

Case Report

Corrosive ingestion in a four days old newborn

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ABSTRACT

Background: Corrosive ingestion in children is very important and sensitive issue which result in lot of morbidity and mortality corrosive ingestion is mostly in form of acid or alkali chemical. 5000 to 15000 caustic ingestion cases are reported annually in United States. Majority of cases are accidental and can occur in any age of children but in new born it occur very rarely.

Case Presentation: we are presenting a case of corrosive ingestion in 04 days old new born who was given a liquid bleed mixed with formula milk by mother considering the liquid bleed as water for the dilution of milk.

Conclusion: We conclude that legislation should be done for authorizes sale of corrosive chemical and awareness campaign should be lounge through social, print and electronic media about hazards of corrosive ingestion.

Keywords: Corrosive ingestion, liquid bleach, newborn.

INTRODUCTION

Corrosives or caustics are the group of chemicals that have the capacity to cause tissue injury on contact by a chemical reaction. In United States approximately 5000-15000 caustic ingestions occurs per year. (1) The peak incidence is seen in the children aged 1-5 years, with most of the ingestions being accidental. (2,3) Caustic ingestion may cause wide spread injury to lips, oral cavity, pharynx, airway, esophagus and stomach. The probability of the ingestion of caustic agents is low in the newborns period and neonatal caustic burns have rarely been reported globally. (4,5) We present corrosive intake in a 4-day-old newborn who was mistakenly given liquid bleach mixed with formula milk considering it as a water by her mother.

CASE REPORT

A 4-day-old full term female newborn delivered through C-section with birth weight of 2.5 kg was brought to pediatric medical emergency with complaints of excessive crying, cyanosis and excoriation of oral mucosa and tongue. There was a history of liquid bleach mixed with formula milk given by her mother. Some part of liquid bleach was stored in coca cola bottle which was transparent resembling water.

The patient was initially managed conservatively with intravenous fluids, analgesics, and antibiotics, then shifted to pediatric surgery department for abdominal distension and pneumoperitoneum on X-ray abdomen. On general physical examination patient was agitated with oropharyngeal mucosal excoriation. The abdomen was moderately distended and tender. The patient was tachypneic. Heart rate 170/minute, blood pressure 70/40 mmHg and temperature 100 degree foreign height. Rest of the examination was unremarkable. X-Ray abdomen revealed football sign indicating pneumoperitoneum. After resuscitation, preoperative preparation, parents counselling and informed consent, exploratory laparotomy was performed through right supraumbilical transverse incision. There was 3*3cm perforation in the posterior wall of the stomach along the lesser curvature.

Primary repair of the gastric perforation was done along with feeding jejunostomy. Patient was shifted to NICU on ventilator. After 3 days we started oral rehydration salt through jejunostomy that was well tolerated and jejunostomy feed started on fourth post-operative day. On 5th post-operative day, abdominal distension increased and repeat X-ray abdomen showed air under diaphragm (Fig. 1). Redo exploratory laparotomy was done that revealed

leakage from previous anastomotic site that was repaired again. But unfortunately patient succumbed to sepsis postoperatively.

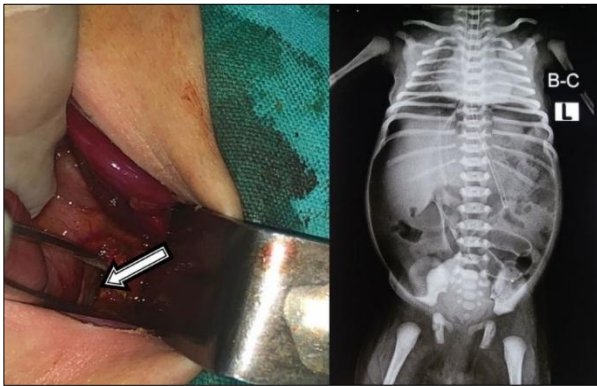


Figure 1: Perforation in stomach and X ray-Abdomen

DISCUSSION

Corrosive ingestion is not uncommon in children. Various corrosive agents like, caustic soda, bleach and acids are ingested accidentally/ suicidal attempts by children. Common age for corrosive ingestion is 1-5 years, when child becomes mobile and starts to pick up things.(2,3) Corrosive ingestion may leads to many complications like injuries to oral cavity, esophagitis /perforation and gastritis /perforation and later on stricture formation in esophagus and pylorus. Our patient was given bleach accidentally by parents considering it as water due to its transparency for dilution of powder milk at age of only 4 days.

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Few cases of corrosive ingestion have been reported at 6 hours, 2 days and 2 years of age respectively. (6,7,8) Our case is unique and rare as it was given considering it as water for dilution of powder milk, but in other studies corrosives has been given accidentally considering it as sacred water (ZAM ZAM) and cough syrup respectively. In another study, a two year old baby ingested the remaining part of liquid used for hair and grease remover.(8) In our case corrosive ingestion leads to gastric perforation, while in above mentioned cases it leads to esophagitis and chemical pneumonitis and bowel perforation. In another study, the most common agent was bleach and cleaners similar to our case report. (9) CR Turan, et al. reported eight cases of corrosive injuries with mean age 12 days and the agent was benzalkonium chloride in six newborn and trichloroacetic acid in two newborn,(4) but in our case bleach was the corrosive agent. This public health problem can easily be prevented by making parents conscious about the issue.

Conflict of Interest: Nil

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Consent to Publication: Author(s) declared taking informed written consent for the publication of clinical photographs /material (if any used), from the legal guardian of the patient with an understanding that every effort will be made to conceal the identity of the patient, however it cannot be guaranteed.

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