Differentiating Acute Confusional State (Delirium) from Aphasia in Acute Stroke Assessment

In the acute stroke setting, distinguishing between an acute confusional state (delirium) and aphasia is critical for appropriate diagnosis, management, and prognosis. This guide provides a systematic approach to differentiate between these two conditions, integrating historical clues, examination findings, and ancillary testing.

I. Definitions and Underlying Mechanisms

Feature	**Acute Confusional State (Delirium)**	**Aphasia**
Definition	A transient, fluctuating disturbance in attention, awareness, and cognition that develops over a short period (hours to days) and represents a change from baseline.	An acquired language disorder resulting from damage to the language-dominant hemisphere (usually the left) of the brain.
Underlying Mechanism	Multifactorial: metabolic derangements, infections, medication side effects, sleep deprivation, acute neurologic injury (including stroke)	Focal brain damage, typically in the left hemisphere, affecting specific language areas (e.g., Broca's, Wernicke's, arcuate fasciculus). Most commonly due to stroke.

II. Clinical Differentiation: History and Examination

A. Historical Clues

Feature	**Acute Confusional State (Delirium)**	**Aphasia**
Onset and Time Course	Acute or subacute (hours to days). Fluctuating symptoms with lucid intervals.	Sudden onset. Symptoms usually most severe initially, may improve gradually.
Baseline Cognitive Function	Often superimposed on pre-existing cognitive impairment or other medical conditions.	May have had normal cognitive function before the stroke.
Fluctuations	Hallmark feature: Confusion comes and goes.	Mental status is usually stable; factors that provoke confusional states (toxic, metabolic, infectious) may worsen language.
Associated Medical Factors	Infections, metabolic disturbances, medication changes, recent surgery/hospitalization are common triggers.	Stroke risk factors (hypertension, atrial fibrillation, etc.), previous stroke history.

Medication History	Certain medications (e.g., anticholinergics, benzodiazepines, opioids) can cause or worsen delirium.	Less directly relevant to diagnosis but important for overall management.
Patient/Caregiver Reports	Fluctuating alertness, confusion, agitation/lethargy, possible hallucinations, unpredictable behavior changes.	Specific language difficulties: trouble finding words, difficulty understanding speech, repeated use of nonsensical words.

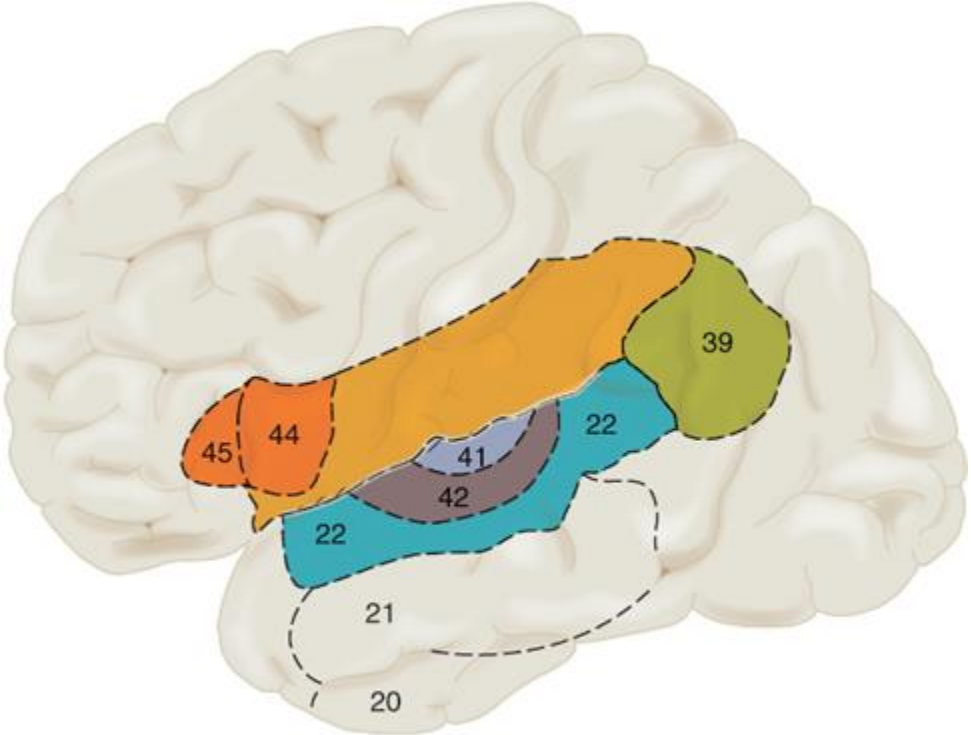
B. Examination Findings

Feature	**Acute Confusional State (Delirium)**	**Aphasia**
General Appearance	May appear confused, agitated, restless, or withdrawn. Disoriented.	May appear frustrated by communication difficulties but generally alert (unless coexisting delirium).
Attention	Impaired. Difficulty focusing, sustaining, or shifting attention. Assess with digit span, serial sevens, months of the year backward.	Generally preserved (unless coexisting delirium or large right hemisphere stroke causing neglect).
Language	Speech may be rambling, incoherent, tangential. Content illogical/nonsensical.	Specific language deficits depending on the type of aphasia (see **Table 3**).
Level of Consciousness	Can range from hyperalert to lethargic or comatose.	Usually alert unless the stroke is very severe or other complications are present.
Hallucinations/Delusions	Visual hallucinations are common. Delusions may be present.	Not typical features unless co-occurring psychiatric condition or delirium.
Focal Neurological Signs	May be present in the setting of prior neurologic impairment.	Commonly associated with other signs of focal lesion in left hemisphere (e.g., right-sided weakness or sensory loss).

Table 3: Types of Aphasia and Associated Language Deficits

Aphasia Type	Spontaneous Speech	Comprehension	Repetition	Naming	Reading/Writing
Broca's (non-fluent)	Effortful, telegraphic, agrammatic	Relatively preserved	Impaired	Impaired	Often impaired
Wernicke's (fluent)	Fluent but meaningless (paraphasias, neologisms)	Impaired	Impaired	Impaired	Often impaired
Global	Severely impaired in all modalities	Severely impaired	Impaired	Impaired	Severely impaired
Conduction	Fluent, but with phonemic paraphasias	Relatively preserved	Impaired	Impaired	Variable
Anomic	Fluent, with word-finding pauses	Preserved	Preserved	Impaired	Variable

Figure: Neuroanatomical Localization of Language Areas



Source: A.H. Ropper, M.A. Samuels, J.P. Klein, Sashank Prasad
Adams and Victor's Principles of Neurology, 12th Edition

III. Ancillary Tests and Tools

Tool/Test	Acute Confusional State (Delirium)	Aphasia
Neuroimaging (CT/MRI)	Typically does not show a focal lesion responsible for the *global* cognitive deficits. May reveal other contributing factors (infection, inflammation).	Often reveals a lesion in specific language areas of the left hemisphere (e.g., left MCA territory).
Laboratory Tests	Useful to identify underlying causes: metabolic derangements (electrolytes, glucose, renal/liver function), infections (CBC, urinalysis, cultures).	May identify stroke risk factors but do not directly diagnose aphasia.