Holding On

### Prompt:  
  
"I have a 19-year-old male college student who presented with a persistent nosebleed during cheerleading practice. Along with the nosebleed, he reports dizziness and an intermittent perception of hearing his deceased brother's voice over the past ten years. His family history is significant for unresolved grief after his brother died a decade ago, leading to some family dysfunction, including an alcoholic father. Physical examination reveals no sign of acute distress but does include slight blurred vision and mild confusion. Initial neurological workup including brain imaging and EEG shows no abnormalities, yet his symptoms continue to worsen, causing significant emotional distress.  
  
Given his psychological background and the physical symptoms, what differential diagnoses should be considered, and what further investigations would you recommend to clarify the cause of his ongoing issues?"  
  
### Expected LLM Response:  
  
"In this case, the combination of the patient's persistent nosebleed, dizziness, and auditory hallucinations raises several differential diagnoses. It’s important to explore both physical and psychological factors contributing to his symptoms.  
  
\*\*Differential Diagnoses:\*\*  
  
1. \*\*Persistent Stapedial Artery:\*\* A rare anatomical variant that could lead to auditory issues and symptoms similar to those described. This condition occurs when the stapedial artery fails to regress during embryonic development and could explain the auditory hallucinations as it may press on nearby structures in the temporal lobe.  
  
2. \*\*Migraine with Aura:\*\* Given the age and symptomatology, a migraine variant, particularly one with auditory and visual phenomena, could be contributing to both the neurological disturbances and the episodes of nosebleeds, though it wouldn't typically explain long-term auditory hallucinations.  
  
3. \*\*Temporal Lobe Epilepsy:\*\* The auditory hallucinations and potential for confusion may suggest some form of seizure activity, especially if related to a structural anomaly or underlying disease.  
  
4. \*\*Psychotic Disorder:\*\* Given his prolonged grief and potential familial trauma, schizophrenia or a schizoaffective disorder could present with auditory hallucinations amid physiological complaints.  
  
5. \*\*Increased Intracranial Pressure or Chiari Malformation:\*\* These could result from subtle abnormalities not seen on standard imaging that can lead to headache, dizziness, and visual changes.  
  
\*\*Recommended Diagnostic Tests:\*\*  
  
1. \*\*CT Angiography or Contrast MRI:\*\* To identify any vascular malformations or anomalies that were not evident in the initial imaging.  
  
2. \*\*Lumbar Puncture (LP):\*\* To analyze cerebrospinal fluid (CSF) and rule out infections, inflammatory conditions, and measure intracranial pressure, which might explain some of the neurological findings.  
  
3. \*\*Psychiatric Evaluation:\*\* To assess for underlying psychosocial issues or psychosis, which would guide treatment if a psychiatric disorder is confirmed.  
  
4. \*\*Environmental Scan and Toxicology Screening:\*\* Investigate for potential drug use or environmental exposures that could contribute to his neurological symptoms.  
  
5. \*\*Visual Field Test and Ophthalmologic Consultation:\*\* To evaluate any underlying visual disturbances that could provide further insight into his symptoms.  
  
While it’s essential to pursue a comprehensive workup considering both physical and psychological health, the persistent stapedial artery stands out as a notable consideration given the unique auditory complaints alongside physical symptoms."  
  
### DISEASE:  
Persistent Stapedial Artery