Confusion

Summary from Rosen's By John R Corker

Epidemiology

- Incidence is chronically underestimated – often incidental or secondary to the primary diagnosis.
- 2% of ED patients, 10% of hospitalized patients and 50% of elderly hospitalized patients.
- For elderly ED patients, Delirium is an independent predictor of increased mortality within 6 months of d/c.

Pathophysiology

- Largely a disturbance in the *content of consciousness*, NOT in the level of arousal or activity, with varying severity.
    - Extreme confusion – which incorporates arousal/activity – Is termed *delirium* (hyperactive or hypoactive).
- Thought to be caused by widespread cortical dysfunction, often secondary to:
    - Substrate deficiency (hypoglycemia, hypoxemia)
    - Neurotransmitter or Circulatory dysfunction

Differential Diagnosis

- Underlying cause often falls into 1 of 4 categories:
    - Systemic disease affecting the CNS
    - Primary intracranial disease
    - Exogenous Toxins
    - Drug w/d states
- Focal cortical dysfunction (stroke, tumor) rarely causes confusion, but can cause receptive/expressive aphasia.
- Subcortical/brainstem dysfunction causes a change in the level of alertness.

Signs and Symptoms

- Most acutely confused patients do not require immediate intervention, but critical exceptions include:
    - Hypoglycemia
    - Hypoxia
    - Fever
    - Unstable vital signs

Work-up

- Initial work-up should center on a complete H&P and rapid bedside assessment, including:
    - Updated Vital Signs (including Temp and O2 Sat)
    - Bedside blood glucose reading
    - From family:
        - When the patient last exhibited "normal" cognition and behavior?
        - Any recent illnesses, drug use or changes in medication?
- Patient must be protected from self-harm (medication or restraints may be required).
- Careful evaluation is necessary to differentiate between organic and psychiatric causes:
    - Oriented?
        - Quick Confusion Scale (QCS) used most commonly in the ED
    - Hallucinations?
        - Visual (delirium) vs. Auditory (psychiatric)
- Laboratory tests and diagnostic imaging are less often helpful.
    - Serum electrolytes (BMP) testing is indicated in all cases.
    - Urinalysis (UTI) and CXR (pneumonia) are common tests for suspected infection.

Empiric Management

- Treat the underlying cause! Observe for clinical improvement, and d/c when confusion has resolved.

Disposition

- If no identifiable or reversible cause, and confusion persists, consider admission for further work-up beyond the means of the ED.

**Figures 17-3 and 17-4 on page 154 of Rosen Volume 1 (8th Ed.) represent helpful algorithms for diagnosis and management.