IDENTIFICATION OF CEREBELLAR STROKE IN THE ED:
A RETROSPECTIVE APPROACH

FOEM Oral Abstract Competition
ACOEP 2016 Scientific Assembly
Joshua Spicer DO
Co – Authors

Joshua Spicer DO
Asim Malik DO
Karyn Gilbert DO
Brian Kim MD

Henry Ford Allegiance Health
Jackson, Michigan
Background

- Dizziness is a common presenting symptom to the ED, making up to 3-5% of Adult ED visits
Dizziness is a common presenting symptom to the ED, making up to 3-5% of Adult ED visits. Most often the cause is benign and peripheral in origin.
Background

- Dizziness is a common presenting symptom to the ED, making up to 3-5% of Adult ED visits
- Most often the cause is benign and peripheral in origin
- A small percentage are secondary to an ischemic event
Background

- Cerebellar Strokes have a 35% misdiagnosis rate
Background

- Cerebellar Strokes have a 35% misdiagnosis rate
- Misdiagnosis can have up to a 40% mortality
Background

- Differentiating between peripheral and central events can be difficult
- This can lead to the diagnosis being made on repeat visits
Objectives/Purpose

- Goal: Determine common predictors that are often missed in the initial workup of cerebellar stroke.
Objectives/Purpose

- Identify trends associated with missed diagnosis:
  - Lack of proper documentation
  - Imaging test choice
  - Repeated visits
Methods

- Retrospective study
- Study Population:
  - Diagnosis of ischemic cerebellar event
  - Associated diagnosis: ataxia, dizziness, imbalance, and/or vertigo during ED visit or associated inpatient admission
  - 18 years and older
  - Exclusions: prisoners and pregnant women
Results

- 98 patients had a diagnosis of stroke with an associated complaint of dizziness or vertigo
  - 20 patients (22%) had a diagnosed cerebellar stroke
  - Only 1 patient presented on a repeat visit for a final diagnosis
Results: Diagnosis in ED

- Only 6 patients (30%) were given a final diagnosis of cerebellar stroke in the ED
- The remaining 14 patients were diagnosed during their inpatient stay
Results: Imaging

- All 20 patients had CT non-contrast imaging performed in ED
- 5 (25%) CT scans were positive for cerebellar infarct
Results: Imaging

- 15 (75%) patients went on to have an MRI performed during their inpatient stay and 13 (86%) of the MRI's were positive for a cerebellar stroke.
- 4 (20%) patients were diagnosed clinically by the neurology team after negative CT imaging.
Results: Ambulation

- Only 9 patients (45%) had physician documentation discussing attempted ambulation, gait, or signs of ataxia.
Discussion

- Few cerebellar strokes are presenting repeatedly for a final diagnosis
- Few are diagnosed in the ED
- The majority are diagnosed during their inpatient service after a neurology consult
Discussion

- The majority of physicians are not documenting ambulation, evaluation of gait, or signs of ataxia.
- CT scan is a poor tool in the diagnosis of cerebellar stroke.
Limitations

- Retrospective design
- Potential lack of external validity
- Limited statistical power given number of events
Conclusion


Thank You

Any Questions?