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Case report

Suspected poisoning associated with an unidentified traditional preparation in an infant: an autopsy case report from Kindia, Guinea

Intoxication suspectée liée à une préparation traditionnelle non identifiée chez un nourrisson : à propos d'un cas autopsique à Kindia, Guinée

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Abstract

Background: Poisoning in infants following the administration of unidentified traditional preparations may raise major diagnostic and forensic challenges, particularly when toxicological testing is unavailable.

Case presentation: We report the case of a 10-month-old girl who was reportedly given an unidentified liquid preparation by mouth by a traditional healer in Kindia, Guinea, on 2 February 2025. Unusual cries, persistent crying and blood-stained oral secretions developed within minutes. The child was admitted to Kindia Regional Hospital and subsequently transferred to Donka University Hospital in Conakry because of clinical deterioration. She died on 8 February 2025. The autopsy, performed on 9 February 2025, revealed ulceronecrotic lesions involving the lips, perioral region, tongue, pharynx, larynx, trachea, main bronchi, oesophagus and stomach, together with marked pulmonary oedema and diffuse congestion. Histopathological examination showed acute inflammation with tissue necrosis. Toxicological testing was not performed because it was unavailable locally.

Conclusion: The clinical chronology and post-mortem findings raise suspicion of severe injury following exposure to an unidentified substance. However, in the absence of toxicological testing, the substance involved and its specific contribution to death could not be established conclusively. This case highlights the diagnostic limitations encountered in suspected poisoning when toxicological investigations are unavailable.

Keywords: Infant; suspected poisoning; traditional medicine; autopsy; histopathology; Guinea.

Résumé

Contexte : L'intoxication du nourrisson après administration de préparations traditionnelles non identifiées peut poser d'importantes difficultés diagnostiques et médico-légales, en particulier lorsque les analyses toxicologiques ne sont pas disponibles.

Observation : Nous rapportons le cas d'une fillette de 10 mois à qui un tradipraticien de Kindia (Guinée) aurait administré par voie orale une préparation liquide non identifiée, le 2 février 2025. Des cris inhabituels, des pleurs persistants et des sécrétions buccales sanglantes sont apparus en quelques minutes. L'enfant a été admise à l'hôpital régional de Kindia, puis transférée à l'hôpital national Donka de Conakry en raison d'une aggravation clinique. Elle est décédée le 8 février 2025. L'autopsie, réalisée le 9 février 2025, a mis en évidence des lésions ulcéro-nécrotiques des lèvres, de la région péribuccale, de la langue, du pharynx, du larynx, de la trachée, des bronches souches, de l'œsophage et de l'estomac, associées à un œdème pulmonaire important et à une congestion diffuse. L'examen histopathologique a montré une inflammation aiguë associée à une nécrose tissulaire. Les analyses toxicologiques n'ont pas été réalisées, faute de disponibilité sur place.

Conclusion : La chronologie clinique et les constatations autopsiques font suspecter une atteinte sévère consécutive à l'exposition à une substance non identifiée. Toutefois, en l'absence d'analyses toxicologiques, la substance en cause et sa contribution précise au décès n'ont pu être établies de façon formelle. Ce cas illustre les limites diagnostiques rencontrées devant une intoxication suspectée lorsque les investigations toxicologiques ne sont pas accessibles.

Mots-clés : Nourrisson ; intoxication suspectée ; médecine traditionnelle ; autopsie ; histopathologie ; Guinée.

Introduction

Acute poisoning in infants is a paediatric and forensic emergency, particularly in settings where access to specialised toxicological investigations may be limited. Children may be exposed to medicines, household chemicals, hydrocarbons and other potentially toxic substances, including unidentified traditional preparations [1].

In several African settings, traditional medicine remains an important part of child healthcare. In West Africa, caregivers may use medicinal plants and consult traditional healers for childhood illnesses and culturally defined conditions, while some illnesses may also be attributed to spiritual or supernatural causes [2]. Serious paediatric poisonings associated with herbal or traditional medicinal preparations have also been documented in African settings [3,4].

We report the case of a 10-month-old girl who developed severe clinical manifestations shortly after the oral administration of an unidentified traditional preparation and subsequently died. The clinical history and autopsy findings are presented, together with the limitations arising from the absence of toxicological testing, in order to discuss the suspected toxic exposure and its possible contribution to death.

Case report

Background

The patient was a 10-month-old girl with no documented medical history. According to her father, the child had "growth retardation". This description reflects the father's account; no objective anthropometric measurements or medical assessment confirming growth retardation were available.

Clinical course and chronology

On 2 February 2025, the child was taken to a traditional healer in Kindia, Guinea, where, according to the available history, an unidentified liquid preparation was given by mouth for therapeutic purposes. Within minutes of administration, she developed unusual cries, persistent crying and blood-stained oral secretions, suggesting an acute adverse event following exposure.

The child was subsequently admitted to Kindia Regional Hospital. Because of clinical deterioration, she was transferred to Donka University Hospital in Conakry for further management. She died on 8 February 2025, six days after the reported administration of the preparation.

The clinical information available for this report does not provide a sufficiently detailed day-by-day account of the child's condition during this six-day interval. Serial vital signs, respiratory, digestive and neurological manifestations, laboratory and imaging investigations, treatments administered and the precise circumstances immediately preceding death were not available in the records reviewed and therefore cannot be reliably reconstructed.

The temporal association between administration of the unidentified preparation and the onset of symptoms, together with the subsequent clinical deterioration, raises suspicion of a potentially serious toxic exposure. However, the available information is insufficient to establish the precise sequence of clinical events or the exact mechanism of death.

Forensic findings

Post-mortem examination. The child died on 8 February 2025. The autopsy was performed on 9 February 2025 at 2:00 p.m. Before the examination, the body was kept in a cold room at a temperature of 5–8 °C.

External examination. External examination revealed complete rigor mortis, dependent lividity and generalised cooling of the body. Ulceronecrotic lesions of the lips and perioral region were observed, together with blood-stained oral secretions.

Internal examination. Internal examination revealed diffuse ulceronecrotic lesions involving the tongue, pharynx, larynx, trachea and main bronchi (Figures 1 and 3). The lungs showed marked oedema and diffuse congestion (Figure 2). The oesophagus and stomach were inflamed and ulcerated. Approximately 30 mL of brownish gastric fluid was present in the stomach.

Histopathological investigations. Samples of blood, urine, gastric contents, tongue, larynx,

pharynx and lungs were collected at autopsy. Histopathological examination of the tissue samples revealed acute inflammation associated with tissue necrosis.

Toxicological analyses were not performed because such testing was not available locally in Guinea. Consequently, the chemical composition of the administered preparation and the presence or absence of a specific toxic substance could not be established.

Diagnostic considerations and limitations

The temporal relationship between the reported oral administration of the unidentified preparation and the onset of symptoms, together with the ulceronecrotic lesions affecting the aerodigestive tract, raises suspicion of exposure to a potentially injurious substance. However, in the absence of toxicological testing, the responsible substance could not be identified.

The pulmonary oedema and diffuse congestion observed at autopsy are non-specific findings and cannot, in isolation, establish the cause or precise mechanism of death. Although the macroscopic and histopathological findings are compatible with severe injury to the aerodigestive tract, they do not conclusively establish the chemical nature of the substance involved or prove that a specific toxic agent caused death.

These limitations should be borne in mind when interpreting the findings, and they underline the importance of access to toxicological testing in suspected poisoning.



Figure 1: Aerodigestive tract removed at autopsy. (1) Tongue showing extensive ulceronecrotic lesions; (2) oropharynx/hypopharynx: severely damaged aerodigestive junction; (3) larynx: severely affected region, with lesions compatible with a risk of asphyxia; (4) trachea: brownish-black, fibrotic-appearing mucosa, compatible with chemical injury; (5) proximal bronchi: respiratory extension of the lesions.

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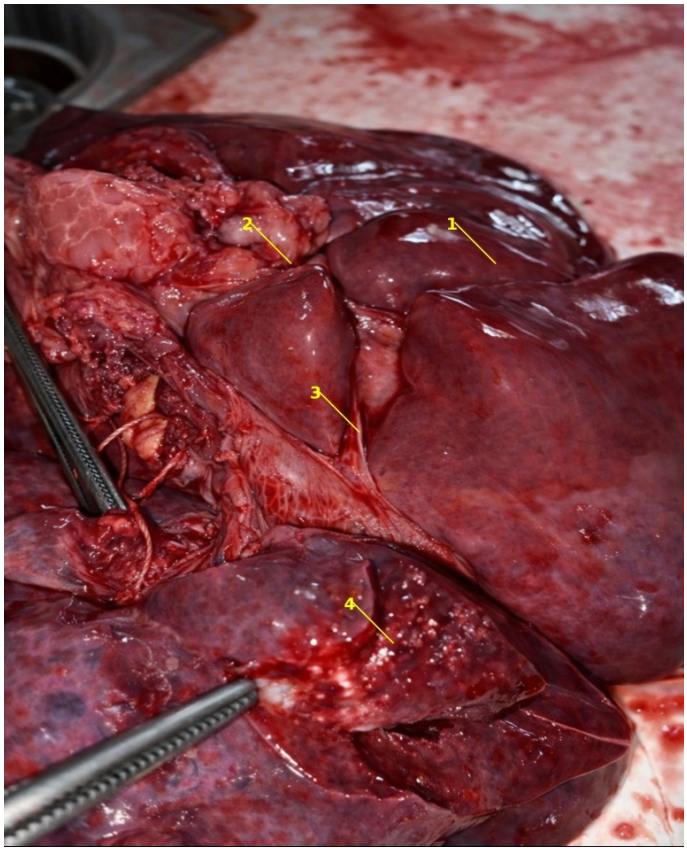


Figure 2: Macroscopic appearance of the lungs. (1) Right lung: congested and oedematous, dark red; (2) left lung: heavy, blood-filled parenchyma with areas of haemorrhage; (3) pulmonary hilum: central region containing the bronchi and blood vessels, with marked congestion; (4) focal haemorrhagic and oedematous area (indicated by the instrument), corresponding to acute parenchymal injury.

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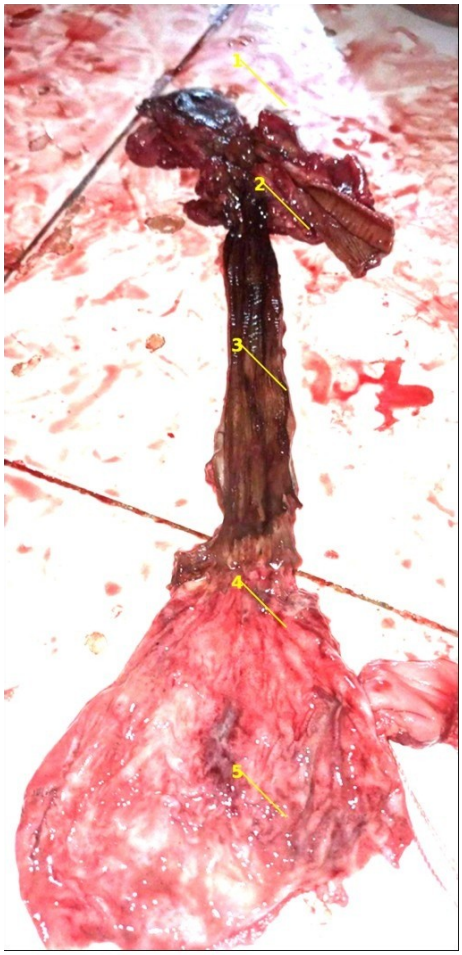


Figure 3: Macroscopic appearance of the laryngotracheal apparatus and lungs. (1) Upper laryngeal region; (2) laryngotracheal junction; (3) trachea; (4) tracheal bifurcation and main bronchi; (5) lung parenchyma.

Discussion

The rapid onset of symptoms after oral administration of an unidentified traditional preparation, together with the ulceronecrotic lesions of the aerodigestive tract observed at autopsy, raises strong suspicion of exposure to a substance capable of causing chemical injury. However, as no toxicological analysis could be performed, the responsible substance was not identified. The findings therefore point to a suspected toxic exposure but do not establish the specific chemical agent or, on their own, confirm the mechanism of death.

Traditional preparations may be given by caregivers or traditional practitioners for therapeutic purposes, particularly for illnesses interpreted within local cultural or spiritual frameworks [2,3,4]. However, administration of a preparation in a traditional or culturally defined context does not, by itself, establish that the exposure was ritual-related or demonstrate an intention to cause harm.

In the present case, according to the available information, the preparation was reportedly given for therapeutic purposes. In the absence of additional documented evidence, it would therefore be inappropriate to describe the event as a confirmed ritual-related poisoning or to infer criminal intent. The circumstances of administration must be distinguished from the clinical and pathological findings, and any assessment of intent requires evidence beyond the clinical history and autopsy findings alone.

Paediatric poisoning associated with traditional preparations has been reported in several African settings, although the populations studied and the circumstances of exposure differ. In South Africa, Tindimwebwa and Dambisya [3] reviewed 156 records of children admitted between 1998 and 2001 with suspected herbal intoxication. They reported 68 deaths (43.6%), 84 favourable outcomes (53.8%) and four cases with undocumented outcomes (2.6%). These findings relate to a selected hospital population and cannot be directly extrapolated to all children exposed to traditional remedies.

In Morocco, Talib et al. [4] described 24 cases of childhood poisoning associated with products and practices of traditional practitioners locally known as "Ferraga", recorded by the Moroccan Poison Control and Pharmacovigilance Centre between 2010 and

2020. Two infants died. This case series illustrates the potentially severe consequences of certain exposures linked to traditional practices, but its findings should not be generalised to all forms of traditional medicine.

In Burkina Faso, Kouéta et al. [5] studied accidental acute poisoning in children at the Charles-de-Gaulle Paediatric University Hospital in Ouagadougou. This study concerns a different category of exposure and should be interpreted accordingly: it provides a point of comparison for accidental childhood poisoning but cannot be equated with a series specifically addressing poisoning after the administration of traditional preparations.

In the present case, the rapid onset of symptoms after the reported administration of an unidentified liquid preparation, followed by clinical deterioration and ulceronecrotic lesions of the aerodigestive tract, raises suspicion of exposure to a potentially harmful substance. However, without toxicological testing, the composition of the preparation could not be determined. These published studies provide a broader context for understanding childhood poisoning but do not identify the substance involved in this Guinean case, demonstrate an intention to cause harm or establish individual responsibility.

Conclusion

This case describes the death of a 10-month-old girl after the reported oral administration of an unidentified traditional preparation, with symptoms developing within minutes and severe ulceronecrotic lesions of the aerodigestive tract identified at autopsy. The findings raise strong suspicion of toxic exposure linked to the preparation, although the responsible substance was not identified.

The available evidence does not establish the exact toxic agent, definitively prove the mechanism of death or demonstrate that the administration was ritual-related or intended to cause harm. This case highlights the importance of detailed clinical documentation, a comprehensive post-mortem examination, appropriate toxicological investigations and cautious interpretation of the circumstances surrounding suspected poisoning in children. Raising community awareness and improving access to specialised toxicological and forensic investigations may help to prevent and clarify similar cases.

Ethical declarations

Medico-legal authorisation and post-mortem examination. The autopsy was performed under a judicial requisition, in accordance with the applicable medico-legal procedures.

Institutional framework and authorisation for publication. This case report was prepared within an academic framework in collaboration with Gamal Abdel Nasser University of Conakry. The institutional and regulatory requirements applicable to the publication of medico-legal data concerning a deceased child have been respected, and compliance was confirmed with the University and the competent authorities.

Consent for publication. The status of consent from the child's legal representative for publication of clinical information and post-mortem images was clarified in accordance with applicable legal, institutional and editorial requirements.

Confidentiality and anonymisation. Directly identifying information has been excluded from the manuscript and from the illustrations intended for publication. The data presented are limited to what is necessary for the scientific and medico-legal understanding of the case.

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