Clinical Work-Up:
Diagnosis: central nervous system lymphoma, multiple sclerosis or 
other disease specific to the patient and vary depending on their environment and physiological factors. Diagnostic Table 1:

<table>
<thead>
<tr>
<th>Presenting Features or Symptoms</th>
<th>Incidence/Prevalence</th>
<th>Age of Onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dehydration</td>
<td>0.5 to 3 cases per 1000 (0.05%-0.3%)</td>
<td>10-30 years old</td>
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<tr>
<td>Venous puncture</td>
<td></td>
<td>21 years old</td>
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<tr>
<td>Emotional stress</td>
<td></td>
<td>Younger population</td>
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<tr>
<td>Prolonged sitting/standing position</td>
<td></td>
<td>Immediate &amp; spontaneous recovery</td>
</tr>
<tr>
<td>Slight female predominance</td>
<td></td>
<td>Sudden loss of consciousness</td>
</tr>
</tbody>
</table>

Differential Diagnoses:
- Autonomic dysfunction
- Migraine (vasospasm or vasovagal reflex)

Treatments:
- Endocrinology screening
- EEG
- Brain MRI
- Cardiac MRI
- Tilt-Table Test
- Brain SPECT

Case Report:

**Presentation:** 21 year old female collegiate lacrosse athlete with no medical or family history of cardiovascular disease or structural deficits

**Management:** Team of healthcare professionals including cardiologist, neurologist, physical therapist and athletic trainer

**Initial Clinical Work-Up:**
- No focal deficits
- CT scan of chest: normal
- MRI of the chest: normal
- MRI of brain: normal
- Electrocardiogram: normal
- Valsalva maneuver: negative
- Head-up tilt test: negative
- Postural orthostatic tachycardia syndrome (POTS) testing: negative
- Vagal nerve stimulation: positive
- Beta-blocker challenge: negative
- Endocrinology screening: negative
- Cardiac MRI: negative
- EEG: normal

**Final Diagnosis:** Vasovagal Syncope

**References**


**Table 1:** Characteristic features of vasovagal syncope compared to our patient's specific profile. Vasovagal syncope affects the young population more often than elderly and females more than males. Prodromes are specific to the patient and vary depending on their environment and physiological factors. Diagnostic testing is extensive and rules out other conditions in order to rule in syncope.

**Table 2:** Comparison of three different case reports exhibiting patients who experienced pre-syncope/syncopal events. The main difference between the case reports and our patient is that her syncopal episode resulted in a concussion injury.

**Diagram 1:** Adapted from Ciolacovici P, Ammendt T, Sihts E. Epidemiology and prognostic implications of syncope in young competitive athletes. Eur J Heart Fail 2004;6:1949-51. RCMS, retromastoid comet sign; ARMD, arteriogenic retinal migraine; TIA, transient ischemic attack; ICT, intracranial convexity tachycardia; WPW, Wolff-Parkinson-White.

**Diagram 2:** Example of diagnostic tilt-table test. Patient’s test was positive after 18.5 minutes and was the only abnormal finding during the test.

**Diagram 3:** Similar cases of vasovagal syncope

**Table 3:** Comparison results of three case reports exhibiting patients who experienced pre-syncope/syncopal events. The main difference between the case reports and our patient is that her syncopal episode resulted in a concussion injury.

**Discussion:** Having a label for the athlete’s condition has improved her quality of life immensely. Obtaining a thorough history and extensive diagnostic testing aids to rule out differential diagnoses and rule in reflex syncope. Undiagnosed reflex syncope can contribute to multiple concussions due to repeated fainting during exercise. Dysautonomia should be scrutinized as a cause or effect of a student athlete’s concussion profile.