It’s not all Bieber-fever!

Pediatric Syncope
Objectives

1. Attendees will be able to name the life-threatening causes of syncope in pediatric patients

2. Attendees will be able to discuss an evidence-based approach to emergency room diagnostics
1. Distinguishing cardiac syncope from vasovagal syncope in a referral population.

From 2001-2011

17 Cardiac Cause

8 LQTS
3 cardiomyopathies
1 abnormal left coronary
1 primary pulmonary HTN
1 myocarditis with VT
1 CPVT
1 cardiac fibroma
1 idiopathic VT
2. Practice Variation and Resource Use in the Evaluation of Pediatric Vasovagal Syncope: Are Pediatric Cardiologists Over-Testing?

1380 patients from 1994-2012

- 763 excluded  + 617 included

15 Cardiac Cause

4 WPW
3 LQTS
3 2nd degree HB
2 Abnormal Coronary Arteries
1 SVT
1 Pulmonary HTN
1 MVP
1. Distinguishing cardiac syncope from vasovagal syncope in a referral population.

<table>
<thead>
<tr>
<th></th>
<th>Vagal</th>
<th>Cardiac</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR</td>
<td>0%</td>
<td>65%</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>2%</td>
<td>88%</td>
</tr>
<tr>
<td>Trigger Event</td>
<td>24%</td>
<td>0%</td>
</tr>
<tr>
<td>Surrounding (Peak) Activity</td>
<td>18% (6%)</td>
<td>65% (53%)</td>
</tr>
<tr>
<td>Family History</td>
<td>25%</td>
<td>41% (23%)</td>
</tr>
<tr>
<td>Physical Exam</td>
<td>0%</td>
<td>29%</td>
</tr>
<tr>
<td>ECG</td>
<td>0%</td>
<td>76%</td>
</tr>
</tbody>
</table>
Conclusions

1. Exertional Syncope  
2. Concerning Family History  
3. Abnormal Physical Exam  
4. Abnormal ECG

100% Sensitivity  
60% Specificity  
60% reduction in referrals
2. Practice Variation and Resource Use in the Evaluation of Pediatric Vasovagal Syncope: Are Pediatric Cardiologists Over-Testing?

Conclusions

“Screening with a detailed personal and family history, a physical examination, and an ECG, identified all patients with a serious cause of syncope”

100% Sensitivity
52% Specificity
50% reduction in referrals
3. ED management of pediatric syncope: searching for a rationale.

Take Home

1. Life threatening causes of pediatric syncope are real but incredibly rare.

2. Evidence-based approach equals focused history (exertional syncope, family history), physical (auscultation), and ECG.
References


