



PP06

Cucurbitacin - Toxic Squash syndrome

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A 39 year old gentleman, presented to the Emergency department, with complaints of multiple episodes of vomiting, hematemesis, bloody diarrhoea and hypovolemic shock, approximately five minutes, following intake of 200 ml of bitter bottle gourd juice. He was aggressively resuscitated with intravenous crystalloids as per FALLS (fluid administration limited by lung sonography) protocol, along with proton pump inhibitors, antiemetics and parenteral antibiotics. His initial blood gas analysis was suggestive of mixed acidosis with raised serum lactate. Complete blood counts showed severe hemoconcentration and liver function tests showed transaminitis. The patient was symptomatically improved with treatment after resuscitation with nearly 10 litres of crystalloids by the end of day 1. He underwent upper gastrointestinal endoscopy which revealed esophagitis, diffuse hyperemia and gastric erosions and scalloped duodenum. Patient was discharged in a stable condition after 84 hours. Bottle gourd (*Lagenaria siceraria*) also known as Calabash/ Lauki/ Ghia in

Northern India, is a vegetable of the Cucurbitaceae family, which is used as a food and consumed as juice for its health benefits as mentioned by traditional medicine healers. Other members of this family include cucumber, water melon, zucchini, snake gourd, squash, pumpkin and bitter melon. All these

fruits/vegetables contain cucurbitacin B, C, D, G and H in trace amounts, approximately 0.013%, mainly as cucurbitacin B. Cucurbitacin is the toxic substance. It is a tetracyclic triterpenoid compound which is responsible for the bitter taste as well as toxicity of the vegetable. Cucurbitacin has been bred out of cultivated vegetables but higher levels are seen when the vegetable is overripe or grown under extreme environmental stress like poor soil quality, droughts and low soil pH. Higher levels of cucurbitacin can also occur by cross pollination of cultivated with the wild variety plants. There is no specific antidote. Symptoms start within five minutes of ingestion of bitter bottle gourd. The treatment is symptomatic with aggressive fluid resuscitation and proton pump inhibitors. It can lead to life threatening complications like acute kidney injury, acute liver failure, pancreatitis, gastric necrosis, gastric perforation and even death, if not treated timely.