

# A RARE CASE OF ESCAPING DEATH EVENT : A SURVIVOR OF CARDIAC ARREST IN MARATHON

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## INTRODUCTION

Physical activity predisposes not only athlete but anyone to develop cardiac arrest as a result of ventricular tachyarrhythmia. While long distance running races gain high traction of millions participants worldwide, cases of sudden cardiac death among marathon runners were reported with few numbers of survivors.

## CASE DESCRIPTION

We present a 38 years old male, nonsmoker with underlying hyperlipidemia and compliant to medication, collapsed at kilometer two during a marathon event. Commencement of cardiopulmonary resuscitation (CPR) at the scene was performed by medical personnel and he was found to be in ventricular fibrillation thus early administration of automated external defibrillation (AED) followed by multiple defibrillation and intravenous adrenaline restored spontaneous circulation within 42 minutes effort of resuscitation. Echocardiogram later showed mild tricuspid regurgitation meanwhile coronary angiogram further revealed double vessel disease with complete occlusion at proximal left anterior descending artery (LAD) and mid right coronary artery, hence percutaneous coronary intervention (PCI) to LAD was performed. He was discharged one week later and planned for stage PCI to LAD during next follow up.

## DISCUSSION

Based on Race Associated Cardiac Arrest Event Registry (RACER) study, incidence of cardiac arrest was 0.54 per 100000 runners, with highest risk in male marathoners. Coronary artery disease is the commonest cause that predisposes runner to develop ventricular tachyarrhythmia leading to cardiac arrest. Further study found a mismatch between oxygen supply and demand in older male sportsman with ischemic heart disease which precipitate acute coronary events in race-related cardiac arrest. Hence, preparticipation screening to detect those with high cardiac risk is encouraged to athletes. Prompt emergency intervention by expert medical staffs and availability of AED in marathon event are strongest factors contributing to high resuscitation rates following race-related cardiac arrest.

## CONCLUSION

Initiation of early bystander CPR and accessible AED at the scene increase likelihood of surviving cardiac arrest during a marathon thus organiser should be well equipped with trained medical response teams and available AED.

## KEYWORDS

cardiac arrest, marathon, coronary artery disease

## REFERENCES

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