

LocuTour's Differential Diagnosis: Dysarthria

Dysarthria

A: The following behaviors were reported or observed in the course of evaluation and/or treatment. Follow-up evaluation by a physician for a possible neurogenic disorder is indicated. (Information compiled from Darley, Aronson, and Brown, 1975; Chamberlin and Narins, 2005; Johns, 1978.)

Spastic dysarthria

A: The client exhibited the following symptoms consistent with Spastic Dysarthria:

- Upper Motor Neuron damage
- Abnormally excessive nasal speech quality
- Imprecise articulation behaviors, slurring, periods of speech unintelligibility
- Slow-labored rate of speech
- Strained or strangled voice quality
- Limited vocal pitch
- Difficulty with loudness, range, and volume control
- Overall disruptive speech breathing patterns (incoordinated, shallow, forced, or uncontrolled)
- Co-occurring weakness and paralysis of all four limbs.
- Widespread involvement of the tongue, lip, jaw, soft palate, larynx, and respiratory muscles
- Emotionally labile
- Swallowing difficulties – dysphagia

Unilateral Upper Motor Neuron (UMN) Dysarthria

A: The client exhibited the following symptoms consistent with Unilateral UMN Dysarthria:

- Damage to either the left or right UMN tract
- Mild to moderate weakness and paralysis of the lower face, tongue, arm, and leg on the side of the body opposite the damaged UMN tract - unilateral problem
- Mild speech production and swallowing difficulties
- Opposite half of the lips and tongue often compensate
- Typically normal breathing and inflection
- Typically normal nasal resonance
- Aphasia
- Apraxia

Ataxic Dysarthria

A: The client exhibited the following symptoms consistent with Ataxic Dysarthria:

- Damage to the cerebellum or brain stem
- Difficulty regulating the force, timing, rhythm, speed, and overall coordination of all bodily movements
- Drunk-like motor patterns
- Gait disorders, wide and reeling gait
- Slurred articulation
- Intermittently explosive voice, pitch, and loudness outbursts.
- Intention tremors during purposeful movements
- Tremors disappear at rest
- Swallowing is usually normal

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Hypokinetic dysarthria

A: The client exhibited the following symptoms consistent with Hypokinetic Dysarthria:

- Damage to the upper brain stem, extrapyramidal system
- Imprecise articulation of sounds
- Harsh-hoarse voice quality
- Abnormal bursts of speech that sound like the individual is tripping over his or her tongue
- Widespread rigidity (i.e., stiffness and limited range of motion -hypokinesia)
- Tremors
- Incoordination of the tongue, lip, jaw, and laryngeal muscles
- Trunk and limb disturbances
- Rest tremors of the hands
- Stooped posture
- Shuffling gait
- Mask-like facial expressions
- Swallowing difficulties

Hyperkinetic dysarthria

A: The client exhibited the following symptoms consistent with Hyperkinetic Dysarthria:

- Damage to nerve pathways and centers within the depths of the brain (subcortex) known as the basal ganglia, extrapyramidal system
- Difficulty maintaining posture, muscle tone, bodily adjustments, and overall stability during gross voluntary movement patterns
- Rigidity - Increased muscle tone and very slow movement
- Dystonia - involuntary, excessive, and uncontrollable quick-jerky, slow-twisting, or trembling limb and speech musculature behaviors
- Articulation is inconsistent and imprecise
- Voice is hoarse-harsh in quality
- Rhythm of speech is flat and irregular
- Breathing patterns are sudden, forced, and shallow
- Speech intelligibility is significantly reduced
- Swallowing difficulties can be a significant problem

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Flaccid dysarthria

A: The client exhibited the following symptoms consistent with Flaccid Dysarthria:

- Lower Motor Neuron damage to nerves that emerge from the brain stem (cranial) or spinal cord and travel directly to muscles that are involved in speech production
- Cranial nerves V, VII, X, and XII may be involved
- Trigeminal V – Sensation to forehead, cheek and jaw, mandible - chewing
- Facial VII -Eyes, mouth, lips, cheeks
- Vagus X – swallowing, phonation, uvula, soft palate
- Hypoglossal XII - tongue protrusion, lateralization
- Nerves to diaphragm and thoracic spinal nerves that stimulate the chest and abdominal wall muscle may be involved
- Paralysis
- Weakness
- Reduced speed of movement
- Depressed tactile feedback
- Limited reflex behaviors
- Atrophy or shrinkage of muscle tissue.
- Fasciculations or twitch-like behaviors
- Tongue fasciculations at rest. This pathologic feature is an important differential diagnostic sign of damage to the cranial nerve XII.
- Articulation imprecision
- Hypernasal voice
- Hoarse
- Breathy vocal quality
- Slow-labored speech rate
- Swallowing problems may occur

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Mixed Dysarthrias

Simultaneous damage to two or more primary motor components of the nervous system.

Spastic-flaccid Dysarthria

A: The client exhibited the following symptoms consistent with Spastic-fl accid Dysarthria:

- Imprecise consonants
- Hypernasality,
- Harsh voice quality
- Slow rate
- Monopitch
- Short phrases
- Distorted vowels
- Low pitch
- Monoloudness
- Excess and equal stress
- Prolonged intervals

Spastic-ataxic-hypokinetic Dysarthria

A: The client exhibited the following symptoms consistent with Spastic-ataxic-hypokinetic Dysarthria:

- Upper Motor Neuron, cerebellar, extrapyramidal
- Reduced stress and intonation
- Monopitch
- Imprecise consonants
- Slow rate
- Excess and equal stress
- Low pitch
- Irregular articulatory breakdown

Spastic-ataxic-flaccid Dysarthria

A: The client exhibited the following symptoms consistent with Spastic-ataxic-fl accid Dysarthria:

- Upper Motor Neuron, cerebellar, Lower Motor Neuron
- Irregular articulatory errors
- Irregular difficulty with rate, quality, harshness
- Variable spasticity
- Slow movement
- Limited range of movement
- Inaccurate movement