



E-ISSN: 2707-4455
P-ISSN: 2707-4447
IJFM 2020; 2(2): 14-16
Received: 10-05-2020
Accepted: 12-06-2020

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Death following cocaine poisoning in body packer: Two cases report and review of the literature

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DOI: <https://doi.org/10.33545/27074447.2020.v2.i2a.26>

Abstract

Background: Body packing is the concealment of illicit drugs enclosed in containers inside the body by swallowing or insertion into the rectum or vagina, usually for transportation to escape detection by customs agents. This report seeks to explore ways of establishing general definition of body packer in the Moroccan context and assess its possible implications on data collection and future research.

Materials and Methods: This is a descriptive and analytical retrospective study of two fatal cases related to Cocaine toxicity of body packers. The deceased underwent an autopsy at Medico-legal institute of Ibn Rochd University Hospital (UHC) of Casablanca, Morocco.

Cases presentation: In these index cases, 02 male youths of foreign nationality in their twenties died in Casablanca airport. The young men took ill at the airport. Abdominal CT scan subsequently performed at the hospital revealed intra-abdominal capsules in both cases. Autopsy showed 47 whitish capsules in the stomach and colon in the first case and 67 similar capsules in the small intestine in the second case. Rapid toxicology testing in the forensic laboratory confirmed the powder to be cocaine. The cause of death was secondary to acute intoxication by leakage of cocaine substances from their packaging.

Conclusion: Prevention and compliance with the legislation governing drug trafficking activities, are of vital interest in reducing the incidence of youth use as vectors of drugs and mortality consequence.

Keywords: body-packer, intoxication, illicit drug, cocaine

Introduction

Illicit drug trafficking across international borders remains a problem. Concealment of illicit drugs enclosed in containers inside the body by swallowing or insertion into the rectum or vagina, usually for transportation, is used by drug smugglers to evade detection through security points [1]. Among different illegally transported drugs, cocaine body packing is very commonly detected in the emergency departments or custody wards [1]. This method of internal concealment of illicit drugs was first reported in 1975 [2]. Subsequently a fatal case was reported in 1977 involving drug overdose while body packing to avoid detection [3]. Since then, there have been frequent reports of fatal cocaine overdose among body packers in the medical literature [4, 5, 6]. The term body packer syndrome was first used following an incident in the United States in which 10 people died due to drug intoxication after swallowing body packets [7]. Internal concealment of cocaine very often poses serious life-threatening conditions among body packers, such as cocaine intoxication due to rupture of the drug packets. In some instances, bowel obstruction by the drug packets has caused near fatalities [8].

The purpose of our work was to determine whether a general definition of this "body packer" can be developed in the Moroccan context and assesses its possible implications for data collection and future research.

Materials and Methods

This is a descriptive and analytical retrospective study of two fatal cases related to Cocaine toxicity of a body packers autopsy at the forensic institute of Ibn Rochd University Hospital in Casablanca (UHC).

Data was reviewed from the forensic departmental registers and case records, police reports, medical records, and autopsy's reports.

Cases presentation

In the two cases, both males in their 20s were reported dead in the airport of Casablanca. The police investigation revealed that the two deceased were transit passengers, intending to catch an international connecting flight later that day. They developed severe abdominal pains and nausea, with subsequent loss of consciousness. They were rushed to the nearest tertiary hospital but pronounced dead on arrival.

An ante mortem abdominal CT scan was done in both cases, the results shown the existence of gastrointestinal capsules. When autopsy was conducted on the next day, rigor mortis was found to be present all over the body. No evidence of any injury or intravenous line or scar was found on the body. However, on dissection, 47 white cylindrical pellets and 67 similar pellets were found in the stomach and large intestine of the first and second cases respectively. (Fig1). Each pellet measured 3 × 2 cm (Fig 2), and contained white matted powder wrapped in aluminum foil, covered by a layer of tubular latex. However, some of the pellets were ruptured in both cases with the release of white liquid inside the stomach and the intestines. The dissection of heart was without abnormalities. All organs were congested. A rapid toxicological test made in our medico-legal department, identified the white powder as cocaine in those pellets in both cases. Cocaine concentrations were not measured in our cases.

The cause of death was considered to be acute poisoning due to cocaine substances leaked from the ruptured pellets.



Fig 1: Pellets inside the stomach



Fig 2: White cylindrical pellets

Discussion

Cocaine overdose is known as an exaggerated version of the physical and psychological signs of cocaine toxicity. Cocaine exerts a toxic effect on almost all organs of the body, but it is on the heart that this effect is the most manifest. The acute effects of cocaine, though intense, are usually short-lived because of the 30-90 minute half-life of

this substance in the body. This half-life depends on the route of consumption, the dose and the subjects. Victims recover from an overdose shortly with medical support, but it should be noted that no antidote exists to counter the toxicity of this substance^[9]. Cocaine body packers usually experience clinical complications due to intraluminal rupture of the drug packets such in our cases, or mechanical obstruction of the gastrointestinal tract^[9]. Abdominal CT scan is an easier and more reliable method that can measure density and reveal information about the localization and number of packets? which was the method performed in our cases^[10].

Cocaine pellets classified into the following three types^[11]: type I capsules are small quantities with thin wrapping and a high chance of rupturing; type II pellets have a medium-quality wrapping fixed with a knot with a low chance of rupturing; while type III packets, have good-quality packing with several layers of latex wrapping fixed with paraffin or wax and have very low chance of rupturing. Later, another type was described (type IV) packet in which cocaine-filled tubular latex was fixed by colored paraffin or fiberglass^[12]. Severe cocaine intoxication, including fatalities among body packers, is usually attributed to rupture of type I or type II packets^[13], which it was the case in our study. However, complications related to cocaine intoxication are also reported with type III body packets^[14].

The literature reports some cases of fatal intoxications with cocaine concentrations measured in deceased subjects ranging between 1.1 mg/L and 7.5 mg / L: Giroud and al^[15]: 5 mg/L, Furnari and al : 4 mg/L^[16]. The interpretation of such a result is easy; however we must not forget that the factors of pre-analytical variations (age, weight, sex, delay between sampling and taking) can be important. The experience and practice of the toxicologist remain indispensable for a relevant interpretation of the measured concentrations^[17].

In conclusion, the deadly cocaine overdoses reported in the recent literature have all been observed in the particular context of Body Packers. The opening or breaking of the packaging in the digestive tract exposed them to a massive dose of drugs which caused their death, such as reported in our cases.

Conclusion

The role of prevention in general, and compliance with the legislation governing drug trafficking activities in particular, are of vital interest in reducing the incidence of youth use as vectors of drugs and mortality caused by drug use. Early intervention and detection of drug body packs in such cases could possibly save them from deadly cocaine overdoses.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

Reference

1. Flach PM, Ross SG, Ampanozi G, *et al.*, Drug Mules As A Radiological Challenge: Sensitivity And Specificity In Identifying Internal Cocaine In Body Packers, Body Pushers And Body Stuffers By Computed Tomography, Plain Radiography And Lodox. *Eur J Radiol* 2012; 81(10):2518-26.
2. Mebane C, DeVito JJ. Cocaine intoxication: a unique case. *J Fla Med Assoc* 1975;62:19-20.

3. Koehler SA, Ladham S, Rozin L, *et al.* The risk of body packing: a case of a fatal cocaine overdose. *Forensic Sci Int* 2005;151(1):81-4.
4. Dinis-Oliveira RJ, Magalhães T, Carvalho F, Santos A. A cocaine body packer case report: clinical and forensic aspects. *Clin Toxicol* 2009;47(6):590-1.
5. Hantson P, Capron A, Maillart JF. Oesophageal and gastric obstruction in a cocaine body packer. *J Forensic Leg Med* 2014;27:62-4.
6. Kassim T, Clarke D, Mai V, Clyde P, Shakir KM. Catecholamine-induced cardiomyopathy. *EndocrPract* 2009;14(9):1137-49.
7. Finkel JB, Marhefka GD. Rethinking Cocaine-associated chest pain and acute coronary syndromes. *Mayo Clin Proc* 2011;86(12):1198-207.
8. Cregler LL. Cocaine: the newest risk factor for cardiovascular disease. *Clin Car-diol* 1991;14(6):449-56.
9. Ribeiro M, Dunn J, Sesso R, Dias AC, Laranjeira R. Causes of death among crack cocaine users. *Rev Bras Psiquiatr* 2006;28:196-202.
10. Koehler SA, Ladham S, Rozin L, *et al.* The risk of body packing : a case of a fatal cocaine overdose. *Forensic SciInt* 2005;151:81-4.
11. McCarron MM, Wood JD. The cocaine body packer's syndrome: diagnosis and treatment. *JAMA* 1983;250(11):1417-20.
12. Pidoto RR, Agliata AM, Bertolini R, Mainini A, Rossi G, Giani G, *et al.* A new method of packaging cocaine for international traffic and implications for the management of cocaine body packers. *J Emerg Med* 2002;23(2):149-53.
13. Peng SK, French WJ, Pelikan PC., Direct cocaine cardiotoxicity demonstrated by endomyocardial biopsy. *Arch Pathol Lab Med* 1989;113(8):842-5.
14. De Prost N, Lefebvre A, Questel F, *et al.* Prognosis of cocaine body-packers. *Intensive Care Med* 2005;31(7):955-8.
15. Giroud C, Michaud K, Sporkert F, *et al.* A fatal overdose of cocaine associated with coingestion of marijuana, buprenorphine, and fluoxetine. Body fluid and tissue distribution of cocaine and its metabolites determined by hydrophilic interaction chromatography-mass spectrometry (HILIC-MS). *J Anal Toxicol* 2004;28:464-74.
16. Furnari C, Ottaviano V, Sacchetti G, Mancini M. A fatal case of cocaine poisoning in a body packer. *J Forensic Sci* 2002;47:208-10.
17. Berny C, Cohen S, Caselagno JS, Durand PG, Coquelin H. A case of fatal cocaine overdose, *Ann BiolClin* 2008;66(1):105-9, Lyon France.