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Myocard infarction developing due to carbon monoxide poisoning

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Introduction: Acute myocard infarction (AMI) is a clinical condition occurring suddenly but resulting from long term decrease in the amount of oxygen presented to myocardium. Its most common cause is atherosclerotic disease of coronary arteries. AMI associated with carbon monoxide poisoning occurs very rarely.

Aim: In this report, a young person who did not have known coronary atherosclerotic disease, and had AMI due to exposure to carbon monoxide is presented with the aim of drawing attention to the fact carbon monoxide poisoning, which occurs commonly throughout the world, may lead to AMI.

Case: A 27 old male patient lost consciousness while struggling against fire in work place and had a cardiac arrest. After undergoing resuscitation by 112 emergency service, he was brought to emergency service intubated and with closed consciousness and admitted. Glasgow coma score was 4 and noradrenaline infusion was initiated owing to hypotension. In ECG, ventricular tachycardia, and other alterations were observed. Patients was diagnosed with anteroseptal AMI. Patient underwent emergency angiographic examination and it was observed that LAD was completely obstructed and stent was placed. Thorax CT was taken and pneumothorax and trachea rupture was observed. No intervention was considered necessary except for chest tube inserted by chest surgery department. Patient was extubated on 11th day of admission to intensive care unit and transferred infectious diseases clinic.

Discussion: Carbon monoxide (CO) is a non irritant gas without color, taste and smell. Carbon monoxide has higher affinity for hemoglobin than oxygen, with oxygen being presented to tissue at lower amounts. It may lead to cardiac toxicity and myocardial hypoxia. Cardiac involvement may occur immediately after exposure to carbon monoxide as well as a few days later. Palpitation, sinus tachycardia, atrial fibrillation, ventricular extrasystole and bradycardia may be observed. ST segment and T wave changes are frequent. The most frequent ECG finding is sinus tachycardia. Sinus tachycardia, ischemic ST changes and in follow up evaluations, ventricular extrasystoles were observed. 100% oxygen, bed rest, and correction of serious rhythm and conduction disorders contribute to recovery. In our case, symptoms resolved in a short period with the placement of stent to obstructed vessel and antisickemic treatment, and CO Hb level and heart rate returned to normal.

Conclusion: In patients presenting with CO poisoning, ECG and cardiac enzyme monitorization should absolutely be carried out.

Biography

Ozkan Onal has completed his medical education at Gazi University Medical Faculty and he was specialized in anesthesiology in Hacettepe University Medical Faculty. He has more than 15 publications in reputed journals in the field of anesthesia.

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