

'Surgical mules': the smuggling of drugs in the gastrointestinal tract

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SUMMARY

The presentation to surgical units of patients carrying illegal drugs in the gastrointestinal tract is a frequent occurrence at hospitals sited close to international airports. Drugs, usually heroin or cocaine, are wrapped in cellophane packets or condoms. The packages are intracorporeally concealed by being swallowed or passed into the rectum.

The majority of drug traffickers carrying intracorporeal drug packages do not require any medical intervention. Recent reports have suggested that these patients are best treated expectantly avoiding any operative procedures. However, the quantity of drug in any one of the ingested packets is usually above the toxic dose and acute drug toxicity, as well as bowel obstruction, can result in fatalities.

We report a series of five patients who presented over a period of 2 years to a hospital close to Heathrow International Airport, London. The presentation and treatment are reviewed and the management of such 'surgical mules' discussed. We have shown that conservative treatment is appropriate providing bowel obstruction or package perforation has not occurred.

INTRODUCTION

As the market of illicit drugs increased in the 1970s, the awareness of the customs authorities increased. International drug traffickers had to devise new ways of importing drugs through international ports of entry without being detected. This led to the intracorporeal carriage of illegal substances, notably heroin and cocaine, which were either ingested, or inserted *per rectum* or *per vagina*, to be recovered at the country of delivery. Such carriers have become known as 'body packers' or 'mules'¹⁻³. There have been a number of reports of such patients coming to the attention of surgeons, the first being published in 1975⁴. Initially, the treatment was highly interventional and was associated with a significant mortality⁵. More recent reports have shown a better prognosis with a more conservative approach^{3,6}.

The drugs are normally packaged in layers of tightly wrapped cellophane or condoms, each packet containing 1-12 g of the substance. The mules may also take a constipating agent to prevent the passage of the packets before the journey has been completed⁵.

The toxic dose of cocaine is 25 mg, and should a packet rupture the carrier is exposed to a dosage many times the

level which produces the symptoms and signs of toxicity⁷. Management is aimed at the smooth passage of the packages with urgent intervention should there be clinical evidence of toxicity, bowel obstruction, or radiological evidence of imminent packet rupture.

We report five cases of drug 'body packers' who presented to our unit over a period of 2 years.

CASE REPORTS

Case 1

A 54-year-old Nigerian man presented via Her Majesty's Customs and Excise (C&E) having been found to be in possession of cocaine. He complained of loss of appetite and a plain abdominal radiograph revealed a number of packages within the abdomen. He was not obstructed, and was treated conservatively with a course of laxatives. He was discharged 3 days later, after passing 63 packets.

Case 2

A 21-year-old Colombian woman presented under arrest with abdominal pain and vomiting. She had already vomited 15 packets of cocaine prior to arriving in hospital. A plain abdominal radiograph revealed the presence of more packets (Figure 1). Proctoscopy revealed a rectum loaded with

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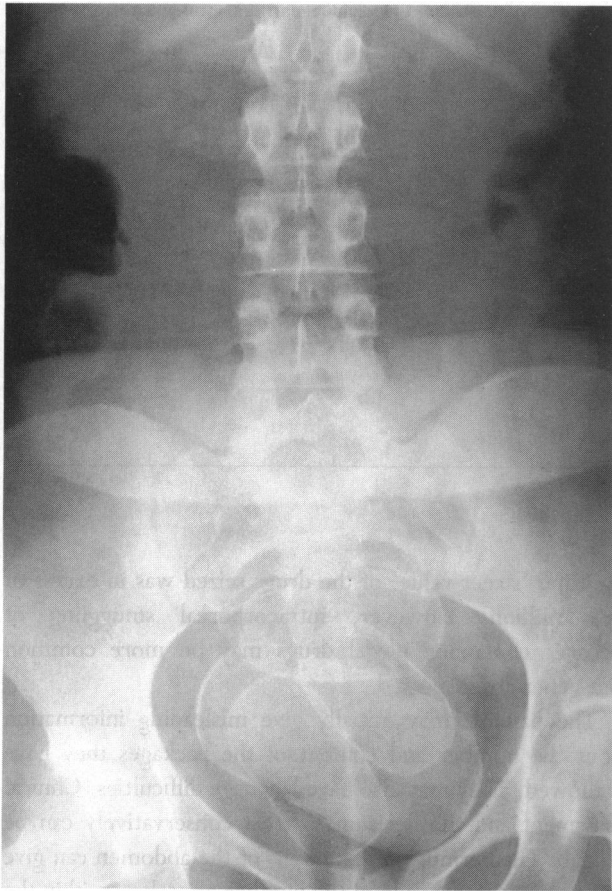


Figure 1 Plain abdominal radiograph of patient No. 2 showing numerous large opacities in the pelvis consistent with intracorporeal carriage of illegal substances



Figure 2 Plain abdominal radiograph of Case No. 4 showing opacities throughout the abdomen consistent with carriage of ingested drug packages. This patient went on to pass 22 packages per rectum

packets, six of which were removed via the proctoscope. She was treated conservatively with an enema and suppositories and discharged after 3 days having passed a further 14 packets.

Case 3

A 30-year-old German woman flying from Colombia was found to be in possession of 250 g of cocaine when searched in Customs. She was not stopped but was allowed to continue and was followed to a local hotel where she was arrested together with three accomplices and her British contact. She complained of constipation and admitted to having ingested up to 20 packets of cocaine and some charcoal prior to her flight. A plain abdominal film revealed at least 10 small packets within the abdomen. Operative intervention was offered as it was thought she was demonstrating signs of acute cocaine intoxication but was refused. Over the next 24 h she became less confused and agitated and after spending 4 days in hospital she was discharged having passed a further 34 packets.

Case 4

A 22-year-old British woman was admitted under arrest complaining of abdominal pain. A plain radiograph revealed the presence of packets within the abdomen (Figure 2). She was treated conservatively with an enema and suppositories. She passed 22 packets containing heroin wrapped in condoms and was discharged after 4 days.

Case 5

A 22-year-old German man, known to have swallowed a number of packages of cocaine, presented to the Accident and Emergency Department (A & E) having had a tonic-clonic seizure following his arrest by the C & E authorities. In A & E he had a respiratory arrest and following resuscitation was taken to theatre where an emergency laparotomy was performed. One hundred and twenty-two packets of cocaine were removed through a gastrotomy and an enterostomy. He was discharged on the tenth day.

Table 1 Intracorporeal carriers stopped at British ports of entry in 1993. Type of drugs carried, number of individual carriers, total and average weight and approximate value of the total haul (Source: HM Customs and Excise)

Drug	No. of people stopped	Weight carried (g)		'Street value' (Pound sterling)	
		Total	Average	Per gram	Total
Cocaine	90	30 441.78	338.24	140	4 260 000
Diamorphine	31	7 745.76	249.86	227	1 760 000
Cannabis resin	56	10 596.3	189.22	3.5	37 000
Cannabis herbal	25	586.60	23.64	3.5	2 050
Cannabis liquid	1	659.00	—	19	12 520
LSD	1	—	—	4.5	—
Others	2	107.00	—	—	—

LSD=Lysergic acid diethylamide

DISCUSSION

Cocaine has been used as a recreational drug by the Indians of Peru for many centuries⁷, and has been used more widely in Europe and the USA for the last 30 years, most recently as 'crack' or free base cocaine. It was estimated that in 1986 there were 5 million regular users of cocaine in the USA and that as many as 30 million people had used cocaine at some time. The market for cocaine in Europe is still thought to be expanding as the American market has become saturated².

Cocaine is usually taken via the intranasal route but can be taken orally, vaginally, sublingually, rectally or smoked. It blocks the presynaptic re-uptake of the neurotransmitters adrenaline and dopamine. Excess transmitter is available at the postsynaptic receptor sites and sympathetic activation produces vasoconstriction and a subsequent rise in arterial blood pressure, tachycardia, arrhythmia predisposition and seizures^{3,7}. The lethal dose for cocaine is reputed to be 500 mg but can be as low as 20 mg. The rate of rise of drug concentration within the blood is an important determinant for a fatal reaction. This is of importance for a body carrier in whom a package perforates.

Acute cocaine intoxication presents with agitation, tachycardia, palpitations, hypertension, hyperthermia, confusion, disorientation and hallucinations^{3,5,7}. A massive dose within the circulation can result in an arrhythmia, seizures and a metabolic acidosis and is usually fatal⁸.

The first reported cases of cocaine 'body packers' was in 1975⁴, since when many other reports have been published. These individuals are the work-horses of the drug industry, carrying considerable risk for little reward. They are often drug addicts themselves⁹, and take the risk in order to finance their addiction².

C & E keep a record of the number of intracorporeal drug carriers that try to enter the UK each year. In 1993 there were 206 'mules' found attempting to pass through British ports of entry carrying a variety of drugs (Table 1).

The total 'street value' of the drugs seized was in excess of £5.5 million. However, intracorporeal smuggling of packages containing illegal drugs may be more common than generally suspected.

The patients may initially give misleading information about the number and content of the packages they have swallowed. They may also have language difficulties. Clinical assessment and the decision to treat conservatively can be difficult. Furthermore, radiographs of the abdomen can give an inaccurate impression of the number of packets within the abdomen^{1,9,10} as demonstrated in Case No. 3. This is partly because of packets overlying one another and is also dependent on the type of wrapping used.

Some of the early reports were post mortem reviews of people found dead in hotel rooms or of patients who were treated surgically^{5,8}. Since these early reports the carriers have devised more secure methods of ensuring that the packets do not rupture whilst within the gut lumen². The majority of carriers do not require medical attention. Carriers who present to hospital have a good prognosis these days as the packaging is more secure and rupture is less likely. As rupture of a package releases a fatal dosage of the drug, surgery should be considered if the package shows radiological evidence of imminent rupture with the development of haloes of gas outlining the package⁴, or if the patient shows signs and symptoms of acute drug intoxication or evidence of small or large bowel obstruction^{2,3,6}.

We support the findings of others^{2,3} that in the majority of asymptomatic patients, a trial of conservative treatment will result in uncomplicated elimination of all ingested packages.

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