26 y/o female
History withheld

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Globus Pallidus Infarcts
Globus Pallidus Infarcts secondary to Anoxic Brain Injury
Patient had H/O depression
s/p suicide attempt
(asphyxiation due to hanging)
Relative hyperintensity of globus pallidus is seen on FLAIR
DWI demonstrates diffusion restriction of globus pallidus, due to infarction
Physiologic Effects of Hanging Injury

External compression of neck leads to:

- **Autonomic reflex activity**
  - Pressure on carotid areas/vagal sheath $\Rightarrow$ changes in systemic vascular resistance and cardiac output $\Rightarrow$ potential cardiac arrest
- **Airway compromise**
  - Tongue and epiglottis move upwards $\Rightarrow$ upper airway obstruction
- **Occlusion of blood flow**
  - Direct compression of vessels (carotid arteries, jugular veins)

These can all contribute to **hypoxic-ischemic brain injury**.
Hypoxic Ischemic Brain Injury

• Vascular Anatomy:
  – The basal ganglia is supplied by the lenticulostriate branches of the middle cerebral artery. These smaller, terminal vessels are more susceptible to ischemia.

• Imaging Findings:
  – There is restricted diffusion in the bilateral basal ganglia. The bilateral findings are suggestive of global hypoxia/hypoperfusion of the brain.
Hypoxic Ischemic Brain Injury

Etiologies:
• Cardiac arrest
• Vascular catastrophe
• Carbon monoxide poisoning
• Head trauma

Goals of Neurologic Treatment:
• Maintain cerebral oxygenation
• Prevent increased intracranial pressure
  – Hyperventilation
  – Osmotic diuresis—mannitol
• Decrease cerebral metabolic rate
  – Hypothermia
  – Prevent seizure activity
References
