

Rowan University

Rowan Digital Works

Stratford Campus Research Day

25th Annual Research Day

May 6th, 12:00 AM

A Case of Cocaine Toxicity from Body Stuffing

Justin Smith
Rowan University

James Lee
Rowan University

Alan Lucerna
Rowan University

James Espinosa
Rowan University

Follow this and additional works at: https://rdw.rowan.edu/stratford_research_day



Part of the [Medical Toxicology Commons](#), and the [Substance Abuse and Addiction Commons](#)

Let us know how access to this document benefits you - share your thoughts on our [feedback form](#).

Smith, Justin; Lee, James; Lucerna, Alan; and Espinosa, James, "A Case of Cocaine Toxicity from Body Stuffing" (2021). *Stratford Campus Research Day*. 5.

https://rdw.rowan.edu/stratford_research_day/2021/may6/5

This Poster is brought to you for free and open access by the Conferences, Events, and Symposia at Rowan Digital Works. It has been accepted for inclusion in Stratford Campus Research Day by an authorized administrator of Rowan Digital Works.

A Case of Cocaine Toxicity from Body Stuffing

Justin Smith DO, James Lee DO, Alan Lucerna DO, James Espinosa MD

Emergency Department Residency and Department of Emergency Medicine, Rowan University SOM

Introduction:

Body stuffing refers to the ingestion of an illegal substance in an effort to conceal it and avoid prosecution. This is distinct from, and more common than, the practice of *body packing* in which large amounts of an illegal substance are carefully packaged and ingested to be transported discreetly by smugglers [1]. While body packers tend to ingest much larger quantities of a drug, they are less prone to developing symptoms of drug toxicity due to the meticulous packaging methods used when compared with those who ingest packets of drugs in haste to avoid prosecution [2]. Many substances have been reported to be contained in these ingested packets, but cocaine continues to be the most common [1]. While many patients who present to the emergency department with suspected cocaine body stuffing will be asymptomatic, about 30% will develop symptoms of drug intoxication, and 4% will develop severe symptoms including seizures [3]. Here we report a case of body stuffing leading to severe cocaine toxicity.

Case Presentation:

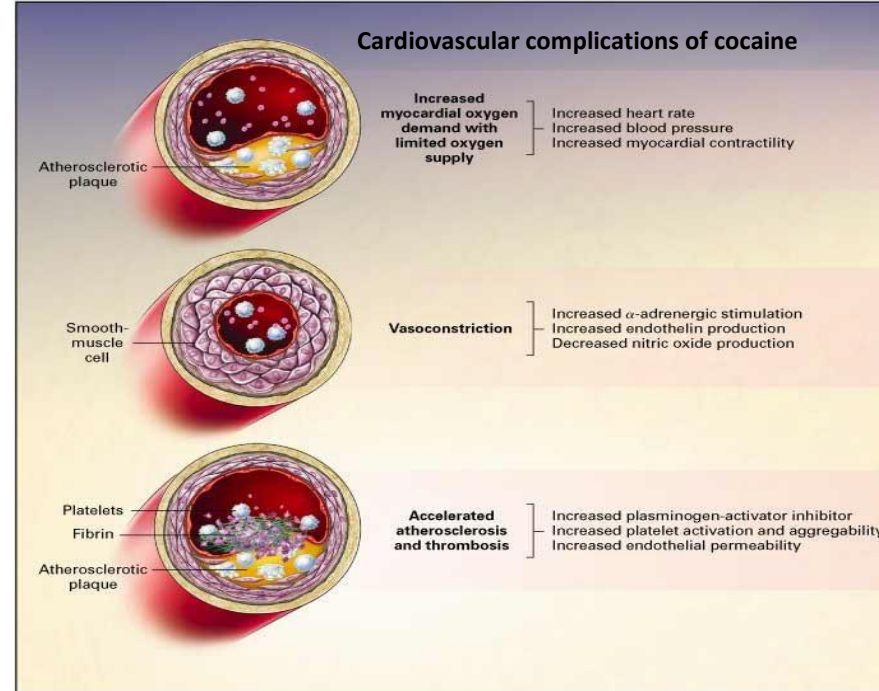
A 22-year-old male presented to the emergency department (ED) with police and emergency medical services (EMS) for altered mental status. Police reported the patient began acting strangely shortly after being placed under arrest. Prior to arrival in the ED, the patient had admitted to swallowing approximately 40 bags of crack cocaine in the back of the police car. EMS reported the patient had vomited en route to the ED, and they had noticed approximately 15 plastic bags filled with a white substance in his vomitus.

On arrival to the ED, the patient was confused and only intermittently responding to questions. He was actively retching and drooling. He was unable to provide any further history and review of his medical record revealed no previous visits or documented medical history. His initial vital signs were blood pressure of 167/121, heart rate of 163, respiratory rate of 30 breaths per minute, a temperature of 96.2 degrees Fahrenheit orally, and an oxygen saturation of 100% on room air.

The decision was made to intubate the patient for airway protection given his altered mental status and apparent inability to tolerate his own secretions. The patient was intubated using 4 mg of midazolam, 100 mcg of fentanyl, and 50 mg of rocuronium. No foreign body was visualized in the airway on video-assisted laryngoscopy. An orogastric tube was placed. A midazolam infusion was started, and his blood pressure had improved to 140/85 at the time of admission.

The patient's urine drug screen was positive for cocaine, phencyclidine, and cannabinoids. His ethanol level was <10 mg/dL. The patient's potassium was 3.0 mmol/L. This was replaced with 20 mEq of intravenous potassium chloride. His serum glucose was 167mg/dL. His initial lactate was 3.5 mmol/L. Arterial blood gas after intubation was pH of 7.19, pCO₂ of 75 mmHg, pO₂ of 257 mmHg, and bicarbonate of 29 mmol/L. Labs were otherwise unremarkable. A noncontrast computerized tomography (CT) scan of the chest, abdomen, and pelvis was performed which showed no acute findings. Critical care, general surgery, and gastroenterology were consulted. The patient was admitted to the intensive care unit (ICU).

Shortly after arriving in the ICU, the patient was awake and agitated but following commands. He was extubated. He had another episode of vomiting while in the ICU and plastic packets were again noted in the vomitus. Midazolam was discontinued following extubation, and the patient remained normotensive. His high-sensitivity troponin rose from 3 ng/dL to 20 ng/dL. He had a CT scan with oral contrast the next morning which was normal. He had a bowel movement later that day which appeared to have pieces of plastic within it. He was downgraded from the ICU on hospital day 2 and was discharged from the hospital on day 3.



N Engl J Med 2001; 345:351-358

Conclusion:

Body stuffing and body packing are both becoming more common since they were first described [1]. Medical management and supportive care are usually the best course of action in cases of body stuffing as seen in our case. While surgery is rarely indicated, surgical consultation should occur early to ensure prompt intervention if obstruction or perforation occurs.

References:

- Maier L, Trueb L, Carron P-N, et al. Emergency department management of body packers and body stuffers. *Swiss Med Wkly*. 2017;147:w14499. doi: 10.4414/smw.2017.14499
- Pollack CV, Biggers DW, Achord JL, et al. Two Crack Cocaine Body Stuffers. *Ann Emerg Med*. 1992;21(11):1370-1380. doi: 10.1016/s0196-0644(05)81905-5
- June R, Ake SE, Keys N, et al. Medical Outcome of Cocaine Body Stuffers. *J Emerg Med*. 2000;18(2):221-4. doi: 10.1016/s0736-4679(99)00198-5
- Traub SJ, Hoffman RS, Nelson LS. Body packing—the internal concealment of illicit drugs. *N Engl J Med*. 2003;349(26):2519-26. doi: 10.1056/NEJMra022719
- Ekbull A, Ehrhardt JD, Hai S, et al. Surgical care for ingested cocaine packets: Case report and literature review. *Int J Surg Case Rep*. 2019;55:84-87. doi: 10.1016/j.ijscr.2019.01.013
- Alfa-Wali M, Atinga A, Tanham M, et al. Assessment of the management outcomes of body packers. *ANZ J Surg*. 2016;86(10):821-825. doi: 10.1111/ans.13226
- Sporer KA, Firestone J. Clinical Course of Crack Cocaine Body Stuffers. *Ann Emerg Med*. 1997;29(5):596-601. doi: 10.1016/s0196-0644(97)70246-4
- Tomaszewski C, McKinney P, Phillips S, et al. Prevention of Toxicity From Oral Cocaine by Activated Charcoal in Mice. *Ann Emerg Med*. 1993;22(12):1804-6. doi: 10.1016/s0196-0644(05)80404-4
- Moreira M, Buchanan J, Heard K. Validation of a 6-hour observation period for cocaine body stuffers. *Am J Emerg Med*. 2011;29(3):299-303. doi: 10.1016/j.ajem.2009.11.022

Discussion:

Body packers will typically present to the emergency department for one of three reasons: symptoms of a drug toxidrome, symptoms of a bowel obstruction or perforation, or for evaluation prior to incarceration or detention. The management of body packers is generally well established. Asymptomatic patients are conservatively managed with laxatives until imaging confirms that all packets have been retrieved. Surgery is performed if the patient develops an obstruction or perforation or if there is any sign of drug toxicity given the enormous amounts of drug in each packet [4,5]. Management and disposition of cocaine body stuffers, on the other hand, poses considerable challenges and is not as well-established [2,6].

Most patients presenting to the ED with suspected body stuffing will be asymptomatic or with a tachycardia that resolves after triage [3,7]. Given the high risk of drug leaking from poorly prepared packets and the lack of an antidote to cocaine overdose, most experts recommend treating these patients with 1 g/kg of activated charcoal. While cocaine is rapidly absorbed through the intestinal mucosa, activated charcoal has been shown to reduce incidence of seizures and death in mouse models [8]. There is some evidence to support discharge after a 6-hour observation period in patients who have received activated charcoal, but there have been case reports of patients developing severe symptoms 24 hours after ingestion [2,7,9]. In addition to activated charcoal, whole bowel irrigation with 1.5-2 L/hr of polyethylene glycol electrolyte solutions (Go-Lytely) should be initiated and stools should be examined for foreign bodies. Unfortunately, the endpoint of whole-bowel irrigation is not well defined and many patients cannot or will not give an accurate count of the packets they have ingested. CT of the abdomen and pelvis can be used to evaluate for the number of packets swallowed on presentation or to confirm expulsion of all packets after whole bowel irrigation. [2]

In cases of body stuffing, most patients will have begun to exhibit signs of intoxication by the time they present to the emergency department [7]. Patients who develop symptoms of intoxication after body stuffing are better managed medically rather than with surgery. Cocaine is a sympathomimetic drug that acts on adrenergic receptors both centrally and peripherally. Symptoms of cocaine ingestion range from tachycardia and hypertension to agitation, hyperthermia, myocardial infarction, and seizures. Patients with mild to moderate symptoms of intoxication should be treated with benzodiazepines. If hypertension persists despite benzodiazepines, nitroglycerin or nitroprusside may be effective. β -blockers should be avoided as they cause unopposed activation of α -adrenergic receptors and have been shown to increase cardiac mortality. [2] If the patient develops severe cocaine toxicity such as repeated seizures, hyperthermia, severe agitation, or myocardial ischemia he or she will require admission to the ICU and continued medical management [2,7].

Surgery is indicated for bowel obstruction, intussusception, or signs of ischemic bowel. Surgery is rarely needed in cases of body stuffing because the ingested packets are small. The surgical team should nevertheless be consulted early, before complications develop. [2] Endoscopy can be used to look for packets that remain in the stomach, but endoscopic removal of these packets risks rupturing the packages and is therefore dangerous [1,2].