

Bitter Bottle Gourd Juice Leading to Gastric Necrosis

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Health benefits of fresh vegetables have been known since time immemorial and are recommended for regular use by naturopaths. Fresh bottle gourd juice has been used in the management of hyperlipidemia, diabetes, constipation, urinary problems, heart disease, and paralysis.¹ Patients often accept the use of vegetable preparations (herbs) for diseases that are chronic or practically incurable. In allopathic practice, prescribed drugs undergo strict trials before they are made available for use by doctors. The government and health department supervise these drugs, but no such restrictions or supervision apply to naturopathy and herbal medicines prescriptions. Case series report ill-effects on the gut following bitter bottle gourd juice consumption on fifteen patients.⁴ Mixing illicit material with untested bottle gourd juice can leading to poisoning. We report a case which required surgery and resection of the stomach because of gastric necrosis.

Case Report

A forty-six-year-old female presented to the emergency department following the consumption of bottle guard juice three days back. Following ingestion, she developed severe abdominal pain, hematemesis, and melena. On examination, her pulse rate was 142/min, blood pressure 90/60 mmHg, and there was guarding in the upper abdomen. Initial investigations revealed a leukocyte count of 18,000/cumm and platelet count 1,85,000/cumm. Upper

gastrointestinal endoscopy(UGIE) (**Figure 1**) showed complete charring of mucosa from the upper esophagus to pylorus with a large patch of posterior gastric necrosis. After initial resuscitation and vasopressor support, contrast-enhanced computed tomography (CECT) scan of the abdomen demonstrated thick necrotic posterior wall of the stomach with severe edema extending up till proximal jejunal loops, along with free fluid in the upper abdomen and lesser sac. The patient underwent total gastrectomy with the closure of duodenal stump and feeding jejunostomy. Postoperatively patient remained on mechanical ventilation and vasopressor support for 3 days, following which she gradually improved and was discharged on post-op day eight, with feeding jejunostomy in situ.

Discussion

A handful of reports describe the clinical presentation, endoscopic appearance, and treatment of bottle gourd juice related to corrosive poisoning in humans. We have experience of similar presentations in three cases previously that were managed conservatively, but this was the first to require major surgery. Although vegetables are considered healthy, they can occasionally become toxic, which can be inferred from their taste. Bottle gourd belongs to the cucumber family (Cucurbitaceae)

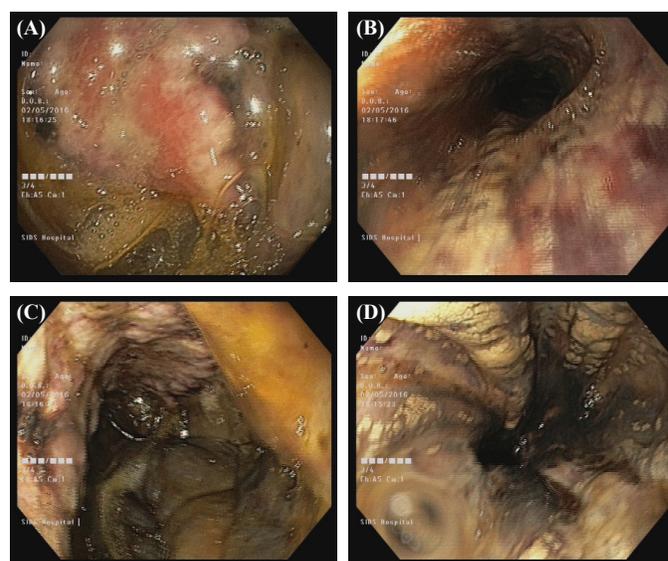


Figure 1 (A): Stomach antrum; (B): Stomach posterior wall; (C): Esophagus; (D): Proximal stomach.

and can generate toxins. High levels of cucurbitacin compounds are stimulated by high temperature or wide-temperature swings, low pH, and very little water, as well as improper storage of vegetables or over-matured vegetables. Consumption of these in turn leads to multi-organ dysfunction, which could be fatal.^{3,4,5} The amount of juice consumed correlates with the toxicity: while 50 ml of bitter bottle gourd juice produced medical complications, over 200 ml proved to be fatal at times.^{3,4,5} As no specific antidote is available, general supportive care including intravenous fluids, blood products, proton pump inhibitors, and gastric tube lavage are required to maintain the hemodynamics and electrolyte balance.

Conclusion

Toxicity with bottle gourd juice, which is bitter tasting, can occur in some as it is a commonly consumed vegetable, and it may be more common than reported. It is advisable to consume only cooked bottle gourd, or juice when not bitter. Medical care should be sought if one gets discomfort, vomiting, or hematemesis after consuming bottle gourd juice. Increasing public awareness about the danger of consumption of bitter bottle gourd juice can prevent further cases.

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