Trampoline Injury Resulting in Rare Cerebrovascular Accident

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INTRODUCTION

- Trampolines seem relatively harmless until a child sustains an injury resulting in significant, and potentially lifelong, neurological deficit.
- These injuries can be difficult to identify especially in the pediatric population who cannot always verbalize their symptoms.
- Various case studies have investigated orthopedic injuries and spinal injuries sustained with trampoline use.
- There are only a handful of case studies that discuss injuries that cause stroke-like symptoms and of those, the main injury identified was within the neck vasculature near the upper cervical spine resulting in disrupted flow to the brain.
- This case presents a patient who sustained internal carotid artery injury, adding to the literature the complexity of neck injuries that can occur with trampoline use.

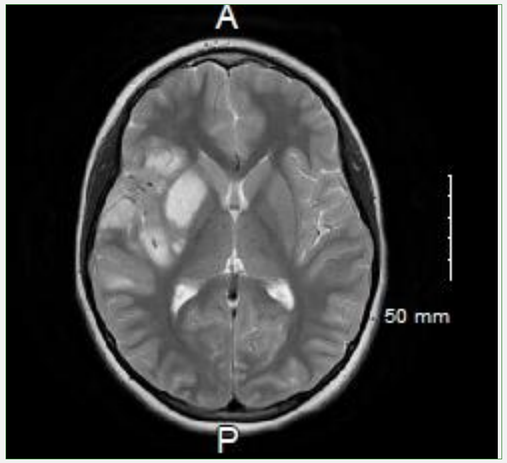

Figure. MRA imaging demonstrates evolution of right MCA infarct without hemorrhagic conversion.

INTERVENTION

- Magnetic Resonance Angiography imaging performed at the time of admission demonstrated acute middle cerebral artery infarction without thrombus, therefore patient was transferred to the pediatric intensive care unit and started on heparin drip.
- Cerebral angiogram performed on her second day of admission demonstrated a right internal carotid artery dissection with distal thrombus in the MCA.
- It was felt based on this finding that patient sustained injury to her internal carotid artery secondary to trampoline use resulting in acute stroke.
- She transitioned from heparin drip to daily 325mg aspirin.
- Throughout her hospital course her neurological deficits gradually improved, and she was discharged to an acute rehab center 4 days after initial presentation.

CASE REPORT

- A 9-year-old female presented to the Emergency Department (ED) for evaluation of left sided weakness, facial droop, aphasia, and increased somnolence.
- Her mother reported that the patient was in her normal state of health until she came in from playing on the trampoline with acute onset headache, slurred speech, difficulty walking and abnormal behavior.
- Head Computed Tomography (CT) without contrast performed in the ED was negative for acute findings such as an acute hemorrhage.
- Further imaging with CT Angiogram of the head and neck was significant for anterior cerebral artery stenosis.

CONCLUSIONS

- This case presents a rare diagnosis of acute vascular injury and resultant stroke in a pediatric patient following trampoline use.
- Strokes within the pediatric population are rare, especially in the setting of normal hematology and cardiac background.
- Clinicians should keep rare differentials such as vascular injury in consideration and do a thorough physical exam when evaluating neck injuries in children.
- This patient benefitted from her prompt evaluation, thorough physical exam and early intervention, increasing chances to gain back her normal life.