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Sudden Cardiac Arrest in Young Adults - Hidden Dangers in Your Lifestyle

Dear **Editor**,

Sudden cardiac arrest (SCA) is a fatal health emergency that is defined by the abrupt cessation of cardiac activity, which prevents the heart from pumping and results in a reduction in blood flow to critical organs. Cases are now consistently increasing among young adults who are healthy and fit, even though it was previously associated with elderly individuals and those with known cardiac disease. The most recent data indicate that out-of-hospital SCA is a condition that affects adults under the age of 40 at a rate of 4 to 14 per 100,000 person-years. The majority of patients did not have any diagnosed cardiac disease before the onset of the event [1].

At an early age, SCA is the result of genetic cardiac alterations, including hypertrophic cardiomyopathy, arrhythmogenic right ventricular cardiomyopathy, and electrical disorders like Brugada and long QT syndromes. Approximately 30% of these occurrences are the result of heredity mutations and do not exhibit any cardiac anomalies. Concealed cardiomyopathy is the term used to describe this condition. In approximately one out of every four cases, a molecular autopsy can reveal previously unknown genetic mutations, suggesting a potential underlying genetic cause [2]. Smoking, obesity, disturbance of sleep cycle, psychological stress, high intake of energy beverages, and abuse of steroids or recreational drugs are all modifiable behavioral risk factors that increase the risk of SCA, as indicated by a recent study [3]. The importance of bridging the divide between identifying risk factors and implementing early prevention measures is emphasized by their findings. Routine cardiac screening, particularly electrocardiography (ECG), is not yet incorporated into the standard preventive strategy in schools, colleges, and gyms, despite the increasing number of these cases among individuals who appear to be medically healthy. Screening with ECG and echocardiography is recommended for those with elevated cardiac risk; however, the use of these diagnostic technologies is uncommon outside of structured athletic settings, effectively leaving the majority of young people unassessed [4]. There was no correlation between sudden cardiac mortality in young adults and COVID-19 vaccination, as indicated by evidence from an extensive multicenter study. Prior COVID-19 hospitalization and other lifestyle-related risk factors posed greater hazards, whereas full immunization was associated with a reduced risk [5].

The imperative need for a public health and educational response to address SCA in youths is evident. The integration of cardiac risk education into youth-oriented environments can help adolescents identify early warning signs and establish a healthy and balanced lifestyle. To prevent the fatalities of young individuals as a result of SCA, it is imperative to increase awareness of behavioral risk factors and implement early screening through a variety of technologies.

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