Limb Shaking TIAs: What Are They, What Imaging Should Be Performed And How Should They Be Treated

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FINANCIAL DISCLOSURE

I Have No Financial Relationships to Disclose

Clinical Presentation

- Unilateral Rhythmic or Arrhythmic Involuntary Hyperkinesias:
  - Hand; Arm; Leg; Hand & Arm; Hand & Arm & Leg
  - Jerking
  - Trembling
  - Twitching
  - Flapping
  - Wavering
  - Inability to Control the Arm
  - Lack of Coordination
- Duration: Usually < 5 Minutes
- Anatomy: Severe Internal Carotid Artery Stenosis or Occlusion

Precipitating Factors

Activities That Lead to Hypotension & Cerebral Hypoperfusion

- Exercise
- Arising From Chair
- Arising From Bed
- Hyperextending the Neck
- Hyperventilation

Differential Diagnosis

LS-TIAs vs SEIZURES

- Precipitating Factors
- Normal Level of Consciousness
- Absence of Tonic Contractures
- No Involvement of the Face or Trunk
- No Epileptic Discharges on EEG
Pathophysiology

Disinhibition or Release of Subcortical Motor Systems in the Setting of Cortical Ischemia
- Exhausted Vasomotor Reactivity
- Autoregulatory Failure
- Maximal Dilatation of Arterioles

Diagnostic Modalities

Xenon-133:
- Regional Decreases in Cerebral Blood Flow

TCD:
- Reduced Vasomotor Reactivity to Hypercapnia

PET Scan:
- Acetazolamide-Induced Hypoperfusion

Treatment

- Carotid Endarterectomy
- Carotid Stenting
- EC-IC Bypass

Post-Intervention: ICH

Limb-Shaking TIAs

<table>
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<tr>
<th>Treatment</th>
<th># of Cases</th>
<th>ICH</th>
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<tbody>
<tr>
<td>CEA</td>
<td>13</td>
<td>3</td>
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<tr>
<td>CAS</td>
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SUMMARY

Limb Shaking TIAs
- Rare But Well Accepted TIA
- Due to Cerebral Hypoperfusion Secondary to Severe Occlusive Disease
- Differential Diagnosis: Seizures
- Rx: CEA or CAS or EC-IC Bypass
- Increased Risk of Post-Intervention Hemorrhage