Lacunar Stroke

Prior to making any medical decisions, please view our disclaimer.

Clinical Lacunar Syndrome

Lacunar strokes tend to occur in patients with diabetes, hyperlipidemia, smoking or chronic hypertension and may be clinically silent or present as pure motor hemiparesis, pure sensory loss, or a variety of well-defined syndromes (e.g., dysarthria-clumsy hand, ataxic-hemiparesis). Descending compact white matter tracts or brainstem gray matter nuclei are injured, often producing widespread and striking initial deficits. However, the prognosis for recovery with lacunar stroke is better than with large artery territory stroke, and for this reason many centers favor using antiplatelet therapy (aspirin, clopidogrel) or conservative management rather than thrombolytic therapy for uncomplicated lacunar stroke. The risk of hemorrhagic transformation or edema in these patients is extremely low. Because initial clinical presentation may be deceiving particularly in the posterior circulation, all patients presenting with acute ischemic symptoms should undergo some form of neurovascular imaging to establish large vessel patency (CTA, MRA, ultrasound or angiography).

Management Algorithm

Phase 1

Additional Diagnostic Testing

- Consider fasting lipids, lipoprotein (a), B12, folate, homocysteine
- If suspicious of large vessel atheroma producing penetrator infarction, refer to algorithm for Large Vessel disease

Prevention of Acute Recurrent Stroke

- Consider antiplatelet therapy (e.g., aspirin, clopidogrel, ticlopidine, persantine, integrilin, reopro)
- Consider iv heparin for fluctuating deficit
- Consider using low molecular weight heparin to anticoagulate those who are at low risk for embolic disease and are awaiting carotid or cardiac ultrasound
- Consider neuroprotective therapies

Phase 2

Subacute Medical Management

Communicate with PCP

- Consider BP goals in context of large vessel stenoses, chronicity of hypertension, and co-morbid medical illness
- Maintain euthermia, euglycemia, eunatremia
- Consider Intensive Care management (e.g., airway compromise, severe hypertension, acute MI, major organ dysfunction)

Ongoing Assessments

- DVT risk if immobile
- Ability to urinate; UTI
- Ability to swallow; Aspiration; need for feeding tube
- GI/GU bleeding
- Cardiopulmonary function; need for tracheostomy

Functional Assessment and Acute Rehabilitation

Communicate with other healthcare personnel

- Safety for ADL, ambulation
- Urinary and fecal continence
- Tone and splinting

- Exercise tolerance
- Cognitive function

Phase 3

Discharge Planning

Discuss with patient and family

1. treatment and prognosis
2. risk factors and risk reduction strategies

Assess subacute rehabilitation needs and eligibility (consider PM&R consult)

1. Short v. long term care needs
2. Inpatient rehabilitation v. skilled nursing facility rehabilitation
3. Home v. outpatient services

Assess financial resources to cover cost of

1. Inpatient, outpatient rehabilitation services
2. Medications
3. Assistive devices (e.g., commode, cane, wheelchair, hospital bed, etc.)
4. Long term care

Long term Secondary Prevention

Risk factor modification

1. Hypertension control
2. Lipid reduction
3. Smoking cessation
4. Nutrition counseling and glycemic control
5. Weight reduction and increased physical activity
6. Antiplatelet therapy

Medical Considerations

1. Choice of antiplatelet therapy
2. Consider statins for mild hyperlipidemia
3. Provide adequate followup with stroke specialist
4. Consider secondary prevention or recovery trials

Patient education

1. Patient/family understands stroke diagnosis
2. Patient/family understands how to lower risk

Authoring Information

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