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An Unusual Case of *Euphorbia Tirucalli* Sap Poisoning

Shruthi Bettegowda[1]*, Vimala Sheshadri Iyengar[2], Madhura Talkad Lakshmikumar[3]
[1]Assistant Professor, [2,3]Associate Professor, Department of Medicine, Adichunchanagiri Institute of Medical Sciences, Balagangadharanatha Nagar, Nagamangala, Mandya -571448, India

***Corresponding Author:**
Name: Dr. Shruthi B
Email: bettegowda.shruthi@gmail.com

Abstract: *Euphorbia tirucalli* sap is extremely irritating to the skin and mucosa. On accidental exposure it causes vesication in the skin and inflammation involving eye sight in the eyes. On oral ingestion, it acts as an irritant, causing vomiting, diarrhea, convulsions and coma. It is used as a local irritant application for procuring criminal abortion, but rarely for homicidal and suicidal purposes. We came across a case of oral consumption of sap of *Euphorbia tirucalli* for suicidal purpose. Patient responded to supportive treatment and recovered over a week without any complication. Though it is rare, we do come across such cases and physicians should be aware of it. There is no specific antidote. Patients can be managed by supportive treatment effectively. At times it can cause serious symptom and can be fatal. More Indian studies needed on this poisoning.
Keywords: *Euphorbia tirucalli*, Poisoning, Sap, Suicide.

INTRODUCTION

Euphorbia tirucalli [ET] is a good live fencing material. The milky sap contained in this plant is extremely irritating to the skin and mucosa. On accidental exposure it causes severe irritation, redness and burning sensation in the skin. Contact with the eyes may cause severe pain and in some cases temporary blindness for several days .There are many case reports of ocular injury due to Sap of ET but oral ingestion of the sap for suicidal purpose is very rare. A case of oral ingestion of sap for suicidal purpose is reported here. Supportive treatment resulted in a full recovery without any complication.

CASE REPORT

A 22 year old male presented to our emergency room with history of consumption of milk juice of ET. His complaints were burning sensation in throat, abdominal pain, and vomiting. No significant past medical history was obtained. On examination patient was well oriented and conscious. Vital signs were normal. Systemic examination was unremarkable. In the emergency room, patient was treated symptomatically with antiemetic and proton pump inhibitor. Gastric lavage with normal saline and activated charcoal was done via nasogastric tube. Blood routine, random blood sugar, electrolytes, renal function test, liver function test, electrocardiogram, chest radiograph and ultrasound abdomen were all normal. Subsequently patient developed diarrhea, treated with intravenous fluids. Patient made uneventful recovery and was discharged after six days of observation.

DISCUSSION

There are about 1600 species of extremely variable forms of plants in Euphorbia genus [1] .The chief of these plants are *Euphorbia antiquorum, Euphorbia nerifolia* and *Euphorbia tirucalli*. ET is also known as Indian Tree Sponge, Milk Hedge, Fire stick Plant, Pencil tree [2].

Euphorbium is an acrid milky juice exuded from stems of various euphorbius plants belonging to Euphorbiaceae. The toxic part is latex. Toxins differ based on species [1].The latex of ET contains polycyclic diterpene esters [3].

The latex on oral ingestion acts as an irritant causing vomiting, diarrhea, burning sensation in the abdomen, convulsion and coma. Irritant toxins indirectly stimulate contraction of the gastrointestinal smooth muscles by mechanical irritation. Skin exposure produces an irritant dermatitis and ocular exposure causes an irritant keratoconjuctivitis. Our patient had gastro intestinal symptoms (vomiting, diarrhoea and abdominal pain).Management includes symptomatic and supportive care [1].

In Europe veterinary practitioner used this sap as vesicant. One to four drops of the juice is used as a purge. Twig of the plant is used as a local irritant for procuring criminal abortion [4].

The latex caused death of an adult on accidental consumption of a teaspoonful of the juice within three days. Postmortem examination showed gangernous patches in the stomach and rotten spleen [2].

In our case poisoning with latex of ET did not cause any serious complications. Patient had only gastrointestinal symptoms which were well tolerated and controlled by supportive therapy.

There have been several case reports in the literature about ocular injuries in humans resulting from accidental exposure to the latex of ET [5, 6]. Oral ingestion of the latex for the purpose of suicide is very rare.

CONCLUSION

In conclusion, being aware of these toxic plants and their sap constituents, the physician can manage patients expose to the plants sap successfully in rural hospital with supportive therapy. Further studies are needed on this poisoning to know the chemical composition of latex and precise mechanism of action.

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