Introduction
Concussion is a traumatic brain injury (TBI) that can have both immediate and potentially long term effects on the quality of life of a person. Concussions can occur in a wide variety of settings, including sports and recreation, automobile and/or other motor vehicle accidents, slip and fall accidents, and even from collisions to other parts of the body besides the head. The medical community has developed some effective guidelines for treating a person who suffers from concussion. However, more work is needed in order to assist individuals who suffer from long term effects.

Purpose
The purpose of this case review, and the associated literature review, is to bring awareness to the medical community, and to the general population, about the potential severity of a concussion type TBI. In particular, the case study presented demonstrates the potential long term effects and symptoms that can arise from a concussion type TBI. Post Concussion Syndrome (PCS) is a long-term continuation of concussion type symptoms that last for much longer than the usual 3 month timeframe for symptom resolution. PCS can include normal concussion type symptoms such as headaches, concentration issues, balance issues, and a number of other chronic issues that can seriously degrade an individuals quality of life. Along with PCS symptoms, a small percentage of TBI patients also experience other, more rare symptoms, such as anosmia (loss of smell), change in personality, depression, and vision problems.

Background
- Subject was ejected from a moving medical cart at approximately 25-30 mph without helmet or head protection
- MOI: Subject landed full force on right lateral portion of occiput on concrete

Clinical Presentation
- Headaches*
- Difficulty concentrating*
- Blurred vision
- Balance (vestibular) issues*
- Anosmia (loss of smell)*
- Fatigue
- Nausea and vomiting
* Indicates symptoms that persisted >3 months. Consistent with diagnosis of PCS.

Diagnosis
- Moderate to severe concussion
- 4" laceration at area of impact
- Whiplash
- Post Concussion Syndrome (PCS) with associated anosmia

Background
- 38 year old male
- 5’ 10” and 220 lbs
- Senior athletic training student intern at a major league baseball spring training facility

Treatment
- 6 staples for laceration
- 1 week of physical rest
- 1+ month of cognitive rest
- 2 CT scans to check for brain bleeding
- MRI for contusion to determine damage to olfactory nerve
- Various narcotic and anti-nausea medications for pain and symptoms
- Cervical radiograph to rule out cervical fracture or pathology
- IMPACT testing (@ 1 month) to determine if concussion was still present

Conclusion
Traumatic brain injuries, and especially concussions are very real injuries that often go unseen, untreated, and are often not clearly understood. Most individuals fully recover within 3 months. Many suffer from prolonged symptoms, and even unique pathologies that could potentially become permanent. More research is needed in order to fully understand concussions.