

Body Packing of Illicit Drugs: An Incidental Radiological Diagnosis In A Covid-positive Patient

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ABSTRACT

Body Packing is the smuggling of illegal drugs by hiding them into waterproof capsules, and using human body as a vehicle for transportation. The drugs may be hidden under the skin, taken orally or introduced into body cavities such as rectum and vagina. Many patients are asymptomatic; however, if the capsule disintegrates resulting in systemic drug absorption a variety of non-specific symptoms may develop. This is a case

where it becomes difficult to clinically diagnosis and for that, one has to know the proper history, radiological imaging and urine analysis. One of the COVID-positive patients presented with clinical features that were initially attributed to be due to novel infection, but radiological evaluation subsequently revealed many drug-filled capsules within gut and few showing evidence of rupture. Currently, there are few publications describing the CT findings of body disintegration due to drug packets.

Keywords: Body packing, radiological imaging of body packing, body positive in covid patient

INTRODUCTION

Body packers, initially described in 1973, are individuals involved with the illegal smuggling of illicit drugs via intracorporeal concealment. The drugs are generally concealed in bodypacks, which entail small oval-shaped packets containing tightly-wrapped capsules or condoms, ingested normally by mouth; pellets of swallowed cocaine can be found this way. These are called body packers (who swallow drug packets) and body pushers (insertion in a cavitory orifice).¹ Cocaine, heroin, methamphetamines and cannabis are the most common illicit drugs that are smuggled into many countries².

Body packers are often asymptomatic; however, severe complications can quickly arise when the packets ruptures or leak into vessel (body-packer syndrome). This can precipitate serious, potentially life-threatening consequences such as seizure, respiratory depression and cardiac arrest if systemic drug absorption occurs³. Mechanical problems such as gastrointestinal obstruction and perforation are serious issues, particularly in the setting of packet ingestions⁴.

Clinical suspicion for body packing is difficult as symptoms are commonly nonspecific (eg, abdominal pain, constipation or altered mental status). Otherwise, these symptoms are often nonspecific and can be mistaken for other conditions.⁵ Imaging plays a significant role in body packing diagnosis. Only 40% to 90% of the time can medication packets be seen on radiographs, depending on the size and quantity of contrast material in the capsules.⁶ The most effective diagnostic tool is computed tomography (CT) without contrast because of its sensitivity to drug-filled packets and associated complications between 95.6%-100%⁷, but ultrasound can be a suitable option for low-resource settings as well⁶. CT scanning is also useful to

instruct, number, size and location of packets but may not detect disintegration or ruption of drug containers⁸. In the realm of illegal narcotics, body packing has long been used as a smuggling technique since it's essentially a more covert and straightforward approach to get by customs. Body packers continue to be a problem, even with improvements in drug screening measures at the borders. When diagnosing and treating them, doctors must exercise caution to avoid a tragic consequence.

CASE REPORT

A 31-year-old male, chronic mawa (chewing tobacco) addict looking drowsy presented with fever - 1 day and constipation-4 days followed by diffuse abdominal pain in addition to altered sensorium. On chest examination had bilateral basal crepitations. A COVID PCR was sent because of the current pandemic, which testing positive for his diagnosis. The patient was first placed in an isolation unit when it was determined that his COVID-19 status was the cause of his symptoms. But rather of getting better, his problems grew worse over time. The non-specific abdominal X-ray (erect and supine). A CT chest and abdominal scan with IV contrast demonstrated diffuse large hyperdense capsules packed in the stomach, duodenum and colon consistent with body packing. The biggest capsule was of 3.5 cm in length and showed an attenuation range between 150 to 400 Hounsfield units respectively (Fig. The stomach was scanned unenhanced in the axial plane (figure 1), and showed a hyperdense capsule with an attenuation of 250 HU. A second capsule was seen in the transverse colon on coronal CT scan (Figure 2). The average attenuation of the capsules in the proximal duodenum was lower, measuring 110 Hounsfield units that suggested disintegration (Figure 3). Findings in the chest on CT were not highly suspicious for COVID pneumonia and more likely systemic drug-related complications.

Urine toxicology was positive for opiates. Thus, upper GIT endoscopy was performed and two capsules were retrieved from the proximal bowel. Despite this despite treatment, the patient's clinical status worsened over time (he developed an entire depressive episode or drowsiness which later evolved to weakness and paresis of his four limbs leaving him with a Glasgow coma score 2T/10). Unfortunately, the patient could not be revived and died at the hospital.

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Figure-1: Unenhanced CT scan axial section taken at the level of stomach. Large oval shaped hyperdense (average attenuation 250 Hounsfield unit) capsule seen in stomach



Figure-2: CT scan abdomen with contrast, coronal section. Another large oval shaped hyperdense capsule seen in transverse colon.

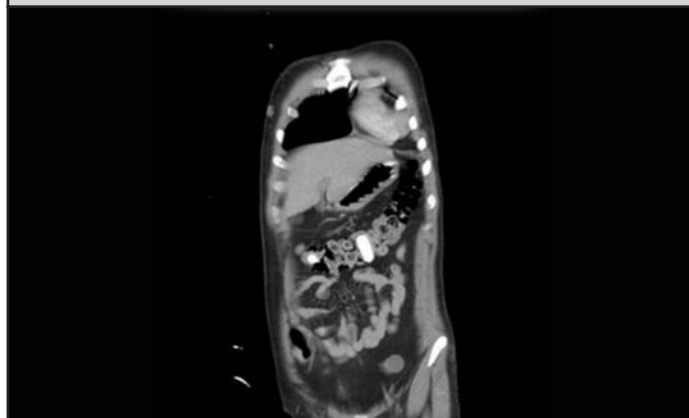
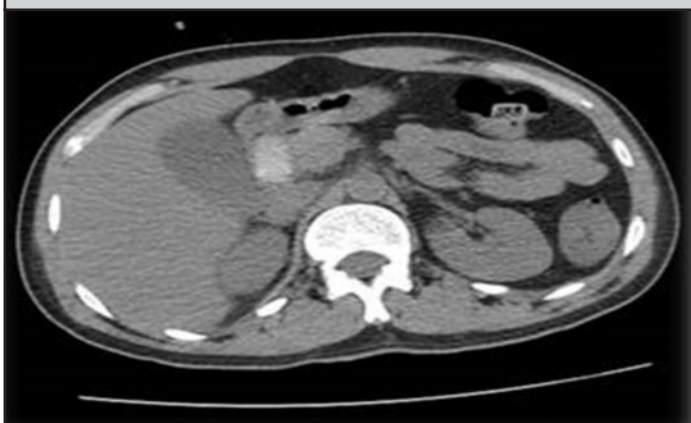


Figure-3: Unenhanced CT scan axial section taken at the level of small bowel. This shows a capsule in 2nd part of duodenum which appears less dense (average attenuation 110 Hounsfield units) representing disintegration of capsule



demonstrates number of packets, their exact location and associated complications which is usually not possible with conventional radiographs(7). Saba Sohail(8) concluded that body packing drugs and their location can be easily diagnosed on CT scan as they appear hyperdense (89-340 Hounsfield Unit) foreign bodies on non-contrast CT scan.

In the current study underlying hyperdense foreign entities in the stomach were seen on unenhanced CT scans of the abdomen (Figure 1), with an attenuation of around 250 Hounsfield units. A comparable hyperdense capsule was found in the transverse colon on a coronal CT picture with contrast (Figure 2), and a lower density capsule (110 HU) indicative of disintegration—a sign of systemic drug leakage—was found on a proximal duodenal CT scan (Figure 3).

Density of drugs (Hounsfield unit HU values) on CT scan also depend on the type of drug use(7) such as:

- opium: ~165-200 HU
- cocaine: ~220 HU
- heroin: ~520 HU

Urine analysis for toxicology is performed to aid in radiological diagnosis and confirm about type drug causing toxicity. Management depends upon location, size of packaging, type of drug, symptoms of patient and complications.(3)

CONCLUSION

Over the years body packing is increasing worldwide. This case report highlights the importance of recognizing body packing as a potential cause of abdominal pain and other gastrointestinal symptoms in patients with a history of drug use or recent travel. Radiological imaging especially CT-scan is valuable tool in diagnosing these patients and associated complications. Very limited data is available in literature about these cases and their imaging patterns especially from our country Pakistan.

Authors' Contributions: **Ameet K:** Conducted the initial clinical assessment. **M Saqib QI:** Supervised the radiological workup. **SM Shahnawaz H:** Analyzed the CT findings. **Aneeta:** performed the literature review and provided radiological insights. **Pooja:** contributed to the discussion on gastroenterological management.

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DISCUSSION:

Over the last two decades cases of drug smuggling are increased with young to middle aged males most commonly involved (3). Cocaine is one of the most smuggled drugs followed by heroin, cannabinoid and methamphetamine. Most frequent locations are gastrointestinal tract, vagina and ears. Condoms, latex gloves and balloons are typically used as drug packets for keeping drugs in the body.(4) Even after sophisticated techniques of packaging, body packers are at increased risk of complications which can be divided into:

- Mechanical: Gastrointestinal obstruction or perforation
- Chemical: Due to systemic drug absorption and toxicity

Systemic absorption can lead to drowsiness, epileptic seizures, neuropathies, rhabdomyolysis, renal failure and cardiac arrest. If not promptly diagnosed and managed complications can lead to coma and death of patient. Radiological imaging play essential role in diagnosis. Plain radiography is still most widely used imaging modality to diagnose with sensitivity ranging from 40% to 90% depending on size, location, type of drug and foiling material. It can detect drug filled packets of 2-8 cm^(2,5). Due to high sensitivity of 95.6%-100% CT-scan without oral or rectal contrast is imaging modality of choice.^(5,6) CT examination

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