories

- Respiratory / airway
    - **Most common**
  - Shock / cardiovascular
  - Metabolic / endocrine
  - Infectious
  - Neurologic
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# Step 1: Rapid impression

- Sick or not s



A vibrant tropical floral arrangement featuring a large, bright red hibiscus flower in the center. The flower is surrounded by various types of green foliage, including large, dark green monstera leaves with characteristic holes, and several palm fronds in shades of light and medium green. The entire composition is set against a plain white background.

2

ABCDE

# Step 2

- Airway
  - Suction
  - Placement
- Breathing
  - Rate
  - > 60 a
  - Blow
- Circulation
  - HR, p
  - Brad
  - POCU
  - 10 m



ation

## Step 2: ABCDE

- **Disability / Dextrose**
  - **Check glucose immediately**
    - ... and know how to replete
    - **Rule of 50s**
  - AVPU
  - Tone, cry, fontanelle
- **Exposure**
  - **Undress fully**
  - Temperature control

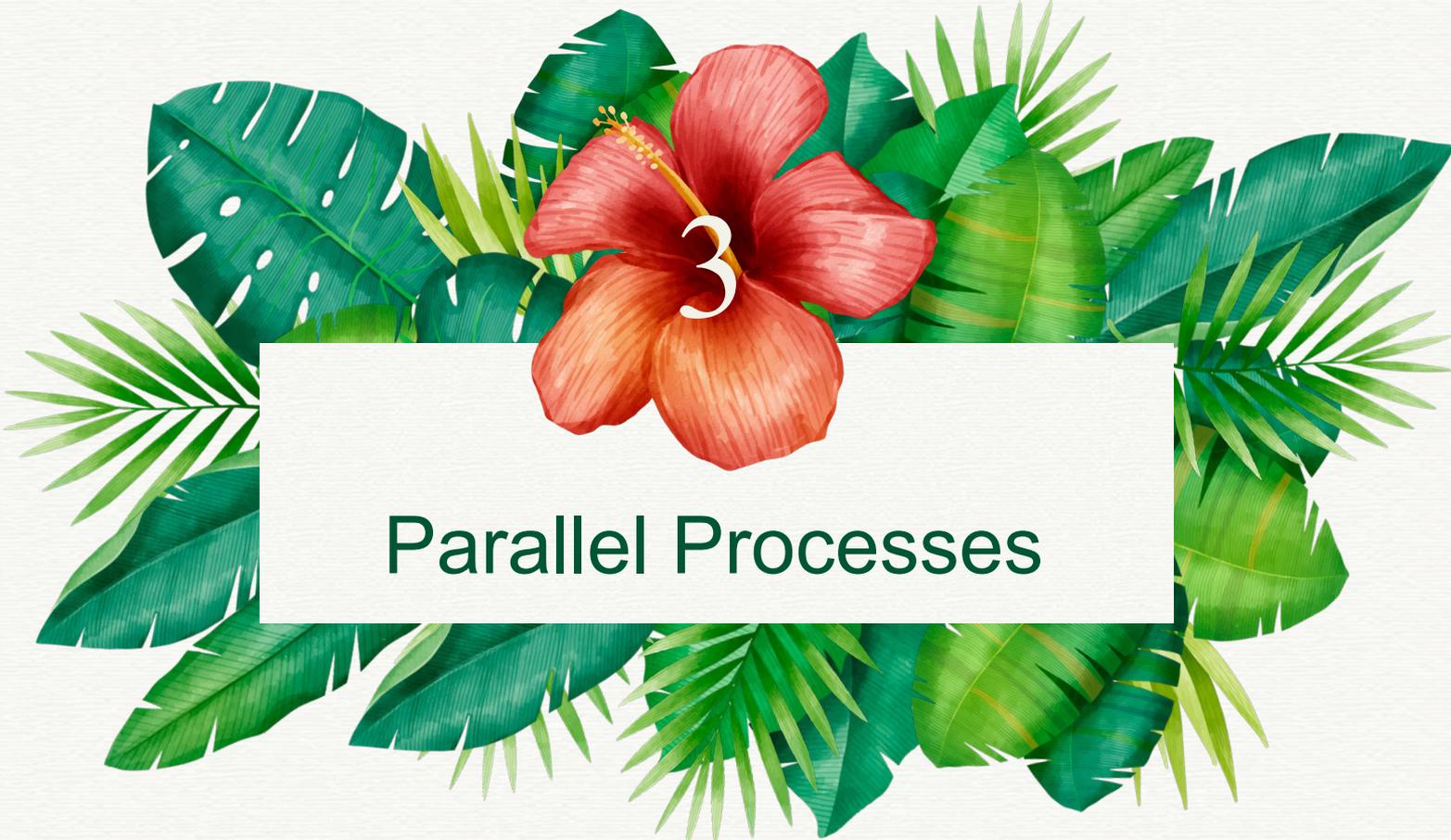


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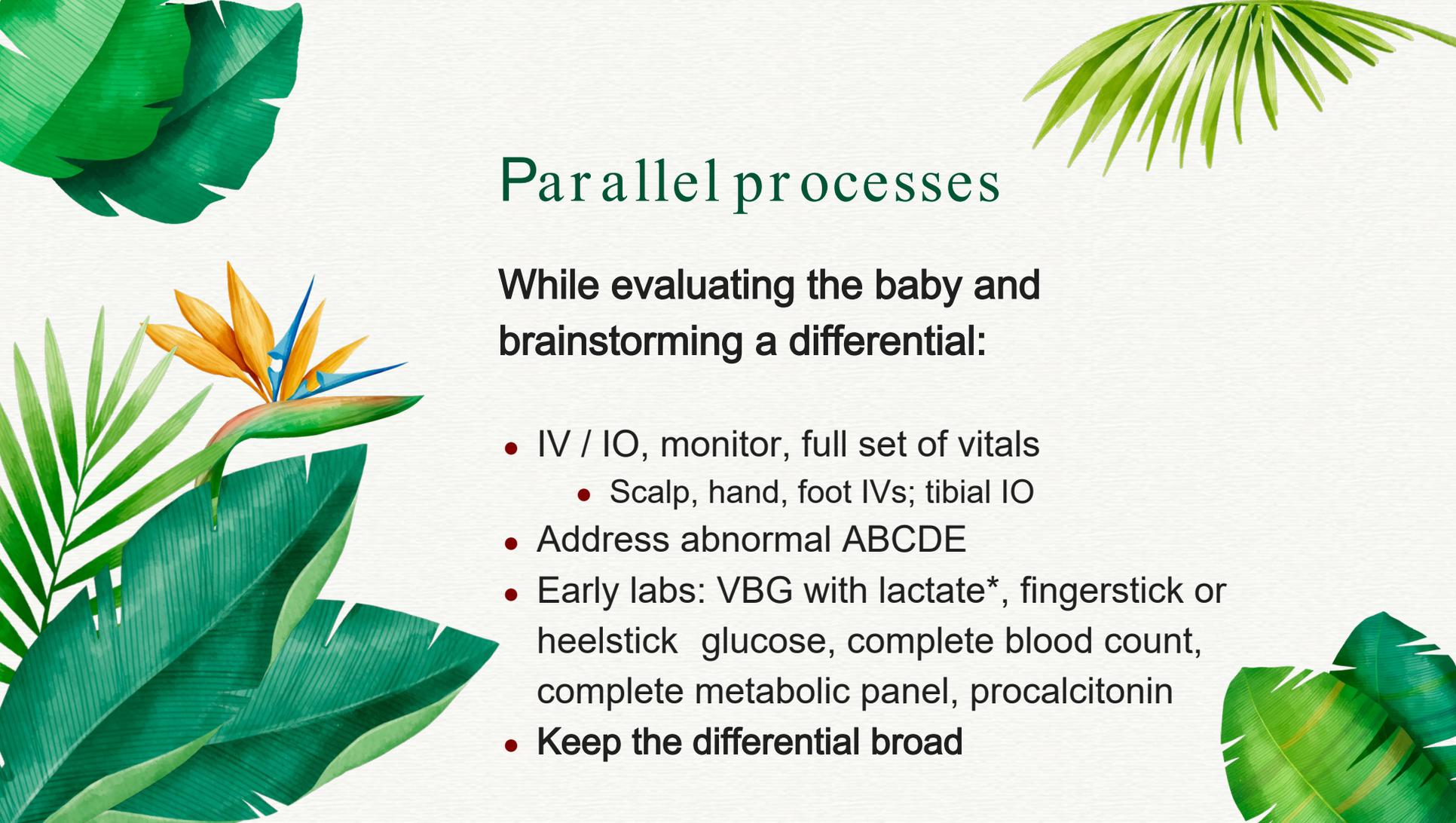
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3

# Parallel Processes

The slide is decorated with tropical plants. In the top left, there is a large green monstera leaf. In the top right, there is a palm frond. On the left side, there is a Bird of Paradise flower with orange and blue petals and green leaves. In the bottom right corner, there is another monstera leaf.

# Parallel processes

**While evaluating the baby and brainstorming a differential:**

- IV / IO, monitor, full set of vitals
  - Scalp, hand, foot IVs; tibial IO
- Address abnormal ABCDE
- Early labs: VBG with lactate\*, fingerstick or heelstick glucose, complete blood count, complete metabolic panel, procalcitonin
- **Keep the differential broad**



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# Case Practice



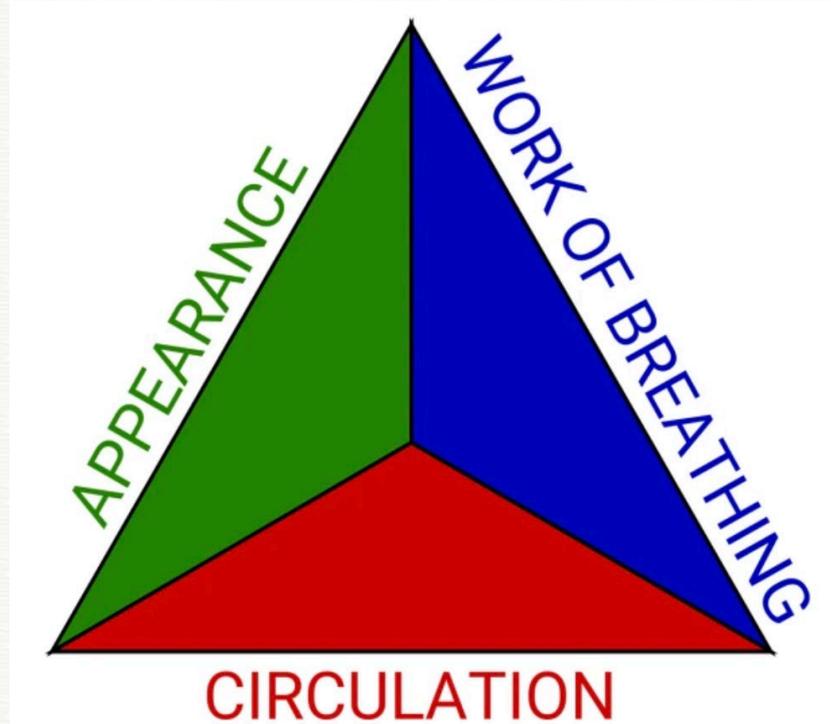
## Case #1

A 10-day-old presents with poor feeding.

On exam, the baby is gray and tachypneic, with weak pulses, normal sats.



# Case #1





# Case #1

- **ABCDE:**
    - **A:** no return on suction
    - **B:** lungs clear, diffuse retractions, head bobbing, tracheal tugging, tachypnea
    - **C:** tachycardic, no appreciable murmur, IVC plump on POCUS
    - **D:** glucose 85, poor tone
    - **E:** no new findings
- 
- 



# Case #1

- **ABCDE:**
  - **A:** placed in sniffing position → no change
  - **B:** started on 100%O<sub>2</sub> → greyness worsens, pulses weaker
  - **C:** no improvement after 10 ml/ kg → liver border palpable
  - **D:** no change
  - **E:** no change





# Congenital heart disease

- Judicious use of oxygen
  - *Really* judicious use of fluid
  - Ductal dependent lesions – differential pulses/ BP
  - **Prostaglandin**
    - Apnea, fever
  - Early cardiology
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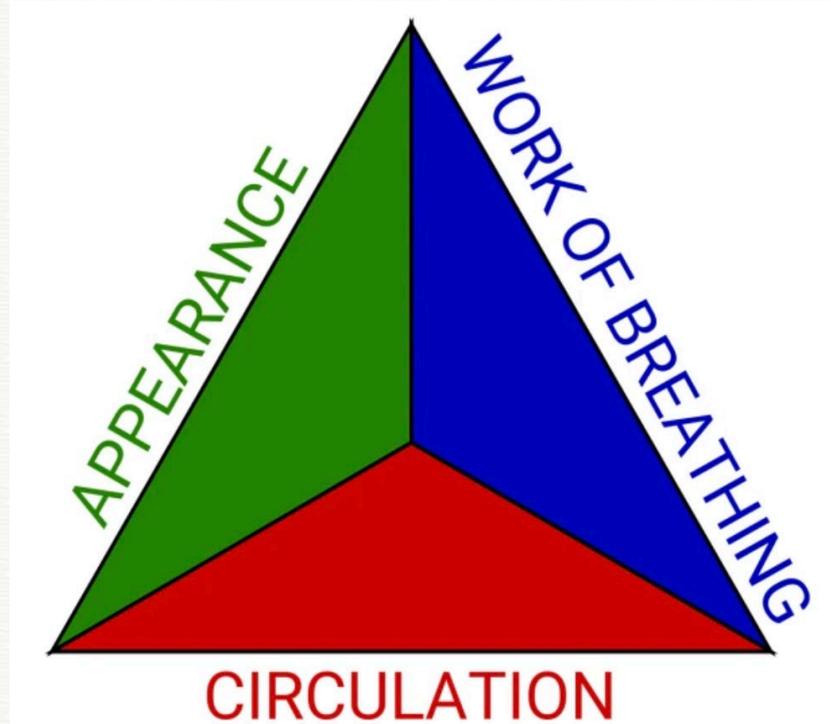
## Case #2

A 5-day-old presents with vomiting and somnolence, worse after feeds.

On exam, the baby is sleepy with an otherwise normal exam.



# Case #2





## Case #2

- **ABCDE:**
  - **A:** no return on suction
  - **B:** lungs clear, mild tachypnea, normal work of breathing
  - **C:** tachycardic, no murmur, strong pulses, IVC normal on POCUS
  - **D:** glucose 35, poor tone
  - **E:** no new findings





## Case #2

- **ABCDE:**
    - **A:** placed in sniffing position → no change
    - **B:** no change on blow-by oxygen
    - **C:** tachycardia improves after 10 ml/ kg
    - **D:** given 5 ml/ kg of D10 → mental status improves
    - **E:** no change
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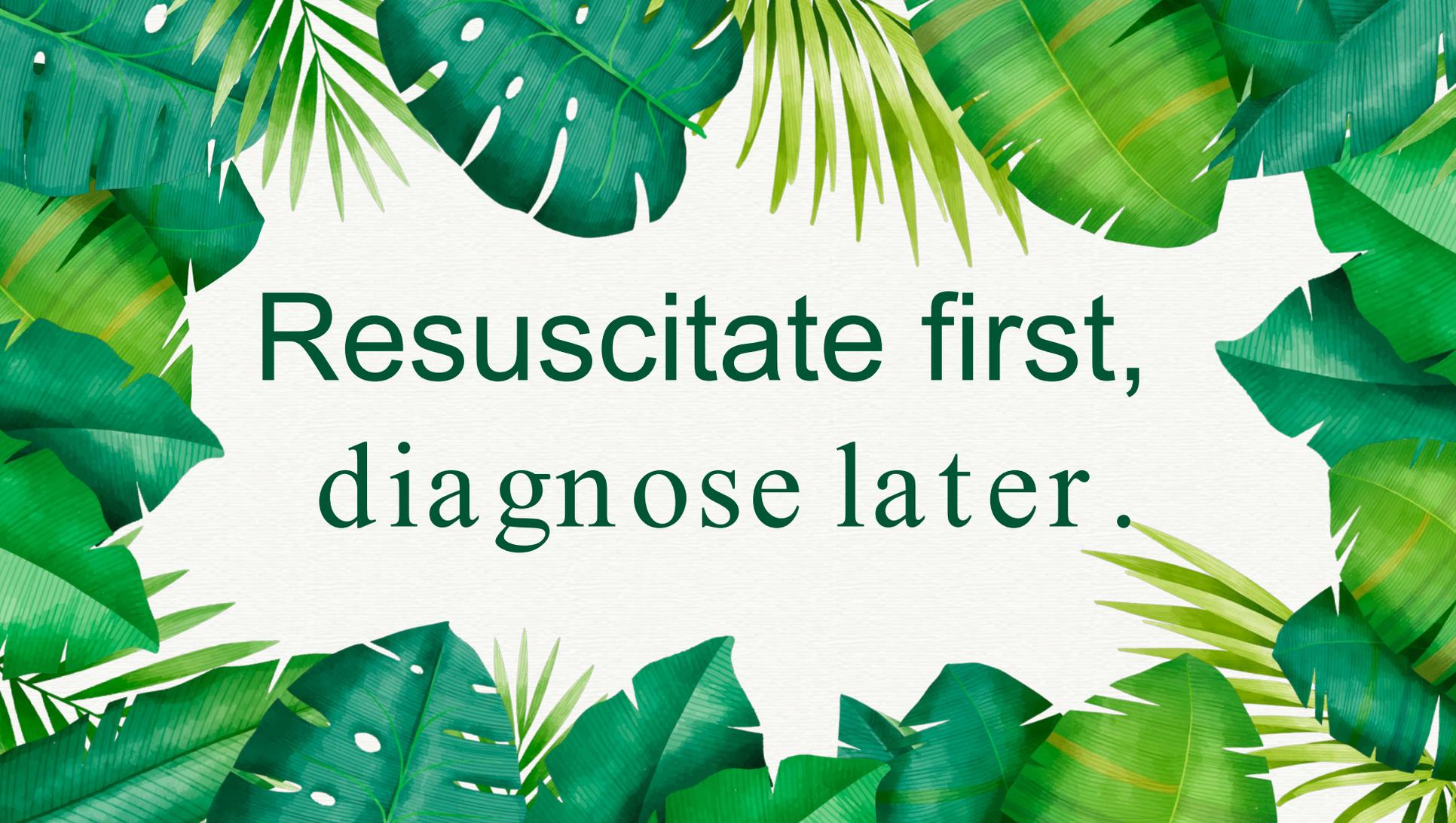


# Inborn errors of metabolism

- Early labs: VBG with lactate, complete metabolic panel, ammonia, UA
    - Save extra tubes
    - **Hypoglycemia may be absent.**
  - Normal exam  $\neq$  well
  - First week of life
  - Immediate dextrose, stop protein-containing feeds
  - Early genetics / ICU
- 
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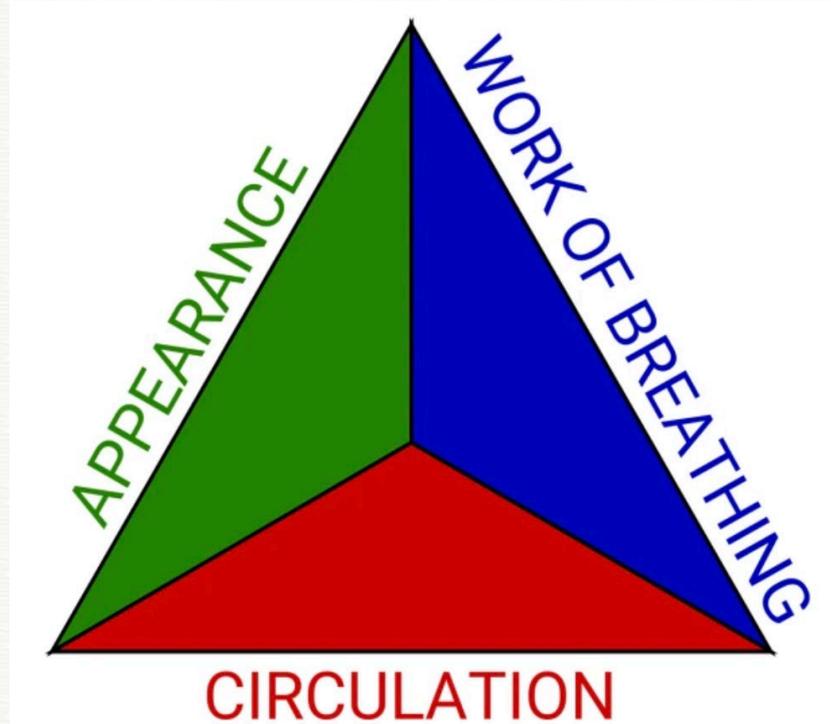
## Case #3

A 2-week-old presents with an episode of apnea at home.

Other than a temp of  $36.7^{\circ}\text{C}$ , the exam is normal.



# Case #3





## Case #3

- **ABCDE:**
  - **A:** no return on suction
  - **B:** lungs clear, normal rate and work of breathing; has another apneic episode in ED that resolves spontaneously
  - **C:** strong pulses, IVC normal on POCUS
  - **D:** glucose 85, normal tone
  - **E:** no new findings





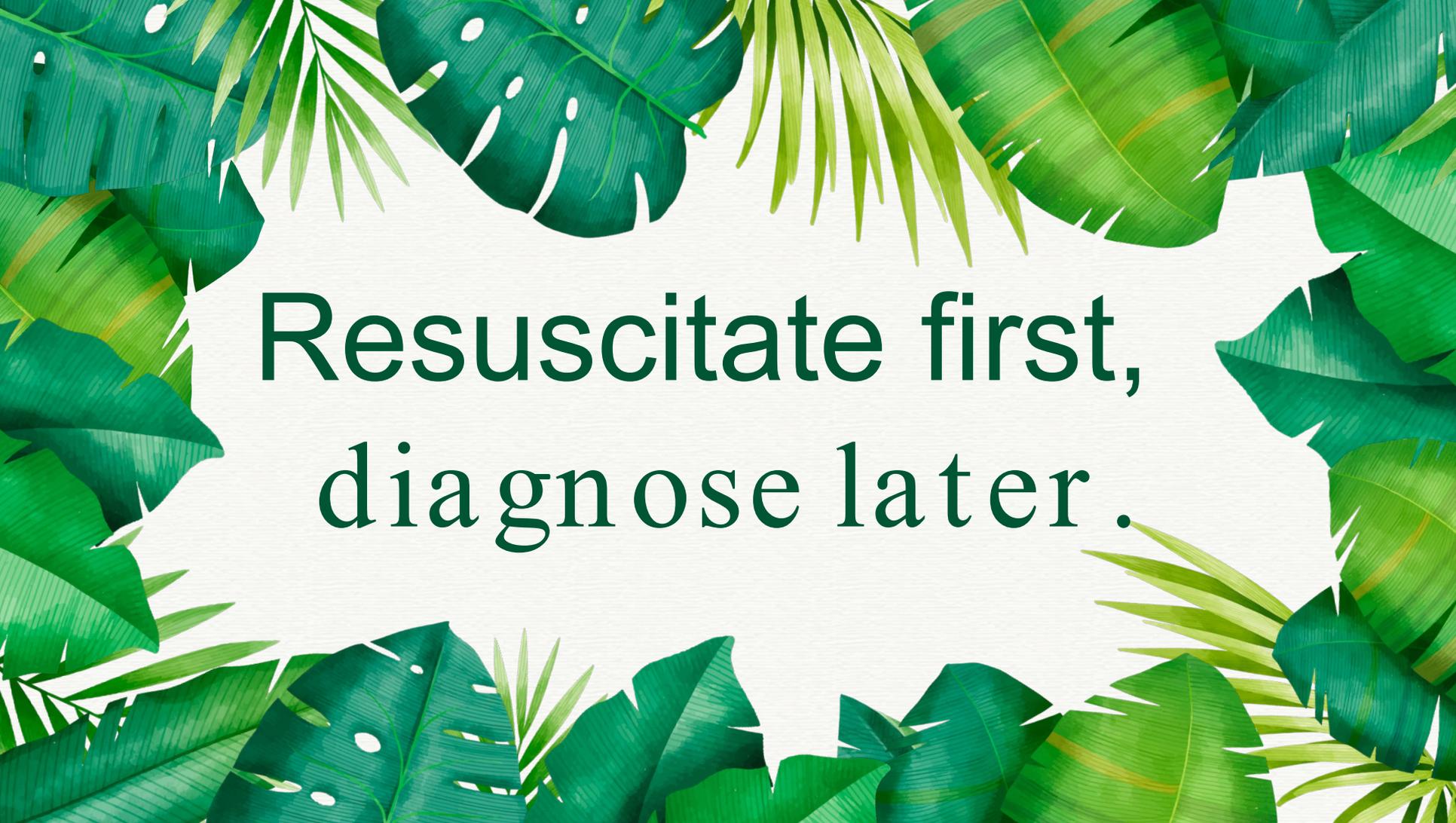
## Case #3

- **ABCDE:**
    - **A:** placed in sniffing position → no change
    - **B:** BVM available at the bedside
    - **C:** no change after 10 ml/ kg
    - **D:** remains alert
    - **E:** no change
    - CBC normal, procalcitonin elevated
- 
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# Neonatal sepsis

- May present very subtly
  - Hypothermia may be more common than fever
  - Apnea = red flag
  - Blood culture, urine culture, CSF culture + HSV studies
  - IV antibiotics + acyclovir ASAP
    - Decreased mortality
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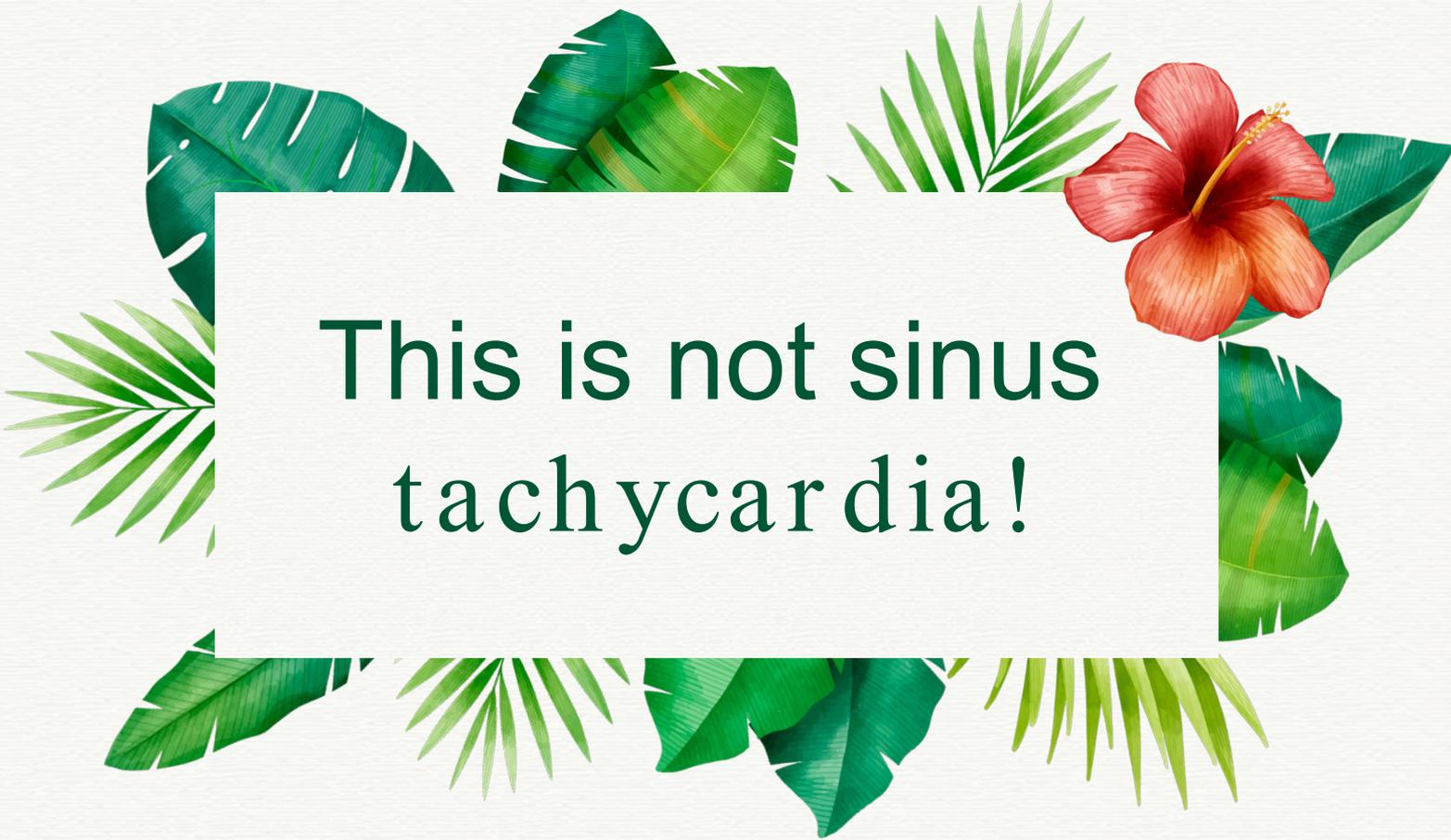


## Case #4

A 6-week -old presents with sleepiness and poor feeding.

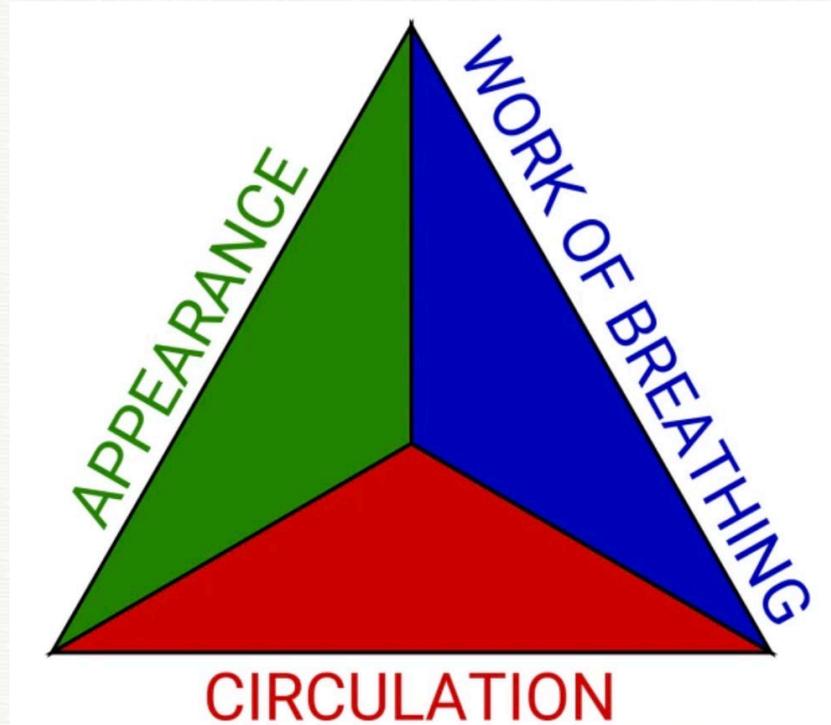
The infant is somnolent, quiet, and pale, with a **HR of 260.**



A decorative border of tropical plants surrounds the text. It includes several large green monstera leaves with characteristic holes, several palm fronds, and a single vibrant red hibiscus flower with a yellow center on the right side.

This is not sinus  
tachycardia!

# Case #4





## Case #4

- **ABCDE:**
  - **A:** no return on suction
  - **B:** lungs clear, tachypneic with intermittent retractions
  - **C:** weak pulses, pale, cap refill  $> 5$  sec, no murmur
  - **D:** glucose 85, low tone
  - **E:** no new findings





## Case #4

- **ABCDE:**
    - **A:** placed in sniffing position → no change
    - **B:** BVM available at the bedside
    - **C:** ice slurry, rectal temp → no change
    - **D:** remains sleepy
    - **E:** no change
- 
- 
- 



# Supraventricular tachycardia



- Most common arrhythmia after sinus tachycardia
  - Vagal maneuvers, IV/IO access, adenosine IV push if stable, synchronized cardioversion if unstable
    - **GO BIG!** 1 J/ kg
  - Always print the rhythm!
- 
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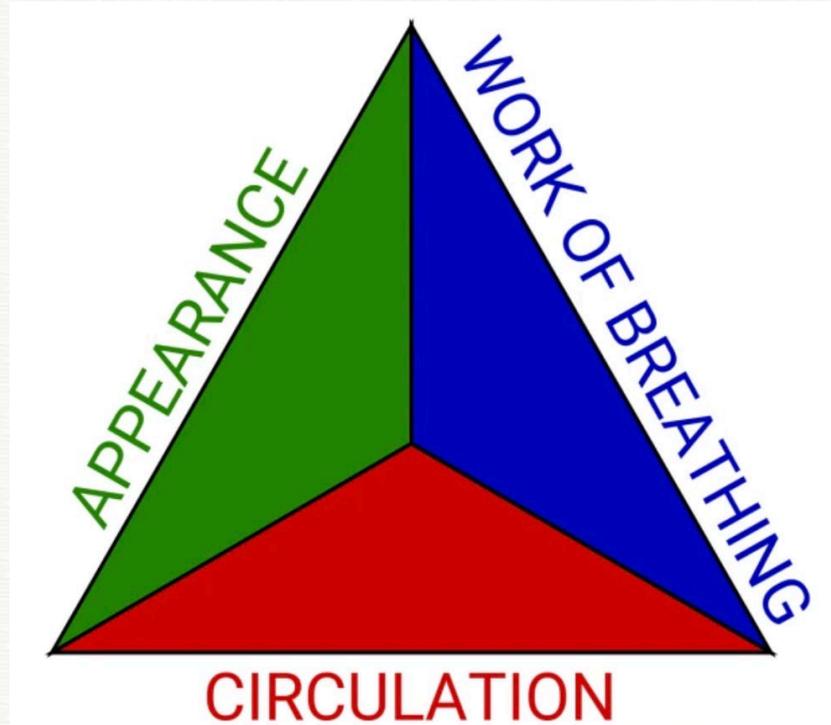
## Case #5

A 3-week-old presents with increased work of breathing.

On exam, they have a RR of 80 with an O<sub>2</sub> sat of 95% on room air, with increased work of breathing and significant nasal congestion.



# Case #5





## Case #5

- **ABCDE:**
    - **A:** large amount of thick mucus suctioned with minor improvement in rate and work of breathing
    - **B:** lungs with diffuse rhonchi and crackles, diffuse retractions, tracheal tugging, head bobbing, grunting
    - **C:** normal pulses and cap refill, tachycardic, no murmur
    - **D:** glucose 85, normal tone
    - **E:** no new findings
- 
- 



## Case #5

- **ABCDE:**
    - **A:** placed in sniffing position → slight improvement
    - **B:** started on high flow nasal cannula 0.5 mL/ kg/ min → significant improvement
    - **C:** 10 mL/ kg IV bolus + breastfeed → improved tachycardia
    - **D:** sleeping
    - **E:** no change
- 
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# Respiratory distress

- Nasal suction is a **critical** first intervention
  - Normal sats  $\neq$  adequate ventilation
  - Grunting = auto-PEEP → **support the flow**
  - Prep early for intubation
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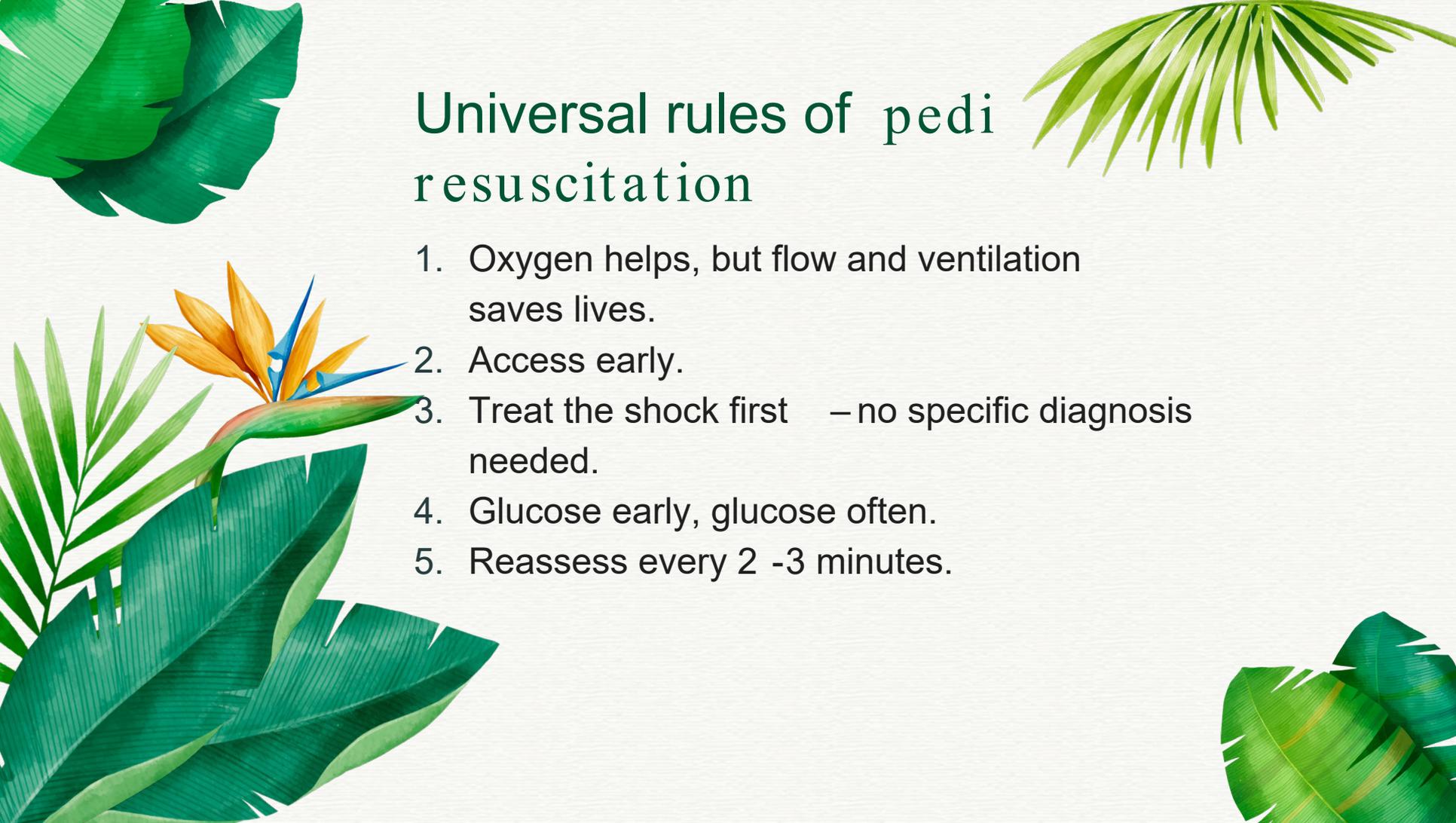
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# Universal Rules



# Universal rules of pediatric resuscitation

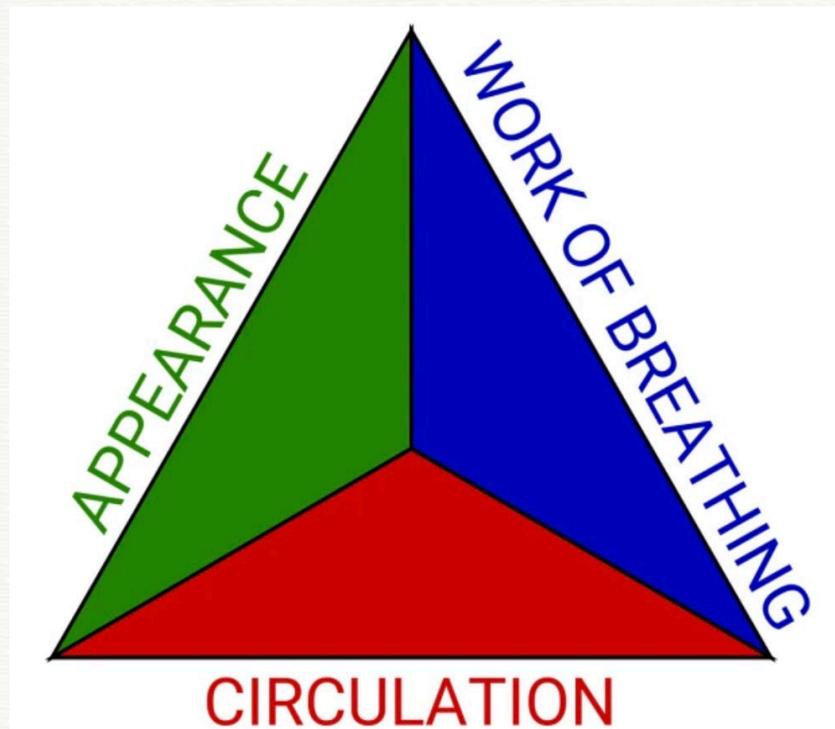
1. Oxygen helps, but flow and ventilation saves lives.
2. Access early.
3. Treat the shock first – no specific diagnosis needed.
4. Glucose early, glucose often.
5. Reassess every 2 -3 minutes.



5

Putting it all together





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ABCDE

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- Describe subtle presentations of several **high risk diagnoses**



# Goal

To improve initial evaluation and stabilization of critically ill infants, with a focus on high risk diagnoses.



A vibrant tropical floral arrangement featuring a central white rectangular box with the text "Thank you!". The box is surrounded by various green leaves, including large monstera leaves with characteristic splits, and a single bright red hibiscus flower with a yellow center. The background is a light, textured white.

Thank  
you!