

Dear Editor. Dennis A Bloomfield, Bao-Gan Peng, Sandro Vento

Editor-in-Chief, World Journal of Clinical Cases

Thank you very much for evaluating our manuscript. We are now submitting a revised manuscript that incorporates many of the suggestions made by a reviewer. A point-by-point response to each of the referees' suggestions is listed, and an index of specific changes has been included. We hope that the comments, concerns, and suggestions of the referees are adequately addressed in the revised manuscript.

Manuscript number: 71916

Manuscript title: Acute Kidney Injury due to Intravenous Detergent Poisoning: A Case Report

Index of changes

1. Addition of Further diagnostic work-up and Discussion contents

2. Addition of Table 1 and Table 4

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Reviewer reports:

Reviewer #2

This is a case report of intravenous detergent-associated nephrotoxicity. The manuscript is clear and easy to read. The information was adequately provided. Although this is not the first report of the type, the rarity of this event makes the case interesting and should be available to the medical communities. I have few points to raise.

Author's response: Thank you for your kind comment.

1. The authors provided the component of the detergent. Do the author know their molecular size or volume of distribution? And, if retrospectively speaking, would it really be necessary to do the hemodiafiltration rather than hemodialysis in order to remove these toxins?

Author's response: Thank you for your important comment. We added molecular weights of components of the detergent to table 1. Unfortunately, information about the volume of distribution of each component is scarce. We performed hemodiafiltration (HDF) to control the patient's generalized edema and to remove potential toxins from the patient's blood. However, considering the molecular weight of the detergent's component, it seems that there was no difference in the toxin removal capacity of conventional hemodialysis or HDF. We have described this in the Discussion sections.

(Discussion section, 5th paragraph, “We performed HDF for control of intractable generalized edema and removal of remained potential toxic substances from the patient’s blood. However, considering the molecular weight of the detergent’s component investigated retrospectively (Table 1), conventional hemodialysis (HD) and HDF could have had no difference in potential toxin removal capacity.”)

Table 1 Detergent composition and molecular weight

Ingredients	Molecular weight (g/mol)
Dodecyldimethylamine oxide	229.40
Sodium alkylbenzene sulfonate	334.45
Water	18.02
Ethanol	46.07
Octane-1,2-diol	146.23
Sodium sulfate	142.04
Silicon dioxide	60.08
Sodium hydrogen carbonate	84.01
Dimethylsiloxane	92.17
Calcium carbonate	100.09
2,6-dimethyl-7-octen-2-ol	156.27
Linalool	154.25
(E)-dodec-2-en-1-al	182.30
(R)-p-mentha-1,8-dien	136.23

2. Do the authors think that elevated liver enzymes and hyperbilirubinemia also result from this detergent? If so, it might be good to make some comment about this in the discussion part since TB 3.48 mg/dL is significantly abnormal. I still question about the cause of the elevated AST (without ALT), hyperbilirubinemia (indirect bilirubin was also elevated with the direct bilirubin), and LDH. Could there be some degree of hemolysis that cause all of this in the first day? Hemoglobin level was also decreased from 12.6 to 10.1 g/dL in the second day,

which might be a little bit too high for hemodilution due to decreased urine output? But again, elevated AST, bilirubin, and LDH could be from liver injury (although a bit strange that ALT was not also significantly increased). Maybe if the information from peripheral blood smear would be helpful if there is any.

Author's response: Thank you for this good comment. We also thought that differentiation for hemolysis was necessary. Therefore, we performed laboratory tests for hemolysis on the 2nd day of hospitalization, and added the results to table 4. Although there are reports that hemolysis may occur, no evidence of hemolysis was seen in our case. Peripheral blood smear showed normal RBCs and serum haptoglobin level was in the normal range. Thus, we presumed that AST and bilirubin elevation was caused by hepatotoxicity of detergent. We described them in the Further diagnostic work-up session and Discussion section.

(Further diagnostic work-up, 1st and 2nd paragraph, "A decrease in hemoglobin from 12.6 mg/dL to 10.1 mg/dL was observed in laboratory findings on the 2nd day of hospitalization. LDH, AST, and bilirubin elevation were observed in the initial laboratory findings, and since hemolysis may be caused by detergent [12,13], further diagnostic work up was performed. Peripheral blood smear showed normal RBCs and reticulocyte counts without schistocytes. Serum haptoglobin level was also within normal range (Table 4).

White blood cell count, AST, bilirubin, and LDH, which were increased in the initial laboratory findings, all decreased at the 2nd day of hospitalization; however, blood urea nitrogen (BUN) and serum creatinine (Cr) levels were increased to 44.0 mg/dL and 3.59 mg/dL, respectively."

Discussion, 4th paragraph, "However, there was no evidence of hemolysis in our

case, and the AST and bilirubin elevation were occurred due to direct hepatotoxicity of detergent, presumably.”)

Table 4 Laboratory tests for hemolysis on the 2nd day of hospitalization

Tests		2nd day of hospitalization
Peripheral blood smear	RBC	Normocytic and normochromic RBCs
	WBC	Normal WBC counts with no toxic granulation
	PLT	Decreased PLT counts
	Reticulocyte count (%)	1.6
	Hemosiderin stain	Negative
	Haptoglobin (mg/dL)	45
	Homocysteine (μmol/L)	8.66

RBC, red blood cell; WBC, white blood cell; PLT, platelet

3. This might not relevant to the case, but I still miss the true reason why another patient had to inject the detergent to this patient?

Author’s response: According to news broadcasts and police statements, another patient who injected the detergent to this patient was a former nurse who could handle fluids and intravenous lines. He was arrested on suspicion of special injury, but denied the charges and the exact reason for injecting the detergent is unknown.