Response to Letter Regarding Article, “Incidence, Cause, and Comparative Frequency of Sudden Cardiac Death in National Collegiate Athletic Association Athletes: A Decade in Review”

We thank Drs Daniels and Burns for pointing out that coronary artery aneurysms were not included on the “Guidelines for Pathological Diagnosis.” The list was not meant to be inclusive, and many pathological entities that cause sudden cardiac death (SCD) in athletes, but not represented in this cohort, were not included. Other diagnoses assigned as a cause of death, but not included in the guidelines, were long QT syndrome, Wolff-Parkinson-White, and commotio cordis. In these cases, the cause of death was assigned given the circumstances of death and personal or family history.

In this study, autopsy was available for review in 73% (58) of cases, and a diagnosis was assigned in an additional 6 cases based on other information such as personal or family history or discussions with medical examiners or coroners. In the remaining 15 cases there was not enough detailed information (sufficient quality autopsies, death certificate only) to assign an exact cause of death with certainty, although the preponderance of evidence indicated SCD. In the athlete whose death was attributed to Kawasaki disease, the autopsy was not available for review and the diagnosis was assigned after talking with the medical examiner.

Drs Daniels and Burns do bring up an important point regarding the potential for unrecognized and misdiagnosed pathology after sudden death. The pathological search for all potential causes of SCD in a young athlete requires specific expertise and dedicated protocols that are lacking in many jurisdictions. In addition, in many institutions the person performing the autopsy may not be a forensic pathologist or hold board certification. In 2009, the National Academy of Sciences produced a blue ribbon report citing the lack of mandatory standards for autopsies and the absence of oversight into the performance of coroners and medical examiners. In an Italian study, 28% of SCDs were initially categorized as morphologically normal hearts; however, with more specialized autopsy examination, 79% of those were later determined to have a specific cause. This highlights the need for widespread implementation of uniform diagnostic strategies, including postmortem molecular genetic testing and increased involvement of cardiovascular pathologists to evaluate cases of SCD. It is only with a clear understanding of the incidence and the causes of SCD in the young that appropriate preventative strategies can be developed.

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