Assessing Utility of Early Depression Screening in Patients with Concussion: A Retrospective Review

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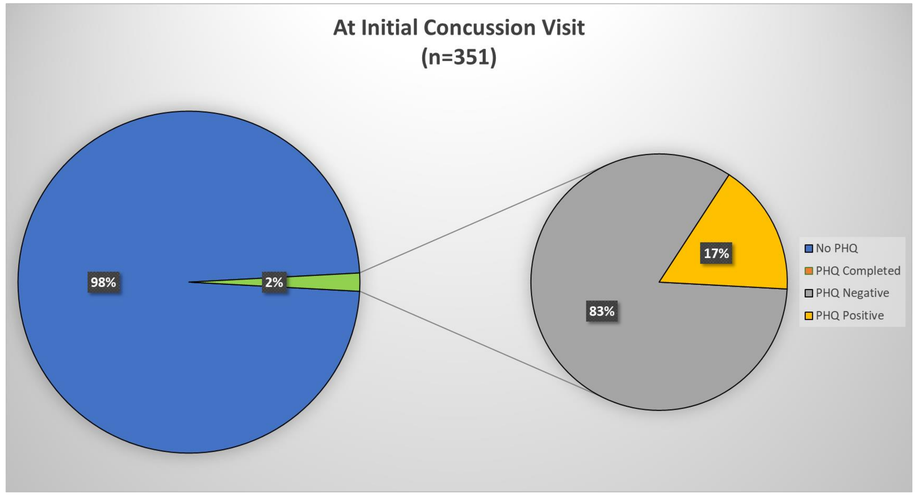
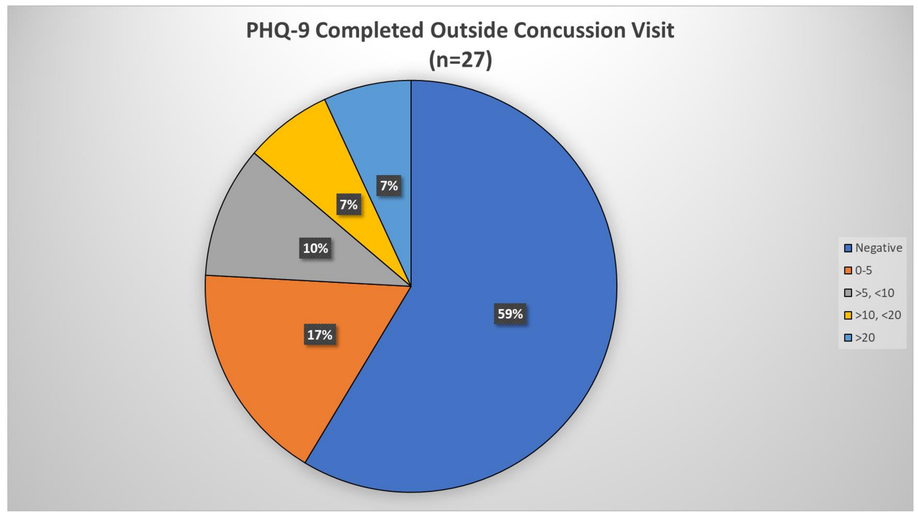
Background

There is growing evidence that major depressive disorder (MDD) is an associated sequela after concussions and can be connected to poor functional outcome and quality of life after injury. In addition to increasing suicide risk, post-concussion depression symptoms (PCDS) have been associated with poor cognitive performance. Furthermore, depression is a mediator between concussion and physical health problems, and persistent concussive symptoms after injury. This research set out to investigate whether formal screening for depression in post-concussion patients can improve success rates of identifying depression at an early stage and decreasing the rate of long-term depression in these patients. If depression screening improves outcome, it may revise standard of care and decrease length of time for patient to return to baseline functioning quality of life.

Multiple studies have been published showing an association between patients with concussion and symptoms of depression. Some studies suggest placing these patients on antidepressants given new onset of symptoms and other studies have shown that these patients occasionally remain with depressive symptoms for a prolonged period of time if screening was not done or considered during the concussion visit. Previously, these patients were assumed to spontaneously recover but some studies have shown persistence of symptoms for several months if therapy was not initiated.





Hypothesis

This study set out to determine the rate of screening for depression at initial or follow-up concussion visits. We also aimed to determine the percentage of patients that met criteria for major depressive disorder out of those who had screening completed. This was done in an objective manner using widely utilized and simple screening methods as discussed below.

Methods

Chart review was conducted on 351 patients who were seen between July 1, 2018 and December 31, 2019 either on an initial concussion visit or follow up visit for concussion per billing codes. Criteria for depression screening included completed PHQ-2, with reflex to PHQ-9 per protocol if indicated.

Results

Of the 351 patients seen for concussion visits, only 6 were screened at the visit. Of the 6 patients who were screened at these visits, 1 tested positive per PHQ-9 grading scale for depression. Interestingly, multiple patents were screened with depression screenings at visits months or even years later and found to meet criteria for depressive disorder.

References

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Discussion

The PHQ-2/PHQ-9 are quick and effective screening tools for MDD. With the growing evidence that concussion and TBI are linked to depressive disorders, this screening test could prove to be an invaluable tool in accelerating diagnosis, treatment and therapy. With only 1.7 % of the population screened with an appropriate screening tool such as PHQ and 16.67 % of this population screening positive for depression there is potential for early identification and management if depression screening is standardized. In our data collection that did not meet criteria for screening, there were multiple patients who screened positive for depression at unrelated visits after the concussion. One patient even scored a 22 on the PHQ-9 who had no history of MDD and was initiated on Lexapro at an unrelated visit post-concussion. This example shows how a missed diagnosis could spiral and lead to worsening depression if not detected early.