

## A Case Study about Death by the Consumption of the Packaged Drugs Referred to Legal Medicine Center of Shiraz, Iran

Research Article

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### Abstract

**Background:** Drug abuse is a major health problem in Iran, particularly in youth and young adults. Opium body packer is a common cause of admission to our Medical Toxicology ward. Body packers are illicit drug smugglers, who mostly carry cocaine and heroin in their body, either by swallowing or inserting them into the rectum or vagina as sealed pellets or packages, across borders without being detected. These drugs are wrapped in the form of capsules, in condoms, balloons, plastic bags or fingers of latex gloves and placed in various anatomical cavities or body orifices.

**Case presentation:** Case is a 33 years old male who was imprisoned and had an addiction. Upon arrival in the ward, patient had lost consciousness, bradypnea, cyanosis, miosis pupil and unaware of his surroundings. We used activated charcoal to the removed opium and crystal from the colon.

**Conclusion:** The case died because of a damaged packets and infiltration of contents into internal organs.

**Keywords:** Opium; Body Packer; Case Report; Iran.

### Introduction

In the United States, the American Association of Poison Control Centers (AAPCC) reported about 2.4 million poisoning exposures a year in 2006, while the Institute of Medicine in 2001 estimated more than 4 million poisoning episodes with 300,000 hospitalizations and 24,173 poisoning-related deaths [1-3]. Opium body packing is a common cause of admission to our Medical Toxicology ward. Since the body packers are drug smugglers, they are mostly brought to the hospital by police. Ultrasonography, plain X-ray, and CT scan are recommended for the diagnosis of body packing and stuffing. It was aimed to compare the diagnostic values of the three techniques in opium body packing [4].

Body packers are illicit drug smugglers, who mostly carry cocaine and heroin in their body, either by swallowing or inserting them into the rectum or vagina as sealed pellets or packages, across borders without being detected. Concealment and transport of narcotic substance is one of the major businesses with high prof-

its all over the world, attracting the attention of criminal minds toward this trade. Body packers may also be called “swallowers”, “internal carriers”, “couriers”, or “mules. Each packet of opium, heroin, cocaine or amphetamine has a life-threatening dose of the drug [5-7].

These drugs are wrapped in the form of capsules, in condoms, balloons, plastic bags or fingers of latex gloves and placed in various anatomical cavities or body orifices. Identifying suspects' is difficult for the immigration authorities at the international borders and airports [8-10]. The body packers are especially prone to rupture of the packets and consequent toxicity. In addition, gastrointestinal (GI) obstruction may occur and there are some reports about upper GI hemorrhage caused by prolonged pressure of the packets on the gastric mucosa [11].

The cases of accidental intoxication may actually decrease as the packing procedure improves. Though being at a high risk, reported body packers die as result of the toxicity due to leakage of an internally concealed container and most of them carry their cargo

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successfully [12].

## Case Study

Case is a 33 years old male who was prisoned and had an addiction that was given activated charcoal in prison due to lack of consciousness and possible poisoning. Subsequently, crystals and opium package were removed from the anus. However, due to the drug leakage and absorption from the digestive tract, the patient was transferred to poisoning center.

Upon arrival in the ward, patient had lost consciousness, bradypnea, cyanosis, miosis pupil and unaware of his surroundings and had abnormal movement with unstable vital signs.

In emergency room patient was given diazepam and phenytoin, but still did not respond to painful stimuli.

Neurological examination revealed no lateralized sign and acrocyanosis was detected.

A short time after administration of hypertonic glucose and naloxone, he had seizure, hypotension and apnea, therefore, he underwent intubation and mechanical ventilation was done. Primary laboratory examinations revealed respiratory acidosis and hypoxemia.

The patient was taken for chest X-ray, brain CT scanning and other lab tests; he received naloxone again and showed more consciousness. Since, he was suspicious of body packing, plain abdomen X-ray was performed and the existence of several packs was confirmed. Treatment by polyethylene glycol 2 lit/h and naloxone, oxygen and serial activated charcoal started and finally, the patient had been defecated the packets.

Finally, we found out that drug package had opened in patient's colon and according to blood tests taken from the patient and his medical diagnosis showed that he had acute renal failure and dialysis was performed for 3 hours.

Also, because the patient had reported episodes of convulsion 5 vials of propofol was administered.

The patient was connected to the internal foley but not there were urinary output and his blood pressure (BP) was 80/30 mm Hg. The cardiac arrest was happen, CPR procedure was performed. During CPR epinephrine and atropine was administered, but eventually the patient expired.

Overall, it was difficult to find the exact amount of opium intoxication. Although the stomach and bowel loops were distended, however no abrupt termination of distention (cutoff sign) in favor of mechanical obstruction was detected. No obvious leakage from the packages was observed.

## Necropsy Result

### Autopsy Anatomical Findings

According to gross pathological findings, there was minimal rigidity in the upper limbs and jaws. No trace of trauma was clear,

except for those resulting from iatrogenic drugs injections on the dorsum of the hands and the cubit fossae. Subcutaneous dissection or any needle track marks were not clear on the body. The brain had outstanding features of increased intracranial pressure including flattened gyring, consular herniation and uncalled for grooving.

There was marked congestion of cerebral vessels, but no evidence of intracranial hemorrhage was observed. Coronal and transverse sections of the brain were normal. The stomach contained moderate amount of dark brown pasty material and five intact black packs. The gastric mucosa was noticeably congested with no ulcerations. The duodenum, jejunum, ileum, appendix, and caecum were normal. There was no evidence of intestinal obstruction. However, the transverse colon contained dark brown viscose material.

There were no other significant positive anatomical findings from the autopsy.

In pathology congestion of lung vessels and edema of brain tissue was detected. Around the anus and intestinal at necropsy charcoal was found.

### Postmortem toxicological detecting

A toxicological test by gas chromatography was performed on postmortem femoral blood, gastric and duodenal contents, liver and kidney extracted by the legal medicine Department.

The toxicology report showed that the dark brown substances in the packs were opium.

The final cause of death was the leakage of opium package in the body and symptoms of poisoning and ultimately respiratory failure and cardiac arrest and refractory seizures were announced.

## Discussion

Body packing may cause terrible effects on smugglers as a result of packet rupture [13]. Body packing was first described in the medical literature in 1973. It is the term used for the intracorporeal concealment of illicit drugs [14, 15].

Shadnia et al, in 2007 reported a case of an opium body packer and reviewed the available scientific literature by focusing on mechanisms of toxicity and treatment approach. The patient was a 35-year-old man who had lethargy, respiratory depression, tachycardia, normal blood pressure, hyperthermia, and pinpoint pupils on presentation. 81 packets were removed by surgery and three of them were left due to leakage after removing the packets, the patient was treated conservatively [16].

In another report by Mostafazadeh et al, in 2010, 11 cases of body-packers who were part of a smuggling gang, were arrested by police and admitted to our hospital in a period of 24 hours. These 11 men were part of 90 body-packers who were arrested in Tehran. Radiological examination including plain abdominal radiographs and CT scan images demonstrated the presence of multiple enteric packages. Non-surgical conservative evacuation of bowel contents was induced by the administration of laxatives.

Analysis of the packages revealed crack and cocaine as concealed drugs [17].

Jakhar et al, in 2013 reported a case of death due to heroin leakage in a body packer, attempting to smuggle the drug by concealing it in his gastro-intestinal tract. Fifty pellets (packages) were recovered from the body. Toxicological analysis of the powder samples from the damaged package and other 48 packages was performed and was found positive for heroin, caffeine and codeine. This case was unique in the sense that cause of death was intoxication caused by leakage of heroin from damaged packages detected at autopsy and demonstrates that body packing is an existing problem in India [18].

According to the reported of mehrpour et al, in their studies described a woman that ingested about 200 pellets of opium for a total of 2.8 kg, but she received 0.8 mg naloxone and finally the patient was revived and all the contents were removed from the patient's colon by the administration of polyethylene glycol–electrolyte lavage solution to the patient at a rate of 2L/h for 12 hours (4). But, in our study we used activated charcoal to the removed opium and crystal from the colon.

The body packers are prone to rupture of the packets and consequent toxicity [19].

But in our case the patient died due to occurrence of acute toxicity caused by the presence of opium and crystals in colon, in spite of the fact that there were no obvious sign of rupture of the packs.

Clinical follow-up-induced toxicity (decreased level of consciousness and seizures) were referred to hospital were reviewed.

The most important medical complications of body-packing include partial or complete gastrointestinal tract obstruction and drug intoxication following leakage or rupture of the covering materials, however most cases do not experience complication and packages may pass spontaneously or pass with the use of laxatives but rarely surgical removal indicated. The main indication for surgery was unresolved bowel obstruction.

## Conclusion

(1) Ultrasonography is of no value in diagnosis of opium body packing. (2) Plane abdominal X-ray is simple but not efficient. (3) CT scan is the best diagnostic technique in opium body packing.

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