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Lifestyle, Behavior, ECG

Abstract 3718: Preliminary Findings of ECG Screening in 9,125 Young Adults

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Introduction: The occurrence of SCD in young adults is devastating to a community. It is estimated that over 1,000 of these deaths occur annually in the USA. Experience in Italy utilizing ECG screening has demonstrated an 89% reduction in SCD in young athletes. Reports in the literature suggest a high % of abnormal findings in athletes. Concern is therefore raised that ECG screening will lead to a large number of abnormal ECGs which may lead to widespread testing and anxiety for the students.

Methods: We have developed an efficient screening process to perform ECG testing on high school students utilizing community volunteers. Six high schools in the Chicago suburban region cooperated in an ECG screening program. Screening was performed during regular school hours. A total of 9,125 students were tested. A total of 138 of ECGs were abnormal (2%). The ECG abnormalities detected are outlined in Fig. 1. Many of the ECG abnormalities are likely to represent clinically important findings for these young adults.

Conclusion: ECG screening of high school student results in an acceptable % of abnormal findings. The types of abnormalities detected are often of clinical significance.

Number of Abnormal ECGs

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ECG abnormality	# abnormal
WPW	11 (8%)
LVH	17 (12%)
Left or right axis deviation	32 (23%)
RVH	6 (4%)
Non-specific IVCD or RBBB	17 (12%)
Multiple PVCs	3 (2%)
1° & 2° AVB	5 (4%)
Prolonged QT (>460msec)	23 (17%)
ST-T wave changes	22 (16%)

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