Strength and Balance Training for a 29-Year-Old Female Who Sustained a Multifocal Stroke

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Background
- Stroke is defined as a decrease in blood supply to the brain, and most often occurs in older adults.
- In the United States, approximately 795,000 people sustain a stroke annually.
- Risk factors for a stroke include: high blood pressure, smoking, diabetes, and high cholesterol.
- Stroke is the leading cause of disability in the United States.
- Although research has shown that a balance and strength training program is beneficial for older adults who have sustained a stroke, there is limited research showing if these benefits also hold true for younger patients who have had a stroke.

Case Description
- 29-year-old female
- Sustained a stroke in her left parietal, left frontal, and bilateral occipital lobes
- Medical assistant
- Wife, mother of two children
- No past medical history
- No family history
- Non smoker
- Normal BMI
- Symptoms include:
  - R LE weakness
  - R LE numbness
  - Poor balance
  - Blurry vision

Outcomes
- LEFS
- Walking endurance
- SLS on R
- Tandem Stance
- General (R) ankle strength

Interventions
- Strengthening exercises
  - Sidelying clams
  - Sidelying hip abduction
  - Bridges
  - Step ups
- Balance exercises
  - Static balance on foam
    - NBOS, tandem, SLS
  - SLS 4-way trunk leans
  - SLS 4-way cone taps
- Home exercises
  - Standing marches in front of mirror
  - Lateral shift correction

Discussion/Conclusion
- Although the patient demonstrated improvements within five PT visits, it is unclear if her improvements were due to the strength and balance program, or if she improved due to her young age.
- More research is warranted to examine which factors and parameters determine the best outcomes for young adults who have sustained a multifocal stroke.

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Purpose
The purpose of this case report was to investigate a comprehensive physical therapy program, that included balance and strength training, in a 29-year old patient who had recently sustained a multifocal stroke.

References