

Incidence and Clinical Course of Yew and Oleander Poisoning in Children and Adolescents

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Objectives and Research Questions and Hypotheses

The primary objective of this study is to determine the incidence, clinical course, and treatment strategies of these rare but potentially life-threatening intoxications in children and adolescents in Germany.

The study aims to answer the following questions:

1. What is the incidence and age distribution of yew and oleander poisoning in children and adolescents in Germany (0–18 years)?
2. Were the intoxications accidental or intentional (suicidal)?
3. Which clinical findings led to the suspected diagnosis, and what diagnostic investigations (medical history, laboratory testing) were performed?
4. What was the clinical course, and which symptoms predominated?
5. Which therapeutic interventions were performed, and which treatments were successful?
6. Was a regional poison information centre consulted?

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Study Duration: 2 years

Background

Both yew (*Taxus* spp.) and oleander (*Nerium oleander*) are commonly found as ornamental plants in parks and gardens throughout Germany. Unfortunately, nearly all parts of these plants are toxic due to the presence of taxine alkaloids in yew and the cardiac glycoside oleandrin in oleander. These compounds are highly cardiotoxic, primarily through inhibition of the Na⁺/K⁺-ATPase and interference with sodium and calcium ion

channels. In addition, they may cause a wide range of poisoning symptoms, including nausea, vomiting, and neurological impairment up to and including coma.

The most life-threatening manifestations are therapy-resistant, rapidly changing cardiac arrhythmias and cardiogenic shock. Reported treatment strategies include activated charcoal, gastric lavage, lipid emulsion therapy, antiarrhythmic drugs, correction of metabolic acidosis, digoxin-specific antibody fragments, and, in severe cases, extracorporeal membrane oxygenation (ECMO). However, because current evidence is largely limited to individual case reports, treatment approaches remain poorly standardized.

Accidental ingestions generally result in mild clinical courses because of the bitter taste of the plants, which usually limits the amount ingested. In contrast, severe intoxications are predominantly associated with intentional ingestion in the context of suicide attempts. The increasing availability of online information regarding the use of yew and oleander for self-poisoning raises concern that the incidence of these intoxications may increase in the future.

Relevance for Clinical Care and Research

Collecting these data will improve the characterization of these potentially life-threatening intoxications, facilitate the identification of complications, and contribute to the development of standardized treatment recommendations. Current evidence is limited to isolated case reports, and no standardized management strategy currently exists.

Case definition

Children and adolescents aged 0–18 years who required inpatient treatment due to symptomatic yew or oleander poisoning.

Logistics

Please report all patients fulfilling the above case definition via the monthly case reporting system to the ESPED coordination office. Upon receipt, a standardized questionnaire will be dispatched.

Literature:

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3. Peer, Eva Maria et al. "Venoarterial extracorporeal membrane oxygenation in combination with Levosimendan as a bridge to recovery for a case of severe yew intoxication in a 13-year-old patient." *Clinical case reports* vol. 11,12 e8203. 27 Nov. 2023, doi:10.1002/ccr3.8203
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5. Lohmeyer, J L et al. "Schwere Intoxikationen mit dem Gift der Eibe (*Taxus*) – Fallbericht und Literaturübersicht" [Severe intoxication after yew (*Taxus*) ingestion-case report and literature review]. *Medizinische Klinik, Intensivmedizin und Notfallmedizin* vol. 120,8 (2025): 642-652. doi:10.1007/s00063-024-01187-z
6. Bienenstein, Evelyn et al. "Yew Poisoning in Adolescents." *Deutsches Arzteblatt international* vol. 122,11 (2025): 304-305. doi:10.3238/arztebl.m2025.0031