Case Report

Non-fatal Oleander Poisoning: A Case Report

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ABSTRACT

In rural India, traditional methods are often employed for treatment of ailments and also for getting rid of unwanted pregnancy. Nerium oleander (common oleander) is one such plant, the leaves and roots of which are used in Indian traditional medicine and the root is often used by rural folk as abortifacient. In this paper, the case of a 20-year old girl who had developed signs and symptoms of oleander poisoning as a result of consumption of a drink prepared by boiling the root of oleander is presented. Even though oleander poisoning has been reported to be a common occurrence in many parts of India, it is a rare occurrence in the State of Manipur.

Key Words: Nerium; Common oleander; Cardiac glycosides

Introduction

In our country, unmarried young girls face social stigma when they become pregnant outside wedlock. This factor often puts unmarried girls in remote areas at the risk of obtaining services from unqualified medical practitioners who maintain secrecy. In rural India, traditional methods are often employed for treatment of ailments and also for getting rid of unwanted pregnancy. Nerium oleander (common oleander) is one such plant, the leaves and roots of which are used in Indian traditional medicine, and the root is often used by rural folk as abortificient.[1] It belongs to family *Apocynaceae* and is an ornamental shrub with long lanceolate leaves and clusters of whitish or pinkish flowers. All parts of the oleander plant contain cardiac glycosides, including the roots, and even burning does not inactivate the glycosides which can be present in the smoke. The toxic component are the two potent cardiac glycosides, oleandrin and neriine, which can be isolated from all parts of the plant.[2] Interestingly, poisoning by oleander is a common toxicological emergency in tropical and subtropical parts of the world including most parts of India, but it is not common in Manipur.[3]

The Case: A 20-year-old female from a remote village in Manipur was brought to the Regional Institute of Medical Sciences, Imphal with vomiting, diarrhoea, faintness, delirium and twitching of muscles on 20th June 2011. According to her parents, they had consulted a local quack the previous day for their daughter's frail health, who gave her a drink prepared by boiling the root of common oleander. A few hours later, she started manifesting the symptoms mentioned, followed by slight bleeding from the vagina.

On initial examination, there was pallor and dehydration and the blood pressure was recorded at 100/80 mmHg with an irregular pulse of 60/min. Other general physical parameters were normal. Cardiovascular examination and investigations revealed an irregular cardiac rhythm. Even though the parents did not give any history of pregnancy, the uterus was enlarged and ultrasound examination confirmed the diagnosis of pregnancy. Blood sample analysis by TLC (thin layer chromatography) showed the presence of glycosides of nerium oleander, and the level was 2.6 ng /ml when measured by a densitometer. She was treated accordingly for oleander poisoning by anticholin-

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ergic and antiarrythmic drugs; and significant improvement in her condition was observed by the evening. Medical termination of pregnancy (MTP) was planned for the next day; however, a foetus (16 weeks approximately) was expelled from the womb spontaneously in the late evening of the same day without any medical intervention.

Discussion

The active principles of oleander (oleandrin and neriin) are cardiac glycosides with cardiotoxic effects, and various ventricular dysrhythmias and tachyarrhythmias have been described following consumption of parts of this plant; bradycardia and heart block being the most frequently reported abnormalities.[4-6] Diagnosis of oleander poisoning is mainly based on a detailed history, i.e., description of the plant, or which part of the plant, time between ingestion and symptoms, etc. In the present case, the history given by the parents was informative and it helped in early diagnosis and treatment of the patient. Confusion, dizziness, drowsiness, weakness, visual disturbances and mydriasis are central nervous system manifestations of oleander toxicity.[6-8]

Interestingly, the patient in this case had obvious central nervous system manifestations initially, which were misdiagnosed by the attending doctors as being the result of some psychiatric ailment. Such CNS effects may be explained by the fact that the glycosides of oleander have digoxin-like effect and they inhibit sodium-potassium ATPase.[1] Digitalis overdose can cause delirium, but whether this is due to hyponatraemia affecting the central nervous system or not is unclear.[9] Although nerium oleander ingestion has been reported for the purpose of procuring abortion in several studies, significant toxicity leading to acute poisoning has rarely been reported.[10] In the present case, abortion occurred after the ingestion of oleander; there was also evidence of significant toxicity, but the victim survived without sequelae.

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