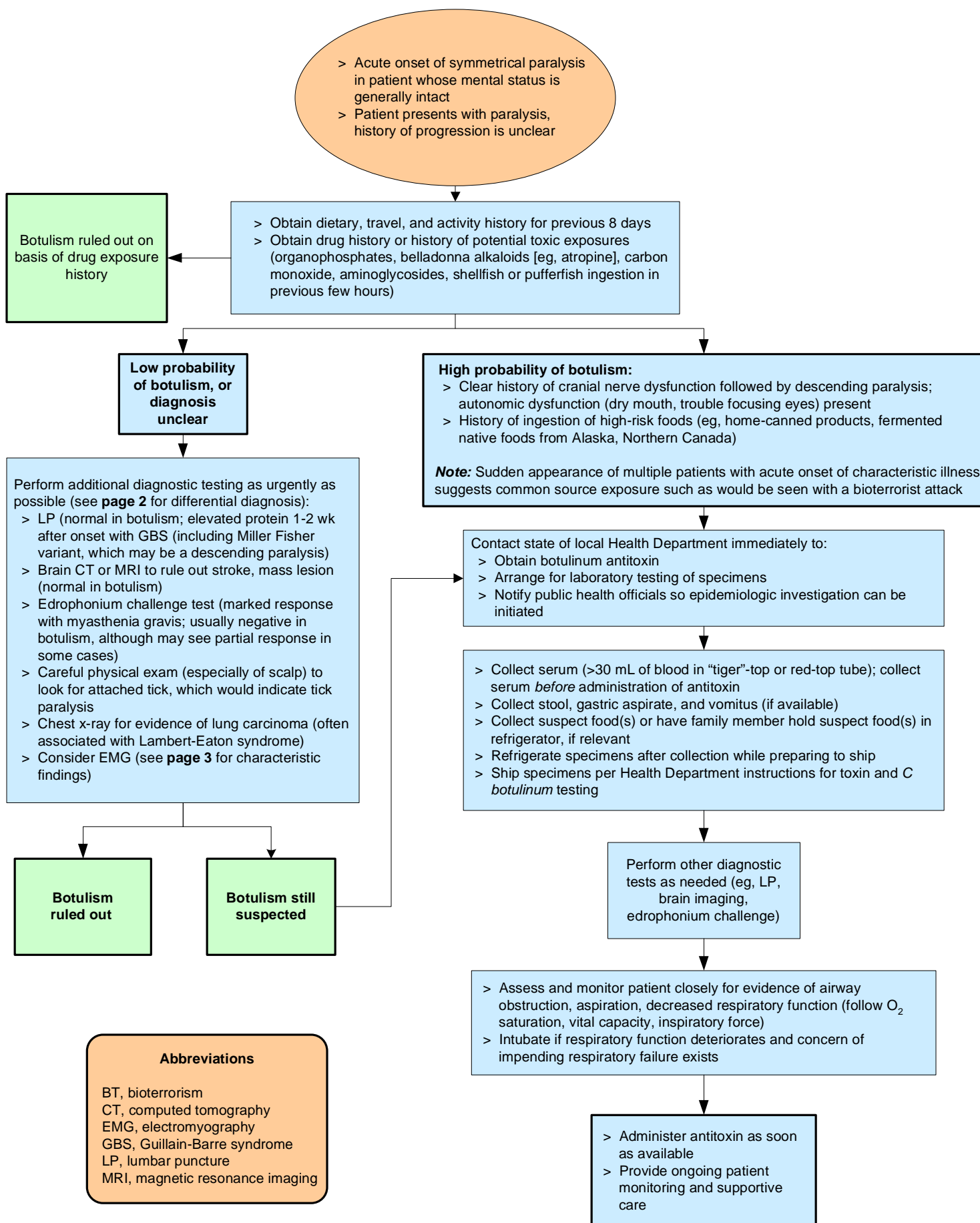


Clinical Pathway: Botulism



Differential Diagnosis for Botulism

- Guillain-Barre syndrome (including Miller Fisher variant)
- Myasthenia gravis
- Tick paralysis
- Lambert-Eaton syndrome
- Toxic exposures (organophosphates, depressants [including ethanol], belladonna alkaloids, carbon monoxide, aminoglycosides, paralytic shellfish poisoning)
- Stroke or central nervous system (CNS) mass lesion
- Poliomyelitis

Note: Other conditions also may be confused with botulism; examples include other infectious conditions (viral syndromes, CNS infections [particularly brainstem], streptococcal pharyngitis), diabetic neuropathy, hyperthyroidism, inflammatory myopathy, psychiatric conversion reaction

Comparison of Electromyographic Findings in Botulism and Similar Illnesses	
Disease	Characteristic EMG findings
Botulism*	<ul style="list-style-type: none"> • Incremental response (facilitation) to repetitive stimulation (not always present and often seen only at 50 Hz) • Short duration of MUPs; polyphasic MUPs • Decreased amplitude of CMAPs after a single nerve stimulus (most prominent in proximal muscle groups) • Normal sensory nerve function • Normal nerve conduction velocity (motor and sensory)
Guillain-Barre syndrome	Abnormal nerve conduction velocity; no facilitation with repetitive nerve stimulation
Myasthenia gravis	Decrease in muscle action potentials with repetitive nerve stimulation
Tick paralysis	Abnormal nerve conduction velocity and unresponsiveness to repetitive stimulation
Lambert-Eaton syndrome	Similar to those in botulism, but repetitive nerve stimulation shows much greater augmentation of muscle action potentials, particularly at 20-50 Hz
<p><i>Abbreviations:</i> CMAPs, compound muscle action potentials; MUPs, motor unit potentials.</p> <p>*From Cherington M. Clinical spectrum of botulism. <i>Muscle Nerve</i> 1998;21:701-10, and Maselli RA, Bakshi N. American Association of Electrodiagnostic Medicine (AAEM) case report 16: botulism. <i>Muscle Nerve</i> 2000;23:1137-44</p>	