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RESEARCH ARTICLE

ECG MANIFESTATIONS AFTER ORGANOPHOSPHATE TOXICITY.

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Key words:-

Organophosphate poisoning, ECG changes.

Abstract

Organophosphate poisoning is associated with different ECG changes, Toxicity resulting from organophosphate is public health hazard in emergency medicine department. This is a retrospective study conducted at King Fahd University Hospital. During the study period, a total of 50 patients were admitted with OP toxicity. The results revealed that, No direct correlation was found between OP toxicity, ECG manifestations and outcome.

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Introduction:-

Toxicity resulting from organophosphate is an important public health hazard in many regions in Saudi Arabia, most commonly in rural areas. Cardiac manifestations that occur in patients with organophosphate (OP) poisoning range from innocuous ECG manifestations, such as sinus tachycardia, to life-threatening arrhythmias like ventricular tachycardia and symptomatic bradycardia also can lead to cardiogenic pulmonary edema and ischemia. The objectives of this study is to evaluate the various ECG manifestations in patients with OP poisoning in correlation to mode of exposure and outcome.

Methods:-

This is a **retrospective** study conducted at King Fahd University Hospital from where the medical records of all patients presented to the emergency department with organophosphate poisoning between the period of January 2000 to December 2010 were reviewed. Demographic data (age and gender), mode of exposure, clinical manifestations, electrographic changes, rate, rhythm, PR and QT intervals, ST segment and T wave changes were traced. Also patient outcome in term of length of hospital stay and mortality were recorded.

Result:-

During the study period, a total of **50 patients** (34 males [68%] and 16 females [32%]) were admitted with OP toxicity. The most common route of exposure was **ingestion** in 20 patients (67%). **Vomiting** was the most common clinical presentation (13 patients [43%]). ECG was obtained for 30 of them **Sinus tachycardia** (46.6%) was the most common ECG finding followed by **T inversion** in (30%) **prolong QT** was found in (16%) and **sinus bradycardia** in (6%). **Cardiac arrest** was reported in 2 cases (7%).

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ECG manifestations In organophosphate poisoning		
ECG abnormalities	No.	%
Sinus Tachycardia	14	46.6
T inversion	9	30
Prolong QTc interval	5	16.9
sinus bradycardia	2	6.8

Conclusion:-

Organophosphate poisoning is associated with different ECG changes and most commonly presented with sinus tachycardia, other ECG signs were T wave inversions, prolonged QT and sinus bradycardia. **No direct correlation was found between OP toxicity, ECG manifestations and outcome.**

Limitation:-

Retrospective type of study.
Small sample size.

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