Sudden cardiac death (SCD) in children and adolescents is not a common event but when it does occur it is horribly devastating. It is important to explore strategies to prevent sudden cardiac arrest (SCA) by optimizing our screening and detection methods. Furthermore, it is important to prevent SCD if an SCA does occur. Survival after out-of-hospital cardiac arrest (OHCA) can most likely be achieved by a strategy that involves early recognition of cardiac arrest followed by early intervention.

Screening is not likely to identify all children and adolescents who are at risk for SCA. This is true because a subset of children and adolescents who have SCA have no antecedent symptoms and have a noncontributory family history. On the other hand, warning signs and symptoms prior to SCA may include syncope, especially associated with exercise, chest pain, or palpitations/arrhythmias. Although it is true that the majority of children and adolescents with these signs and symptoms do not have an underlying life-threatening cardiac condition, a small subset may have symptoms that indicate an ensuing SCA event.

Which of these symptoms are important and a strategy for investigation of these signs and symptoms is important for the generalist taking care of children and adolescents to understand. In this issue of Pediatric Annals, we discuss these issues and highlight the importance of gathering a complete patient history, family history, and physical examination to uncover a potentially life-threatening cardiac event.

Although additional screening with a 12-lead electrocardiogram (ECG) is a potential screening strategy, we will not cover its nuances in this issue. It is controversial and there is much discussion about the feasibility and utility of routine ECG screening of all children and adolescents in the United States. At the time of this writing it would be fair to say that the feasibility and logistics of this strategy, as well as the absence of data demonstrating its efficacy in saving lives, has delayed adoption and endorsement as a mass screening policy in the United States.

For those children and adolescents who have no antecedent symptoms or family history, it is critical to be in a position of timely recognition and intervention should a cardiac episode occur. For example, it is conceivable that a seizure could be the manifestation of a cardiac arrest. It is also possible that the agonal respirations associated with a cardiac arrest might be mistaken for normal breathing in a truly pulseless, nonbreathing person. The chain of survival, which includes calling emergency services, initiating cardiopulmonary resuscitation (CPR), and using an on-site automated external defibrillator, can lead to success, especially if instituted early; it is important to educate the public, including children and adolescents, in the early initiation of the chain of survival. This strategy, including education with regards to the implementation of effective CPR, can and will save lives. It is the assumption that part of the reason for the poor outcomes associated with OHCA may be the relatively low incidence of lay-rescuer CPR. Reasons for the latter may include the fact that lay rescuers may be uncomfortable with or uneducated in the nuances of CPR performance. One cannot only hope for but can also expect improved outcomes with a public who is educated and willing to perform lay-rescuer CPR. The contributors to this issue feel that the lay person should be educated about how to perform CPR, and we also advocate for it to be mandated in the US school system. It seems to be clear to us that a society educated and willing to perform CPR will likely save lives and lead to a much higher incidence of survival from OHCA.

doi: 10.3928/00904481-20151117-01
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