

Ventricular Fibrillation Arrest after Blunt Chest Trauma in a 33-year-old Male, Commotio Cords?

C. Pena, MD^{1*}, N. Patel, MD¹, Z. Nesheiwat, DO¹, F. Zafrullah¹, and E. Eltahawy, MD²

¹Division of Internal Medicine, Department of Medicine, The University of Toledo, Toledo, OH 43614

²Division of Cardiovascular Medicine, Department of Medicine, The University of Toledo, Toledo, OH 43614

*Corresponding author: clarissa.pena@utoledo.edu

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Background: Commotio cordis is an event in which a blunt, non-penetrating blow to the chest occurs. This triggers a life-threatening arrhythmia and often sudden death. This phenomenon is predominately seen in young, male athletes. We present a case in which ventricular fibrillation occurs in an older male athlete after blunt trauma.

Case Presentation: A patient with no known medical history was brought to the emergency department after being found unconscious secondary to ventricular fibrillation after a soccer ball kick to the chest. He was subsequently resuscitated on the soccer field. The patient was admitted to the hospital. Initial lab workup was significant for elevated troponin and lactate, which returned to normal levels. An echocardiogram showed global left ventricular systolic dysfunction with an estimated ejection fraction of 45–50%. Coronary angiography demonstrated nonobstructive coronary arteries. The patient was diagnosed with commotio cordis and discharged from the hospital in stable condition. Follow-up investigations included an echocardiogram which continued to demonstrate low ejection fraction and event monitor demonstrating frequent polymorphic ventricular tachycardia with periods of asystole.

Conclusion: This case is unique in that blunt trauma to the chest from a soccer ball immediately triggered ventricular fibrillation in a patient with a possible cardiomyopathy. It is possible that the blunt trauma caused primary commotio cordis that led to cardiomyopathy in a previously healthy man, or that an underlying cardiomyopathy made it more likely for this to occur. Increased awareness and prevention efforts of blunt chest trauma are required to reduce the associated life-threatening arrhythmias.