

Sports comment: Screening important for avoiding tragedy

By Joe Gross

(EDITOR'S NOTE: This is the fifth in a series on sports-related illnesses and injuries that affect scholastic and youth league athletes) Chances of a young athlete dieing from the occurrence of a heart related ailment while participating in sports are miniscule. When it does happen it is going to be from a pre-existing condition.

And while the incidence of cardiovascular illness or death in athletes competing in an athletic event is approximately five in one million, if one of those five is a loved one, it's traumatic when it happens and the great odds don't matter.

Unlike most other sports-related illnesses or injuries, there is little chance for prevention of heart problems once a person is participating. That has to happen long before that point in time, but there is literally no guarantee that such catastrophic events could be avoided.

In the same vein, any symptom short of an athlete simply falling to the ground is extremely difficult to recognize and the response time for treatment is far more critical and usually takes on-site emergency equipment to save the life of a cardiac victim.

"It's really a huge issue," said Dr. Stephanie Jacobs, a consultative cardiologist with Cardiology Associates and is on staff at Anne Arundel Medical Center, who talked about the need for and difficulty of screening prospective athletes, a subject that has also been addressed by the American Heart Association, the American College of Cardiology, both of which have recently come out with new guidelines for screening, and the National Football Foundation.

"It gets a lot of media attention when someone young and healthy and should be robust dies suddenly. It's just not common. It shakes us because they are the people who should be best at whatever is going on," the doctor said.

Yet, the subject of screening for cardiovascular abnormalities, which is a giant step beyond the usually minimal physical examination required for every high school athlete is controversial. It would be a massive undertaking.

Jacobs pointed out that because of the vast numbers of young people participating in sports programs and that there are so many different tests that could be administered it is difficult to test everyone for everything.

The number of properly trained physicians and technicians would be tremendous and because of the equipment and personnel needed to administer the tests complete screening is considered cost prohibitive. However, it's something that should be done whenever possible.

The AHA, which admits in its report that "there is no cost effective battery of tests to identify all, or even most, dangerous cardiovascular conditions," recommends a national standard for some form of pre-participation cardiovascular screening for high school athletes.

"Why young people who should otherwise be healthy have sudden death are some structural abnormalities of the heart, hereditary things such as hypertrophic cardiomyopathy, a condition where the

heart muscle is thicker than it should be and sets up an abnormal heart rhythm that accounts for about one-third of sudden athletic deaths in this country," Jacobs said.

Another condition is arrhythmogenic right ventricular dysplasia, which is the next most common cause, followed by problems with the coronary artery that when you increase activity increases the risk factor, abnormal electrical problems that predispose you to an abnormal rhythm.

Other categories are undiagnosed coronary artery disease and congenital heart problems that people have lived with since birth.

There are rare traumatic injuries that have caused sudden cardiac death, such as being hit perhaps in the chest by a ball or as happened recently to a baseball coach, being hit by a batted ball in the carotid artery, which through unbelievably rare timing might precipitate an abnormal heart rhythm.

"The AHA has created a pre-participation screening questionnaire that talks about 12 points that includes a family history and a personal medical history ... it helps to determine the risks in terms of genetics," Jacobs said.

"A lot of times kids don't know what (diseases or conditions) their parents or other blood relatives had and because of that the guidelines for anyone under 18 recommend that parental confirmation is utilized."

It is extremely important for young people to know as much as possible about their family history beyond their parents in regard to existing cardiovascular conditions. It could help make decisions as to the tests necessary to identify specific problems known to cause sudden cardiac death or disease progression in young athletes.

Jacobs attempted to dispel the idea that a heart ailment must keep an athlete from participating. She noted that some young athletes are scared of that happening and won't admit to anyone that they are having chest pains or other symptoms, something she said is dangerous.

The doctor pointed out that many athletes with some forms of heart disease can and do compete and are totally fine with it, and that it's up to physicians to decide whether or not someone should be disqualified from participating.

"That's the next step after screening; to be able to say 'what do we do with this information?' That really matters in this country where we have athletes who are making millions of dollars," Jacobs explained. "To disqualify someone from all the social and financial benefits can be traumatic diagnosis to give to somebody."

She also talked about some tests, particularly an EKG, that might be done in the screening process could create false positives, particularly for murmurs, that could keep potential athletes from being permitted to play. That is one of the adverse affects of screening, which is one of the possible negatives of screening, but there are more positives for risk reduction.

As with any injury or illness in sports, it would be helpful to have medical personnel or a certified athletic trainer on site at every sports practice and game. That is, unfortunately, neither economically nor logically possible, although Howard County high schools now have a certified trainer at each school.

Part of the problem with cardiovascular problems is that young athletes seem to believe they are indestructible and if they do feel a chest pain or other symptom they will often ignore it rather than mention it to anyone who might see that as complaining about it.

Also, it is difficult for a coach or parent or sometime even a trained medical technician or athletic trainer to recognize that an athlete is having a problem. However, in that regard, because there is a tiny window of

safety in the event of a cardiac event, there should be such emergency equipment as a portable defibrillator on site.

"The first line of defense is symptoms," Jacobs said. "Exertional chest pains, dizziness or passing out, unexplained fatigue or breathlessness are all suggestive symptoms and should be evaluated further by a cardiologist."

And, anyone with a history of exercise intolerance or who has been diagnosed with a murmur should be watched more closely and taken out of the environment they're in.

In other words, it would be best to have an ambulance at as many events as possible, but if there is none to call for one as quickly as possible if an athlete appears have any of the cardiovascular symptoms. If there is truly a problem, there is about three to five minutes at the maximum to save a life, which is the reason for needing a defibrillator and someone who knows how to use it at the field.

"Theoretically, the defibrillators do not need a professional to use it because the new ones are automated and can be properly used even by students who get a little bit of training," Jacobs explained. "One of the problems is that the defibrillators are usually locked away in an office in the school and if they are needed on a field there won't be enough time to go get it, bring it to the field and use it on a victim.

"Having a physician or a trained athletic trainer on the field to recognize a critical situation would be the idea thing,"

In truth, very few athletes suffer from sudden cardiac death while participating in sports, but it's critical to do all in our power to keep such catastrophic events at a minimum. It's important to get screening for as many athletes as possible, to know of any existing conditions and to take advantage of every possible precaution.