



G105 Preconception Diagnostic Approach: Case Report

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After attending this presentation, attendees will see the results of the preconception diagnostic approach that can lead to death and the importance of detailed examination.

This presentation will impact the forensic science community by increasing awareness that preconception diagnosis approaches cause negativities at patient's treatment and follow up and the best approach is detailed examination and laboratory investigation.

Sudden unexpected deaths constitute a large part of forensic medicine's daily work and are mostly caused by cardiovascular system disorders. It was noted that acute myocardial infarction and coronary artery disease are mostly seen, but sudden deaths due to aortic dissection and rupture are less seen.¹

Aortic dissection occurs by the rupturing of intima layer and, passing blood to the middle and two-thirds part of the media. This situation occurs mostly at the ascending aorta and mostly has a transverse course. Aortic dissection is a life-threatening disease which is characterized by sudden chest and/or waist pain. The disease is seen most commonly in men.² Compensation mechanisms are not enough because aortic rupture cases are too severe and progress very rapidly. It was seen that of the 85.4% of cases located in the thorax, aneurysm was at the ascending aorta with 70% of them at the opening to the pericardium.³ Despite the improvements of noninvasive diagnostic methods, acute aortic dissection's mortality is still high. Delaying the diagnosis affects hourly mortality by an increase of 1%. A rapid and correct diagnosis can place the mortality rate under 50%. Mortality rate of the disease was 1% per hour in 24 hours, especially at dissections, on the ascending aorta. This rate rises to 75% at the end of second week. When considered from this point, early diagnosis is an important factor which positively affects the prognosis.⁴

Introduction: The most important usage area of the pesticides is in agriculture as pest control. In 1985, organochlorine pesticide usage was forbidden except endosulfan and toxaphene.⁵ Endosulfan (a neurotoxin) poisoning may cause neurologic symptoms like tonic clonic seizures, tremor, headache, dizziness, ataxia. The treatment approach is symptomatic, seizures can be controlled by benzodiazepine and if needed by phenobarbital.⁶

Case: It was detected that a 25-year-old male fainted while spraying his garden and was brought to hospital. He was unconscious, his pupils were dilated, and there was no light reflex. He was intubated due to shallow respiration and, right after cardiac arrest occurred, he was resuscitated with cardiac massage and medical therapy. It was thought that he was poisoned by endosulfan pesticide, so gastric lavage was done by using nasogastric tube. He was comatose and continuously having seizures. Benzodiazepine was used at his treatment. During his medical therapy he was arrested and atropinized; defibrillation was performed, but he expired, not responding to resuscitation. At his autopsy, heart was weighted as 380g, 400cc bloody fluid was detected at his pericardial sac, there was 2cm dissection at his aortic knob, he was died because of pericardial tamponade which caused by aortic dissection. At his toxicological report, 143ng/ml active substance was found in his blood which belongs to benzodiazepine family and an antidepressive drug (diazepam).

Conclusion: There may be a few possibilities which caused undetected endosulfan level at his toxicology report. The first possibility is atropine which was used at treatment and not reported pralidoxime smooth the excretion of endosulfan. Another alternative is incorrect laboratory testing results. And the last and most important alternative is misdiagnosis. It was important that physicians consider endosulfan poisoning at the differential diagnosis instead of cardiac events for a patient who had central nervous system toxicity symptoms and signs with undefined etiology and who came from countryside. But this hospital and other healthcare organizations don't have required conditions for this kind of considerations. This is a dead end and also every condition of the country about this area must be used in situations like that.

Noted in the physicians logs or notes; mistakes were made because of misdiagnosis due to general assessments. Because of this, the best approach is to make the decision after a detailed examination and appropriate laboratory investigations.⁷

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Diagnose, Autopsy, Aneurysm