

OBJECTIVES

- Identify medical conditions that can mimic asthma
- Identifying hallmark features of Myasthenia Gravis
- Recognize common types of cognitive errors and techniques to minimize them

CASE PRESENTATION

16 year old female presents to the Emergency Department with chief complaint of dyspnea

- Nine months ago developed dysphagia
- Soft tissue neck film unremarkable
- 7-pound weight loss for the past 2 weeks

In the Pediatrician's office, she presented with respiratory distress and hypoxia

- Diagnosed with Asthma
- Treated with continuous albuterol and steroid injection

Presented to Emergency Department with RR of 22 and oxygen saturation of 88%. Examination demonstrated significant accessory muscle use and expiratory wheeze bilaterally

- Treated with multiple continuous albuterol treatments with atrovent
- CXR resulted right middle and lower lobe pneumonia and ampicillin was started
- Initial diagnosis was status asthmaticus secondary to pneumonia

Upon admission, physical exam findings include: lower extremity weakness, facial weakness, dyspnea, wheezing, and increase use of accessory muscles

HOSPITAL COURSE

- Symptoms of dyspnea, dysphagia and abnormal neurological exam prompted a Neurology Consult
- Barium swallow performed to rule out anatomical abnormalities
- Developed poor coordination of swallow-breathing technique and aspirated barium
- Admitted to PICU for acute respiratory failure and need for BiPAP for 2 days
- Admitted to Neurology service from PICU for nutritional support and further management

DIAGNOSIS AND TREATMENT

Positive Tests

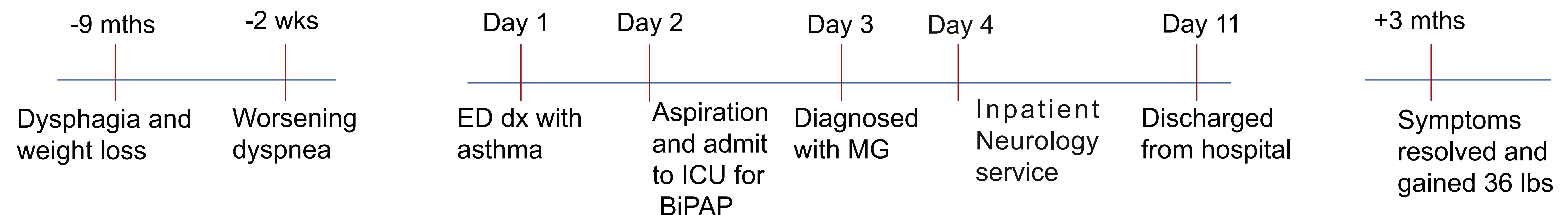
- Acetylcholine Receptor Antibody test
- Nerve Conduction Velocity and Electromyography

Negative Tests

- Anti-MuSK Antibody
- Thyroid Peroxidase Antibody
- Thyroglobulin Antibody test
- CT scan chest with contrast: No thymoma and thymic hyperplasia

Treated with pyridostigmine and steroids

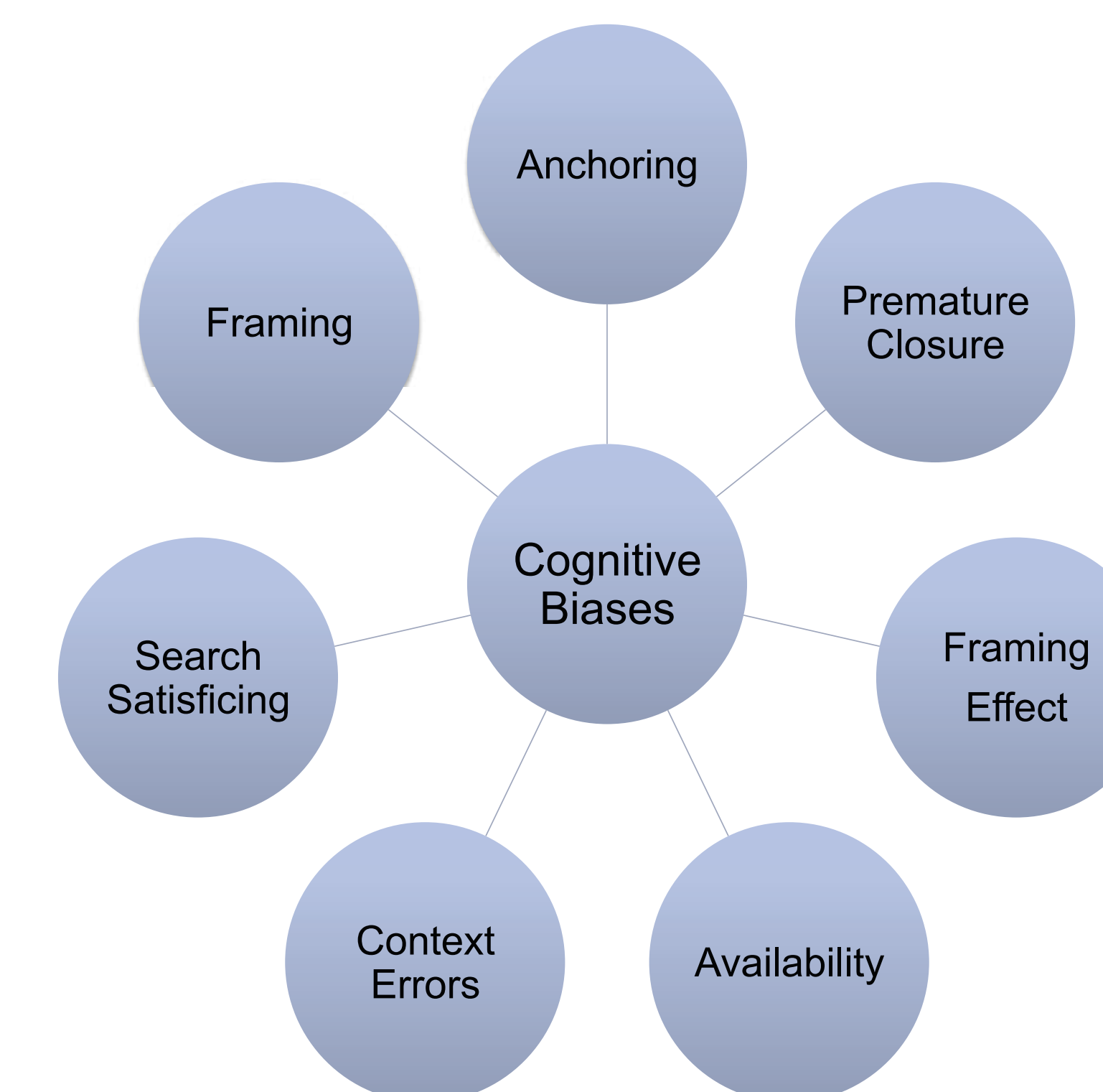
DISEASE COURSE



DIAGNOSTICS ERRORS

- One of the leading causes of preventable adverse events in the hospital
- Estimated rate of diagnostic errors is 10-15%

COMMON TYPES OF COGNITIVE BIASES



Most common Cognitive Errors in our patient:

- Anchoring: Lock onto salient features too early and failure to adjust the initial impression
- Premature Closure: Narrowing the diagnosis too early in the clinical reasoning process
- Framing Effect: Being strongly influenced by the way in which the problem is framed

COGNITIVE FORCING STRATEGIES

- Perform a secondary survey of the data once a diagnosis is made
- Focus on the patient's problems rather than diagnosis to avoid pitfalls
- Understand cognitive errors and scenarios that are likely to occur in each clinical setting
- Slow-down to ensure proper diagnostic decision making time

TAKE HOME POINTS

- Symptoms of Myasthenia gravis can mimic asthma
- Thorough history and physical exam is crucial to guide further workup
- Cognitive errors are common and cognitive forcing strategies can eliminate errors

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