

World Journal of *Clinical Cases*

World J Clin Cases 2022 November 26; 10(33): 12066-12461



MINIREVIEWS

- 12066** Review of risk factors, clinical manifestations, rapid diagnosis, and emergency treatment of neonatal perioperative pneumothorax
Zhang X, Zhang N, Ren YY

ORIGINAL ARTICLE

Clinical and Translational Research

- 12077** Integrative analysis of platelet-related genes for the prognosis of esophageal cancer
Du QC, Wang XY, Hu CK, Zhou L, Fu Z, Liu S, Wang J, Ma YY, Liu MY, Yu H
- 12089** Comprehensive analysis of the relationship between cuproptosis-related genes and esophageal cancer prognosis
Xu H, Du QC, Wang XY, Zhou L, Wang J, Ma YY, Liu MY, Yu H
- 12104** Molecular mechanisms of Baihedihuang decoction as a treatment for breast cancer related anxiety: A network pharmacology and molecular docking study
Li ZH, Yang GH, Wang F
- 12116** Single-cell RNA-sequencing combined with bulk RNA-sequencing analysis of peripheral blood reveals the characteristics and key immune cell genes of ulcerative colitis
Dai YC, Qiao D, Fang CY, Chen QQ, Que RY, Xiao TG, Zheng L, Wang LJ, Zhang YL

Retrospective Study

- 12136** Diagnosis and treatment of tubal endometriosis in women undergoing laparoscopy: A case series from a single hospital
Jiao HN, Song W, Feng WW, Liu H
- 12146** Different positive end expiratory pressure and tidal volume controls on lung protection and inflammatory factors during surgical anesthesia
Wang Y, Yang Y, Wang DM, Li J, Bao QT, Wang BB, Zhu SJ, Zou L
- 12156** Transarterial chemoembolization combined with radiofrequency ablation in the treatment of large hepatocellular carcinoma with stage C
Sun SS, Li WD, Chen JL
- 12164** Coexistence of anaplastic lymphoma kinase rearrangement in lung adenocarcinoma harbouring epidermal growth factor receptor mutation: A single-center study
Zhong WX, Wei XF

Observational Study

- 12175** Prognostic values of optic nerve sheath diameter for comatose patients with acute stroke: An observational study

Zhu S, Cheng C, Wang LL, Zhao DJ, Zhao YL, Liu XZ

- 12184** Quality of care in patients with inflammatory bowel disease from a public health center in Brazil

Takamune DM, Cury GSA, Ferrás G, Herrerias GSP, Rivera A, Barros JR, Baima JP, Saad-Hossne R, Sasaki LY

- 12200** Comparison of the prevalence of sarcopenia in geriatric patients in Xining based on three different diagnostic criteria

Pan SQ, Li XF, Luo MQ, Li YM

Prospective Study

- 12208** Predictors of bowel damage in the long-term progression of Crohn's disease

Fernández-Clotet A, Panés J, Ricart E, Castro-Pocheiro J, Masamunt MC, Rodríguez S, Caballol B, Ordás I, Rimola J

Randomized Controlled Trial

- 12221** Protective effect of recombinant human brain natriuretic peptide against contrast-induced nephropathy in elderly acute myocardial infarction patients: A randomized controlled trial

Zhang YJ, Yin L, Li J

META-ANALYSIS

- 12230** Prognostic role of pretreatment serum ferritin concentration in lung cancer patients: A meta-analysis

Gao Y, Ge JT

CASE REPORT

- 12240** Non-surgical management of dens invaginatus type IIIB in maxillary lateral incisor with three root canals and 6-year follow-up: A case report and review of literature

Arora S, Gill GS, Saquib SA, Saluja P, Baba SM, Khateeb SU, Abdulla AM, Bavabeedu SS, Ali ABM, Elagib MFA

- 12247** Unusual presentation of Loeys-Dietz syndrome: A case report of clinical findings and treatment challenges

Azrad-Daniel S, Cupa-Galvan C, Farca-Soffer S, Perez-Zincer F, Lopez-Acosta ME

- 12257** Peroral endoscopic myotomy assisted with an elastic ring for achalasia with obvious submucosal fibrosis: A case report

Wang BH, Li RY

- 12261** Subclavian brachial plexus metastasis from breast cancer: A case report

Zeng Z, Lin N, Sun LT, Chen CX

- 12268** Case mistaken for leukemia after mRNA COVID-19 vaccine administration: A case report

Lee SB, Park CY, Park SG, Lee HJ

- 12278** Orthodontic-surgical treatment of an Angle Class II malocclusion patient with mandibular hypoplasia and missing maxillary first molars: A case report

Li GF, Zhang CX, Wen J, Huang ZW, Li H

- 12289** Multiple cranial nerve palsies with small angle exotropia following COVID-19 mRNA vaccination in an adolescent: A case report
Lee H, Byun JC, Kim WJ, Chang MC, Kim S
- 12295** Surgical and nutritional interventions for endometrial receptivity: A case report and review of literature
Hernández-Melchor D, Palafox-Gómez C, Madrazo I, Ortiz G, Padilla-Viveros A, López-Bayghen E
- 12305** Conversion therapy for advanced penile cancer with tislelizumab combined with chemotherapy: A case report and review of literature
Long XY, Zhang S, Tang LS, Li X, Liu JY
- 12313** Endoscopic magnetic compression stricturoplasty for congenital esophageal stenosis: A case report
Liu SQ, Lv Y, Luo RX
- 12319** Novel *hydroxymethylbilane synthase* gene mutation identified and confirmed in a woman with acute intermittent porphyria: A case report
Zhou YQ, Wang XQ, Jiang J, Huang SL, Dai ZJ, Kong QQ
- 12328** Modified fixation for periprosthetic supracondylar femur fractures: Two case reports and review of the literature
Li QW, Wu B, Chen B
- 12337** Erbium-doped yttrium aluminum garnet laser and advanced platelet-rich fibrin+ in periodontal diseases: Two case reports and review of the literature
Tan KS
- 12345** Segmental artery injury during transforaminal percutaneous endoscopic lumbar discectomy: Two case reports
Cho WJ, Kim KW, Park HY, Kim BH, Lee JS
- 12352** Pacemaker electrode rupture causes recurrent syncope: A case report
Zhu XY, Tang XH, Huang WY
- 12358** Hybrid intercalated duct lesion of the parotid: A case report
Stankevicius D, Petroska D, Zaleckas L, Kutanovaite O
- 12365** Clinical features and prognosis of multiple myeloma and orbital extramedullary disease: Seven cases report and review of literature
Hu WL, Song JY, Li X, Pei XJ, Zhang JJ, Shen M, Tang R, Pan ZY, Huang ZX
- 12375** Colon mucosal injury caused by water jet malfunction during a screening colonoscopy: A case report
Patel P, Chen CH
- 12380** Primary malignant pericardial mesothelioma with difficult antemortem diagnosis: A case report
Oka N, Orita Y, Oshita C, Nakayama H, Teragawa H
- 12388** Typical imaging manifestation of neuronal intranuclear inclusion disease in a man with unsteady gait: A case report
Gao X, Shao ZD, Zhu L

- 12395** Multimodality imaging and treatment of paranasal sinuses nuclear protein in testis carcinoma: A case report
Huang WP, Gao G, Qiu YK, Yang Q, Song LL, Chen Z, Gao JB, Kang L
- 12404** T1 rectal mucinous adenocarcinoma with bilateral enlarged lateral lymph nodes and unilateral metastasis: A case report
Liu XW, Zhou B, Wu XY, Yu WB, Zhu RF
- 12410** Influence of enhancing dynamic scapular recognition on shoulder disability, and pain in diabetics with frozen shoulder: A case report
Mohamed AA
- 12416** Acute myocardial necrosis caused by aconitine poisoning: A case report
Liao YP, Shen LH, Cai LH, Chen J, Shao HQ
- 12422** Danggui Sini decoction treatment of refractory allergic cutaneous vasculitis: A case report
Chen XY, Wu ZM, Wang R, Cao YH, Tao YL
- 12430** Phlegmonous gastritis after biloma drainage: A case report and review of the literature
Yang KC, Kuo HY, Kang JW
- 12440** Novel *TINF2* gene mutation in dyskeratosis congenita with extremely short telomeres: A case report
Picos-Cárdenas VJ, Beltrán-Ontiveros SA, Cruz-Ramos JA, Contreras-Gutiérrez JA, Arámbula-Meraz E, Angulo-Rojo C, Guadrón-Llanos AM, Leal-León EA, Cedano-Prieto DM, Meza-Espinoza JP
- 12447** Synchronous early gastric and intestinal mucosa-associated lymphoid tissue lymphoma in a *Helicobacter pylori*-negative patient: A case report
Lu SN, Huang C, Li LL, Di LJ, Yao J, Tuo BG, Xie R

LETTER TO THE EDITOR

- 12455** Diagnostic value of metagenomics next-generation sequencing technology in disseminated strongyloidiasis
Song P, Li X
- 12458** Diagnostic value of imaging examination in autoimmune pancreatitis
Wang F, Peng Y, Xiao B

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Cornelia Bala, MD, PhD, Professor, Department of Diabetes and Nutrition Diseases, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca 400006, Romania. cbala@umfcluj.ro

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (WJCC, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The WJCC is now abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, PubMed, PubMed Central, Scopus, Reference Citation Analysis, China National Knowledge Infrastructure, China Science and Technology Journal Database, and Superstar Journals Database. The 2022 Edition of Journal Citation Reports® cites the 2021 impact factor (IF) for WJCC as 1.534; IF without journal self cites: 1.491; 5-year IF: 1.599; Journal Citation Indicator: 0.28; Ranking: 135 among 172 journals in medicine, general and internal; and Quartile category: Q4. The WJCC's CiteScore for 2021 is 1.2 and Scopus CiteScore rank 2021: General Medicine is 443/826.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Ying-Yi Yuan*; Production Department Director: *Xiang Li*; Editorial Office Director: *Jin-Lei Wang*.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Bao-Gan Peng, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati, Ja Hyeon Ku

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

November 26, 2022

COPYRIGHT

© 2022 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/GerInfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>



Acute myocardial necrosis caused by aconitine poisoning: A case report

Yu-Ping Liao, Li-Han Shen, Li-Hua Cai, Jie Chen, Han-Quan Shao

Specialty type: Substance abuse

Provenance and peer review:

Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0
Grade B (Very good): B, B
Grade C (Good): C
Grade D (Fair): 0
Grade E (Poor): 0

P-Reviewer: Duan H, China;
Walusansa A, Uganda

Received: September 3, 2022

Peer-review started: September 3, 2022

First decision: September 26, 2022

Revised: October 13, 2022

Accepted: October 24, 2022

Article in press: October 24, 2022

Published online: November 26, 2022



Yu-Ping Liao, Li-Han Shen, Li-Hua Cai, Jie Chen, Han-Quan Shao, Department of Critical Care Medicine, Dongguan People's Hospital, Dongguan 523058, Guangdong Province, China

Corresponding author: Han-Quan Shao, Doctor, Associate Chief Physician, Department of Critical Care Medicine, Dongguan People's Hospital, No. 3 Wandao Avenue, Wanjiang District, Dongguan 523058, Guangdong Province, China. hqshao0559@163.com

Abstract

BACKGROUND

Herbal medicine has a long history of use in the prevention and treatment of disease and is becoming increasingly popular globally. However, there are also widespread concerns about its safety. Among them, the cardiotoxicity of aconitine has been described.

CASE SUMMARY

We report a case of a 61-year-old male with aconitine poisoning presenting with malignant arrhythmia and severe cardiogenic shock, which was successfully managed with aggressive advanced life support and heart transplantation.

CONCLUSION

This is the first case wherein *in vivo* cardiac pathology was obtained, confirming that aconitine caused acute myocardial necrosis.

Key Words: Aconitine; ECMO; Myocardial necrosis; Ventricular arrhythmia; Herbal medicine; Case report

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: Aconitine poisoning can cause severe cardiotoxicity. In this patient, aconitine poisoning led to life-threatening ventricular arrhythmia and cardiogenic shock, ultimately requiring a heart transplantation as a cure.

Citation: Liao YP, Shen LH, Cai LH, Chen J, Shao HQ. Acute myocardial necrosis caused by aconitine poisoning: A case report. *World J Clin Cases* 2022; 10(33): 12416-12421

URL: <https://www.wjgnet.com/2307-8960/full/v10/i33/12416.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v10.i33.12416>

INTRODUCTION

Aconitine, a diester alkaloid with the chemical formula $C_{34}H_{47}NO_{11}$, is the main toxic component present in plants such as *Aconitum carmichaelii*, *Radix Aconiti kusnezoffii*, and *A. napellus*. Aconitum, a traditional medical herb, is believed to have analgesic, anti-inflammatory, and circulatory enhancing effects[1,2]. However, it has been shown to have severe cardiotoxicity[3]. We report a case of aconitine poisoning presenting with life-threatening ventricular arrhythmia and cardiogenic shock requiring the assistance of ventilators, bedside blood purification device, extracorporeal membrane oxygenation (ECMO), and intra-aortic balloon pump (IABP) equipment. In this case, heart transplantation was required to save the life of the patient, and the *in vivo* cardiac pathology results indicated severe myocardial necrosis due to aconitine poisoning.

CASE PRESENTATION

Chief complaints

A 61-year-old male was admitted to the hospital due to dizziness and vomiting.

History of present illness

Five hours prior to arrival, he consumed about 40 mL of homemade herbal medicinal wine due to back pain. Approximately 10 min later, he developed dizziness and severe, non-projectile vomiting.

History of past illness

The patient had been in good health in the past.

Personal and family history

He had occasionally consumed homemade Chinese herbal medicinal wine for back pain in the past month, about 20 mL each time, according to the family.

Physical examination

On admission, the patient was unconscious, and the main artery pulse disappeared. The heart sound was not heard, and the blood pressure was 0 mmHg.

Laboratory examinations

Liquid chromatography-tandem mass spectrometry showed blood and urine aconitine concentrations of 65.6 µg/mL and 1064.2 µg/mL, respectively.

Imaging examinations

Upon arrival at the hospital, a complete electrocardiogram (ECG) showed ventricular fibrillation (Figure 1), and cardiac arrest occurred afterward.

FINAL DIAGNOSIS

Given the patient's history and blood panel results, he was diagnosed with acute aconitine poisoning.

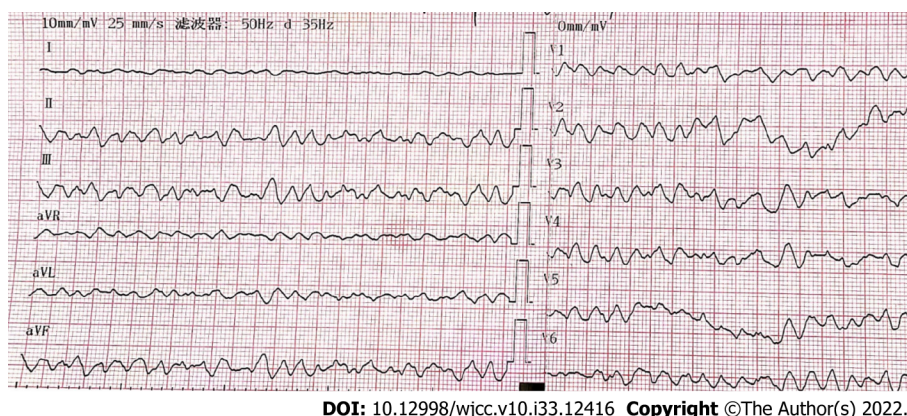
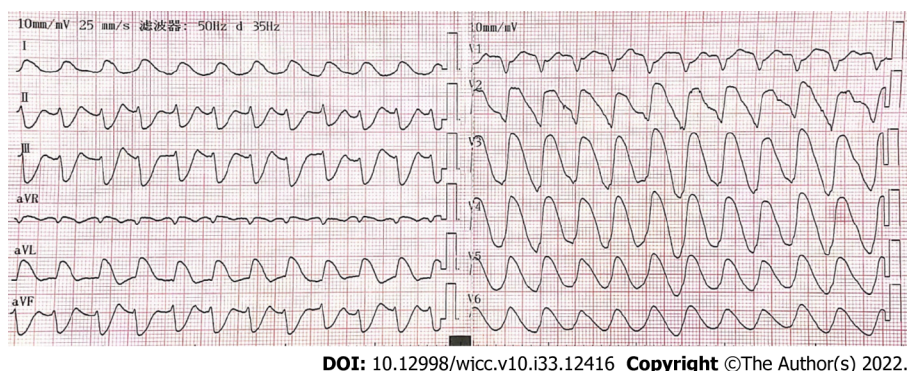
TREATMENT

The patient was treated with external electric defibrillation (200 J), chest compressions, endotracheal intubation, ventilator-assisted ventilation, and intravenous epinephrine. After 5 min, the patient's heartbeat recovered, and the ECG showed rapid ventricular tachycardia (Figure 2). Amiodarone (150 mg) was slowly administered intravenously for 15 min, followed by a continuous infusion at 1 mg/min. Considering that the patient's hypotension was refractory despite the high-dose norepinephrine (> 1 µg/kg/min) and that he had malignant arrhythmia and cardiogenic shock, adjuvant support therapy with venoarterial ECMO (VA-ECMO) was performed within 60 min of arrival at the hospital after obtaining consent from the patient's family. After admission, acute neurological events were ruled out by complete head computed tomography, and acute coronary syndrome was ruled out by coronary angiography. On the same day, complete toxicologic analyses of the blood and urine were performed. Blood and urine aconitine concentrations were 65.6 µg/mL and 1064.2 µg/mL, respectively. Daily blood purification therapy was administered to the patient from days 1 to 4 of admission. After treatment, the blood aconitine concentration decreased to 0 µg/mL on day 4, and the urine aconitine concentration decreased to 0.8 µg/mL on day 11 (Table 1). Additionally, the patient was given glucocorticoids

Table 1 Dynamic changes in the concentration of aconitine in blood and urine

AC	Day 1	Day 2	Day 4	Day 5	Day 11
Blood AC (ng/mL)	65.6	12.7	0	0	0
Urine AC (ng/mL)	1064.2	1021.6	876.5	264.7	0.8

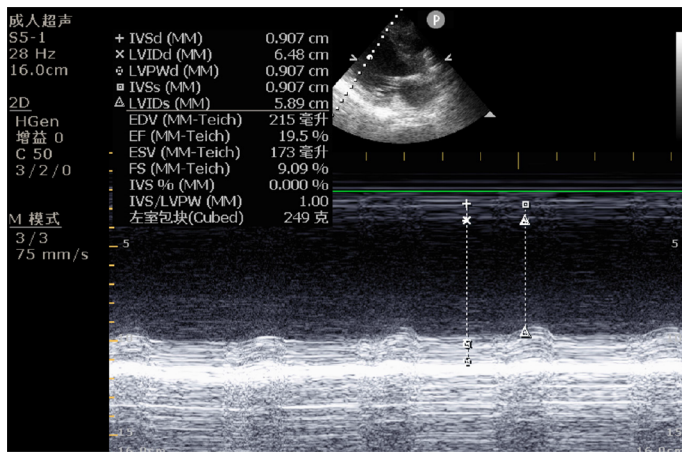
Detection by liquid chromatography-tandem mass spectrometry. AC: Aconitine.

**Figure 1** Twelve-lead electrocardiogram showing ventricular fibrillation.**Figure 2** Development of rapid ventricular tachycardia after cardiopulmonary resuscitation.

(methylprednisolone; 200 mg for 4 d, 120 mg for 3 d, 40 mg for 2 d), γ -globulin (20 g for 3 d), and symptomatic treatment such as bedside hemofiltration and maintenance of internal environment stability. An IABP was used for cardiac assistance on day 1 of admission, and a conventional dose of levosimendan therapy was initiated on day 5 and day 12. However, the patient's cardiac function did not improve. Multiple cardiac ultrasound indicated left ventricular enlargement with severe diffuse hypokinesis of the left ventricular wall. On day 18 of admission, cardiac ultrasound revealed ejection fraction of 19.5% (Figure 3). The patient had difficulty in removing the ECMO and IABP. Hence, he underwent heart transplantation 21 d later. *In vivo* cardiac pathology suggested dilatation of the left ventricle, total necrosis of part of the left ventricular wall accompanied by hemorrhage, partial myocardial necrosis of the ventricular septum, hyperplasia of fibrous granulation tissue, and some infiltration of neutrophils, lymphocytes, plasma cells, and histocytes. Additionally, edema and degeneration of a few cardiomyocytes in the right ventricle were observed (Figure 4).

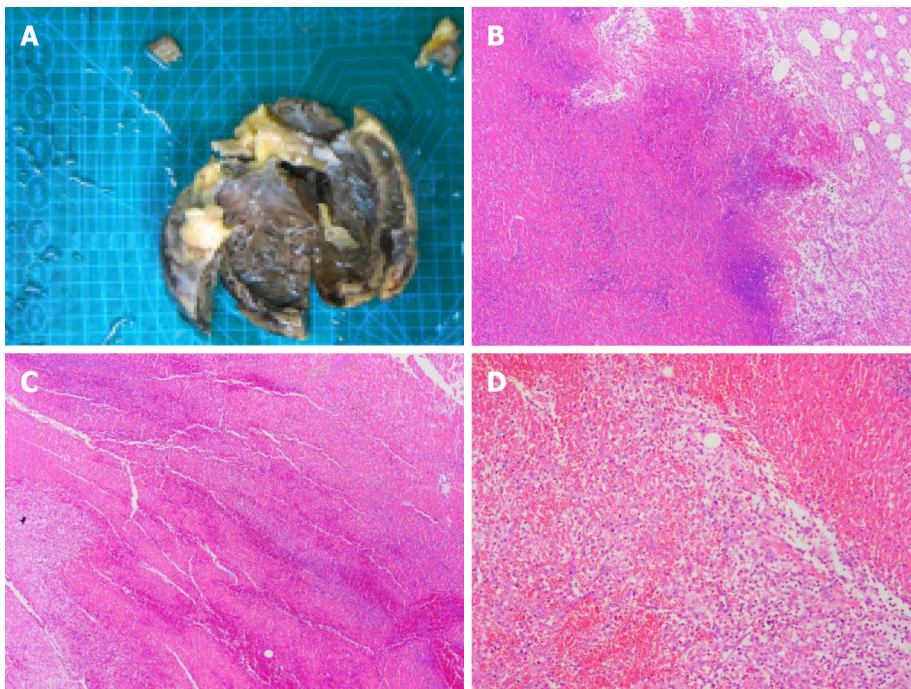
OUTCOME AND FOLLOW-UP

The patient was cured and discharged 3 wk after heart transplantation. The patient has been followed up for 1 year after discharge and has been in good living condition, with no obvious abnormalities on cardiac ultrasound or electrocardiogram.



DOI: 10.12998/wjcc.v10.i33.12416 Copyright ©The Author(s) 2022.

Figure 3 Cardiac ultrasound findings on day 18 of admission. The ejection fraction was 19.5%.



DOI: 10.12998/wjcc.v10.i33.12416 Copyright ©The Author(s) 2022.

Figure 4 Pathology of heart after aconitine poisoning. A: Gross specimen of the heart; B: Necrosis of part of the left ventricular wall accompanied by hemorrhage; C: Ventricular septum partial necrosis. D: Right ventricle histiocytic infiltration; B-D were observed using hematoxylin-eosin staining under a light microscope at 20× magnification.

DISCUSSION

Globally, herbal medicine is used for many medical problems. With increasingly widespread communication, aconitine cardiotoxicity has been reported worldwide despite its analgesic and anti-inflammatory effects. Yeih *et al*[4] reported a case of aconitine-induced life-threatening ventricular tachyarrhythmia that was successfully restored to normal sinus rhythm with amiodarone. Moritz *et al*[5] also described a case of acute arrhythmia caused by the ingestion of three homemade aconitine capsules, in which the half-life of aconitine in humans was calculated to be 3 h. Bicker *et al*[6] reported three cases of death resulting from aconitine poisoning and found that the aconitine concentration was significantly higher in heart blood than in peripheral blood.

Aconitine is highly toxic, and the heart is the main target organ of poisoning, which leads to death mainly by ventricular arrhythmia and cardiac arrest[7,8]. To the best of our knowledge, no exact lethal dose of aconitine has been reported to date. In one case of mortality reported in the literature, the patient's antemortem aconitine blood concentration was 39.1 ng/mL, and the postmortem urine concentration was 67.4 ng/mL[9]. In our case, the aconitine concentration in the blood and urine was

significantly higher than that reported in the aforementioned study, which is considered to be associated with the accumulation of oral aconitine from herbal medicinal wine that was repeatedly ingested 1 mo before the patient's visit. Moreover, the patient developed acute malignant arrhythmia and cardiac arrest and was eventually resuscitated successfully. Organ support technologies such as ECMO, IABP, and bedside blood purification provided a good bridging effect. However, it has also been reported that the aconitine blood concentration does not fully correlate with symptoms or ECG results due to different times of arrival at the hospital and individual physiological differences[10]. Therefore, close monitoring and timely and effective means of support for patients with aconitine poisoning are essential.

Several fundamental studies have explored the mechanism of aconitine-induced cardiotoxicity, but the exact mechanism has not been fully understood. It has been shown that aconitine increases the peak Na^+ current (i_{Na}) by accelerating Na^+ channel activation and Na^+/K^+ pump inhibition, thereby inducing various ventricular arrhythmias in guinea pigs[11]. In addition, aconitine also significantly exacerbates Ca^{2+} overload, leading to arrhythmia, and ultimately promotes the development of apoptosis through the phosphorylation of P38 mitogen-activated protein kinase (MAPK)[12]. Studies have also found that aconitine inhibits the expression of TnT and Bcl-2 and promotes the expression of caspase 3 and Bax in zebrafish embryonic cardiomyocytes[13]. In summary, studies on the mechanism of aconitine-induced cardiotoxic effects have mainly focused on interactions with ion channels, induction of cytotoxic damage, and epigenetic and transcriptional regulation[8]. Unfortunately, no specific antidote for aconitine poisoning has been found. In this case, we tried to use immunoglobulin and glucocorticoids for immune anti-inflammatory therapy. However, the results were poor, and the patient had massive myocardial necrosis and irreversible cardiac pump failure. Fortunately, the patient was eventually cured by heart transplantation, and we obtained the first *in vivo* cardiac pathology specimen of aconitine poisoning. With this pathological result, we found that aconitine caused acute myocardial necrosis, which is of great benefit to our understanding of the mechanism of aconitine poisoning. At the same time, this case also showed that VA-ECMO played an important role as effective support for circulatory failure in cardiogenic shock, cardiac arrest, and refractory ventricular arrhythmias caused by poisoning, providing healthcare providers ample time for subsequent diagnosis and treatment.

CONCLUSION

Aconitine poisoning can cause acute myocardial necrosis. VA-ECMO played an important role in maintaining the patients' condition until heart transplantation.

ACKNOWLEDGEMENTS

All of the authors would like to express their gratitude to the patient.

FOOTNOTES

Author contributions: Shao HQ and Liao YP designed the study; Cai LH and Chen J collected the data; Liao YP, Shao HQ, and Shen LH wrote the manuscript; All authors have read and approved the final manuscript.

Supported by Dongguan Science and Technology of Social Development Program, No. 202050715001213.

Informed consent statement: This study was approved by the Clinical Ethics Committee of Dongguan People's Hospital (KYKT2021-028). Informed written consent was obtained from the patient for publication of this report and any accompanying images.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: China

ORCID number: Han-Quan Shao [0000-0001-9927-5095](https://orcid.org/0000-0001-9927-5095).

S-Editor: Liu JH

L-Editor: A

P-Editor: Liu JH

REFERENCES

- 1 **Jiang H**, Zhang Y, Wang X, Meng X. An Updated Meta-Analysis Based on the Preclinical Evidence of Mechanism of Aconitine-Induced Cardiotoxicity. *Front Pharmacol* 2022; **13**: 900842 [PMID: [35754486](https://pubmed.ncbi.nlm.nih.gov/35754486/) DOI: [10.3389/fphar.2022.900842](https://doi.org/10.3389/fphar.2022.900842)]
- 2 **Khan H**, Nabavi SM, Sureda A, Mehterov N, Gulei D, Berindan-Neagoe I, Taniguchi H, Atanasov AG. Therapeutic potential of songorine, a diterpenoid alkaloid of the genus Aconitum. *Eur J Med Chem* 2018; **153**: 29-33 [PMID: [29133056](https://pubmed.ncbi.nlm.nih.gov/29133056/) DOI: [10.1016/j.ejmech.2017.10.065](https://doi.org/10.1016/j.ejmech.2017.10.065)]
- 3 **Coulson JM**, Caparrotta TM, Thompson JP. The management of ventricular dysrhythmia in aconite poisoning. *Clin Toxicol (Phila)* 2017; **55**: 313-321 [PMID: [28421842](https://pubmed.ncbi.nlm.nih.gov/28421842/) DOI: [10.1080/15563650.2017.1291944](https://doi.org/10.1080/15563650.2017.1291944)]
- 4 **Yeih DF**, Chiang FT, Huang SK. Successful treatment of aconitine induced life threatening ventricular tachyarrhythmia with amiodarone. *Heart* 2000; **84**: E8 [PMID: [10995426](https://pubmed.ncbi.nlm.nih.gov/10995426/) DOI: [10.1136/heart.84.4.e8](https://doi.org/10.1136/heart.84.4.e8)]
- 5 **Moritz F**, Compagnon P, Kaliszczak IG, Kaliszczak Y, Caliskan V, Girault C. Severe acute poisoning with homemade Aconitum napellus capsules: toxicokinetic and clinical data. *Clin Toxicol (Phila)* 2005; **43**: 873-876 [PMID: [16440517](https://pubmed.ncbi.nlm.nih.gov/16440517/) DOI: [10.1080/15563650500357594](https://doi.org/10.1080/15563650500357594)]
- 6 **Bicker W**, Monticelli F, Bauer A, Roeder G, Keller T. Quantification of aconitine in post-mortem specimens by validated liquid chromatography-tandem mass spectrometry method: three case reports on fatal 'monkshood' poisoning. *Drug Test Anal* 2013; **5**: 753-762 [PMID: [23749589](https://pubmed.ncbi.nlm.nih.gov/23749589/) DOI: [10.1002/dta.1501](https://doi.org/10.1002/dta.1501)]
- 7 **Li H**, Liu L, Zhu S, Liu Q. Case reports of aconite poisoning in mainland China from 2004 to 2015: A retrospective analysis. *J Forensic Leg Med* 2016; **42**: 68-73 [PMID: [27266651](https://pubmed.ncbi.nlm.nih.gov/27266651/) DOI: [10.1016/j.jflm.2016.05.016](https://doi.org/10.1016/j.jflm.2016.05.016)]
- 8 **Zhou W**, Liu H, Qiu LZ, Yue LX, Zhang GJ, Deng HF, Ni YH, Gao Y. Cardiac efficacy and toxicity of aconitine: A new frontier for the ancient poison. *Med Res Rev* 2021; **41**: 1798-1811 [PMID: [33512023](https://pubmed.ncbi.nlm.nih.gov/33512023/) DOI: [10.1002/med.21777](https://doi.org/10.1002/med.21777)]
- 9 **Cho YS**, Choi HW, Chun BJ, Moon JM, Na JY. Quantitative analysis of aconitine in body fluids in a case of aconitine poisoning. *Forensic Sci Med Pathol* 2020; **16**: 330-334 [PMID: [31802365](https://pubmed.ncbi.nlm.nih.gov/31802365/) DOI: [10.1007/s12024-019-00211-5](https://doi.org/10.1007/s12024-019-00211-5)]
- 10 **Jeon SY**, Jeong W, Park JS, You Y, Ahn HJ, Kim S, Kim D, Park D, Chang H, Kim SW. Clinical relationship between blood concentration and clinical symptoms in aconitine intoxication. *Am J Emerg Med* 2021; **40**: 184-187 [PMID: [33243534](https://pubmed.ncbi.nlm.nih.gov/33243534/) DOI: [10.1016/j.ajem.2020.11.005](https://doi.org/10.1016/j.ajem.2020.11.005)]
- 11 **Wang XC**, Jia QZ, Yu YL, Wang HD, Guo HC, Ma XD, Liu CT, Chen XY, Miao QF, Guan BC, Su SW, Wei HM, Wang C. Inhibition of the $I_{Na/K}$ and the activation of peak I_{Na} contribute to the arrhythmogenic effects of aconitine and mesaconitine in guinea pigs. *Acta Pharmacol Sin* 2021; **42**: 218-229 [PMID: [32747718](https://pubmed.ncbi.nlm.nih.gov/32747718/) DOI: [10.1038/s41401-020-0467-6](https://doi.org/10.1038/s41401-020-0467-6)]
- 12 **Sun GB**, Sun H, Meng XB, Hu J, Zhang Q, Liu B, Wang M, Xu HB, Sun XB. Aconitine-induced Ca^{2+} overload causes arrhythmia and triggers apoptosis through p38 MAPK signaling pathway in rats. *Toxicol Appl Pharmacol* 2014; **279**: 8-22 [PMID: [24840785](https://pubmed.ncbi.nlm.nih.gov/24840785/) DOI: [10.1016/j.taap.2014.05.005](https://doi.org/10.1016/j.taap.2014.05.005)]
- 13 **Li M**, Xie X, Chen H, Xiong Q, Tong R, Peng C, Peng F. Aconitine induces cardiotoxicity through regulation of calcium signaling pathway in zebrafish embryos and in H9c2 cells. *J Appl Toxicol* 2020; **40**: 780-793 [PMID: [31975431](https://pubmed.ncbi.nlm.nih.gov/31975431/) DOI: [10.1002/jat.3943](https://doi.org/10.1002/jat.3943)]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: bpgoffice@wjgnet.com

Help Desk: <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

