H162 Accidental Corrosive Acid Poisoning in an Infant: A Case Report

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Learning Overview: After attending this presentation, attendees will understand the pattern of corrosive injuries on the mucous surface of the mouth and skin of an infant and its interpretation. Attendees will also learn the causes behind accidental corrosive acid poisoning.

Impact on the Forensic Science Community: This presentation will impact the forensics science community by serving in the diagnosis and treatment of corrosive poisoning in an infant. This presentation will help the forensic expert rule out child abuse cases and implement preventive measures.

Corrosive substances may cause severe to serious injuries of the upper gastrointestinal tract, and the poisoning can even result in death. Accidental ingestion of caustic agents continues to be a major concern for pediatric emergency department clinicians. Corrosive agent ingestions are seen most frequently in young children between one and three years of age, is very rare in infants, and can cause severe acute injury and long-term complications. A 3-month-old male infant was brought to the hospital with a history of blackening of the tongue, injuries over his body, and difficulty breathing after taking some medicine. The pediatrician suspected child abuse and hence sent a call to forensic medicine. After evaluating the infant and detailed history from the relative, it was confirmed that the blackish color was a corrosive injury on the mucosal surface of the mouth, lip, and chest and a reddish color on neck folds and the back. After an ultrasonography, severe epiglottis edema was noticed, and no esophageal or upper digestive tract perforation. On blood investigation, severe acidosis was observed, and the infant was immediately put on a ventilator and treatment began. Aspirated fluid was sent for chemical analysis.

The blackish color of the corrosion and normal urine, favored sulfuric acid poisoning. Phenol corrosive injury is brownish in color with greenish or even black color urine on exposure to air, while nitric acid has is a yellowish color corrosion. On treatment, gastric lavage and emetics were contraindicated and nothing was given orally for two to three days. Broad spectrum antibiotics and IV fluids were given to the infant. On further history it was found that concentrated sulfuric acid was kept in medicine bottle and given by mistake by the infant's aunt. The pattern of corrosive acid injury was blackish in color and the injuries over the chest and neck folds were due to the dribbling of the acidulated fluid from the angle of the mouth. It was confirmed by the forensic science laboratory that sulfuric acid was present in the medicine bottle. Regarding the manner of injuries, it was likely to be accidental as it is common practiced in the slums of Mumbai to keep cheap locally available sulfuric acid in a soda bottle or cold drink bottle or any bottle that is available, such as a medicinel bottle.

Accidental, Corrosive, Poisoning