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**Publication date**  
2005

**Published in**  
Medical Science Monitor

[Link to publication](#)

#### **Citation for published version (APA):**

Raben, A. M. T. J., Phoa, S. S. K. S., Busch, O. R. C., & Schultz, M. J. (2005). Case report of a smuggler's dinner: carrots and asparagus, or bolitas? *Medical Science Monitor*, 11(12), CS79-CS81.

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Received: 2005.04.04  
Accepted: 2005.06.13  
Published: 2005.12.01

**Authors' Contribution:**

- A** Study Design
- B** Data Collection
- C** Statistical Analysis
- D** Data Interpretation
- E** Manuscript Preparation
- F** Literature Search
- G** Funds Collection

## Case report of a smuggler's dinner: carrots and asparagus, or bolitas?

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**Source of support:** Departmental sources

<p><b>Background:</b></p> <p><b>Case Report:</b></p> <p><b>Conclusions:</b></p> <p><b>key words:</b></p>	<h3>Summary</h3> <p>Body packing is a distinct method of drug smuggling. Surgeons and intensive care specialists will be confronted with body packers when packets do not pass spontaneously and rupture, causing drug toxicity.</p> <p>We report of a 32-year-old Liberian male who presented with abdominal complaints and anxiety after having ingested 50 cocaine-containing packets of which 49 had passed the natural route in the previous days. X-ray of his abdomen showed a structure possibly compatible with a packet in or projected over the stomach. We decided to transfer the patient to the operation theatre for surgical removal via gastrotomy. However, no packet was found. During his first day in the intensive care unit he did not regain consciousness. Repeated urine analyses for cocaine were negative. After one day he deteriorated: he needed circulatory support because of hypotension, without signs of sepsis. Repeated surgery revealed no packet. In the end he turned out not to be suffering from cocaine intoxication.</p> <p>When confronted with a case of body packing in which packets do not pass spontaneously and produce bowel obstruction or in which badly wrapped packets rupture, causing drug toxicity, it is of utmost importance to establish the nature of the packet's content.</p> <p><b>intoxication • cocaine • heroine • diagnostic imaging</b></p>
<p><b>Full-text PDF:</b></p> <p><b>Word count:</b></p> <p><b>Tables:</b></p> <p><b>Figures:</b></p> <p><b>References:</b></p> <p><b>Author's address:</b></p>	<p><a href="http://www.medscimonit.com/fulltxt.php?IDMAN=7311">http://www.medscimonit.com/fulltxt.php?IDMAN=7311</a></p> <p>1349</p> <p>–</p> <p>3</p> <p>4</p> <p>Marcus J. Schultz, Internist-intensivist, Department of Intensive Care Medicine, C3-329, Meibergdreef 9, 1105 AZ Amsterdam, The Netherlands, e-mail: m.j.schultz@amc.uva.nl</p>

## BACKGROUND

A popular way of smuggling drugs internationally is to conceal them in body cavities, particularly in the digestive tract. Most body packers probably go undetected by law enforcement agencies. At our hospital, the Academic Medical Center (AMC) in Amsterdam, patients sometimes seek medical attention out of fear of or definite rupture of packets resulting in acute drug toxicity. Another reason for seeking medical care are manifestations of intestinal obstruction such as nausea and vomiting, often combined with abdominal complaints due to bowel distension, and sometimes they even present with an acute abdomen due to intestinal perforation.

The simplest way to detect drug packets is plain X-ray of the abdomen; computed tomography is by far the most accurate diagnostic test [1], but is usually not necessary, and the radiation risk, effort, and the time and resources consumed are limiting factors. While asymptomatic patients are treated by bowel irrigation with a polyethylene glycol-electrolyte lavage solution (oil-based laxatives should be avoided because they reduce the tensile strength and "burst" volume of latex products), surgical removal of packets via enterotomy is performed in symptomatic patients. Surgical evacuation is regarded as the definitive treatment of "body packers", but one should always be aware that some packets may have been left behind [2]. To reduce this risk, the policy in our hospital is to perform a control abdominal X-ray at the end of the operation. Endoscopy seems like an elegant, less invasive way to remove the packets, but experience has taught us there is a major risk of disrupting the wrapping material while trying to remove the objects with a forceps by endoscopy.

## CASE REPORT

A 32-year-old Liberian male asked for medical attention at our emergency department because of abdominal complaints and anxiety. He was afraid of having cocaine intoxication after having ingested 50 cocaine-containing packets one week before presentation, 49 of which had passed the natural route in the previous days. The last one, however, was "stuck", as he told us. Ingestion of large pieces of carrot and other vegetables as a means to facilitate the packet's passing the bowel did not result in the desired effect: the packet did not appear in his stools. On examination he was slightly hypertensive (150/90 mmHg) and had sinus tachycardia (140 beats per minute). The right pupil was narrowed to pinpoint and the left was irregularly dilated due to previous trauma. His abdomen was tender, although with intact bowel sounds. Urine analysis for cocaine was negative. X-ray of his abdomen showed a structure possibly compatible with a packet in or projected over the stomach (Figure 1). The 12-lead electrocardiogram and laboratory studies were normal. We concluded that the packet still had not passed the pylorus after one week, and that it was unlikely it would pass spontaneously. Thus we decided to transfer the patient to the operation theatre for surgical removal via gastrotomy. Surprisingly, we found no packet in his stomach, but only some pieces of undigested carrot. Extensive palpation of the small and large bowel did not reveal any packet, and a per-operatively performed plain X-ray of the abdomen was negative. It was then decided to transfer the patient to the intensive care unit.

During his first day in the intensive care unit he did not regain consciousness. Repeated urine analysis for cocaine was negative. After one day he deteriorated and needed circulatory support because of hypotension, without signs of sepsis. A CT scan with oral and intravenous contrast identified a packet-like structure in the upper digestive tract (Figure 2). Because of the high suspicion of a remaining, and now possibly ruptured, packet, we decided to repeat the laparotomy. Unfortunately, again no packet was found; per-operatively performed gastroscopy showed asparagus- and carrot-like structures in the fundus of the stomach, which were subsequently retrieved (Figure 3). After this procedure, the patient was transferred to the intensive care unit, where he regained consciousness over the following days. No wrapping material or other signs of packets were found in his stools during the rest of his stay in our hospital.

Screening of urinary samples, taken before admission at the emergency department and later in the intensive care unit, showed high levels of opiates, consistent with heroin intoxication. This offered a satisfactory explanation for the prolonged comatose state our patient was in and the respiratory insufficiency and circulatory deterioration later on in his stay. It is of course possible that the high levels of opiates in the urine were caused by his use of heroin for recreational purposes, besides swallowing the cocaine packets for commercial purposes. However, this is unlikely, as the opiate levels in his urine did not decrease initially in the ICU, suggesting an ongoing intoxication with heroin.

## DISCUSSION

While in most cases of drug smuggling a plain abdominal X-ray will suffice in exposing the drug packets, and computed tomography may possibly refine the diagnostics in case of doubt, in the present case it proved to be not that simple. Due to misinterpretation of the clinical signs (the patient was not suffering from cocaine intoxication, the symptoms were more those of heroine intoxication) and incomplete diagnostics (urine analysis should have included opiate screening), the patient underwent two surgical procedures unnecessarily. Obviously, smugglers do not always know what they smuggle, but more importantly, physicians must realize this after obtaining the anamnesis. The fact that the pupil of his undamaged eye was narrowed instead of dilated, as would be expected in case of cocaine intoxication, should have made us suspicious of intoxication with opiates. However, the accompanying symptoms of heroin or opiate abuse consist of respiratory depression and a comatose state, besides the above-mentioned pinpoint pupils. Our patient, however, presented himself with agitation and hypertension, compatible with the suspected cocaine intoxication. Unfortunately, we were led astray by these findings. As the treatment of both intoxications differs significantly, it is of the utmost importance to get the correct diagnosis at an early stage.

Several problems remain to be solved: what was the structure that triggered us to perform the laparotomy, and where did it go? The structure on the plain X-ray certainly suggested the presence of a packet [3], but in hindsight it was probably made by a piece of asparagus, removed during the second operation. Why was the patient showing signs of intoxication for such a long period? We suggest that after leakage



**Figure 1.** X-ray of abdomen showing a structure (arrowhead) possibly compatible with a packet in or projected over the stomach.



**Figure 2.** Reconstruction CT scan identified a packet-like structure in the digestive tract.

of the wrappings, drugs can leak in between the stools and intermittently find their way into the circulation. This may explain the deterioration of the patient in the present case report between the two laparotomies. The packet was “lost”, probably leaving the body unrecognized in parts. Would our treatment have differed if we had been aware of the fact that we were dealing with a heroin intoxication? Yes, the patient would likely have been treated with naloxone intravenous-



**Figure 3.** Structures identified by the last surgical procedure: carrot and asparagus.

ly, a well-established antidote for intoxication with opiates, and both the first and second operation would have been avoided. As mentioned above, physicians should try to establish the nature of the packet's content. Therefore, urinalysis for traces of cocaine, heroine, and other opiates, and not only the expected drug, should be performed.

This case report was not meant to present an overview of diagnostic and therapeutic options in dealing with body packers and their varying intoxications, as an excellent review paper has recently been published on this subject [4]. Our aim was merely to point out some potentially life-threatening pitfalls which can be avoided by adequate (hetero)-anamnesis and physical and neurological examination.

## CONCLUSIONS

When confronted with a case of body packing in which packets do not pass spontaneously and produce bowel obstruction, or when badly wrapped packets rupture, causing drug toxicity, it is of utmost importance to establish the nature of the packet's content. Urinalysis for cocaine, heroine, and other opiates, and not only for the expected drug, should be performed. Surgical evacuation is regarded to be the definitive treatment of “body packers”, but one should always be aware that some packets may have been left behind.

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