Heroin Body Packer's Death in Greece

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Abstract: A 25-year–old black male was found dead alongside the railway lines close to Thessaloniki rail station. According to the police report the deceased had jumped off a moving train. Autopsy was performed eight hours after the incident. Fifty five (55) identical oval shaped "egg" packages were found in the large bowel and one of them was ruptured. The total weight of the powder was 800 g. Toxicological analysis was performed at the fine powder of the ruptured package, a selected sample of the other 54 packages and in post- mortem blood sample of the deceased. Both samples of the powder were positive for heroin and the post-mortem blood sample was positive for morphine at a concentration of $1.45 \mu g/ml$. This case is the first accidental death of a body packer in Greece and demonstrates that body packing is an existing problem in Greek borders.

Keywords: Body packing, heroin, Greece, death.

INTRODUCTION

Body packers are people who illegally carry drugs, mostly cocaine and heroine, either swallowed or inserted packets of them into the rectum or the vagina in the attempt to cross borders without being detected. The first reported body packer that swallowed a condom filled with hashish was in Toronto in 1973 [1], since then the smuggling of illicit drugs is becoming increasingly common [2-5]. Although body packers are young men, the use of children and pregnant women has been reported [6, 7]. The two most popular drugs transported in the USA have been cocaine and heroin. Death may occur due to pharmacological overdose if the packet breaks or leaks. The predominant methods for illicit drugs trafficking in Greece are sea and land routes. The smuggling of drugs by means of body packing is not a traditional trade route. In the present paper, a case of a heroin body packer jumped off a moving train in order to avoid police arrest, is described. The death was instantaneous after suffering severe head injuries. The autopsy was performed eight hours after the incident and revealed 55 identical oval shaped "egg" packages in the large bowel of the deceased man. A number of accidental deaths of body packers have been described in literature due to rupture of an ingested drug pack [8-10]. This paper describes the first death of a heroin body packer in Greece.

CASE REPORT

Case History

A 25-year-old black male was found dead alongside the railway lines close to the railway station of Thessaloniki.

According to the police report the deceased had jumped off a moving train. His boarding point remained unknown. From the location of the injuries, it was assumed that the deceased fell on his head downwards (Fig. 1). An American forged passport found in his trousers indicated that he was an USA citizen.

Autopsy Findings

The deceased was a well –nourished black male 165 cm in height and 73 kg in weight. The external examination demonstrated severe head injuries (cause of the death) and no signs of acute or chronic drug abuse (Fig. 1). Autopsy was performed at a public mortuary after 8 h refrigeration. The gastrointestinal tract revealed a total number of 55 identical oval shaped "egg" packages, which were wrapped in plastic material (Figs. 2 and 3). In addition fragment of one ruptured container was found in his large bowel. The internal examination indicated generalized viscera congestion, pulmonary edema and no natural disease.

Toxicological Findings

The beige coloured fine powders of the ruptured pack and of one sample of the intact packs were positive for heroin by thin layer chromatography (TLC). TLC was performed using a mixture of ethyl acetate: methanol: concentrated ammonia solution (85:10:5 v/v) as the development solvent. Visualisation of the spots was achieved by spraying with acidified potassium iodoplatinate reagent [11].

The toxicological analysis of the post-mortem blood revealed a morphine concentration of 1.45 μ g/ml. No heroin, 6-monoacetylmorphine, other drugs and alcohol were detected in blood. Morphine was also detected in urine. Fluorescence Polarisation Immunoassay (FPIA) was used for the initial screening for drugs of abuse and ethanol. Determina-

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Fig. (1). Severe head injuries.



Fig. (2). Oval shaped "egg" packets in large bowels.

tion and quantification of morphine was done by gas chromatography (GC) equipped with nitrogen phosphorous detector (NPD) after liquid-liquid extraction of the biological samples and derivatization with MSTFA [11].

Gas Chromatographic analysis was performed using a Thermo Finnigan Trace GC Gas Chromatograph equipped with a Nitrogen Phosphorus Detector. Separations were made on an Alltech EC-5 ($30m \times 0.25 mm \times 0.25 \mu m$ film thicknes) column. For the analysis the oven temperature followed the program: $120 \,^{\circ}$ C hold for 3 min, then the temperature was increased to $230 \,^{\circ}$ C with a rate of $10 \,^{\circ}$ C/min. The final temperature was held for 4 min. The temperatures of

the injector port and the detector were set at 230 °C and 300 °C, respectively. Splitless injection mode was used. Helium was used as the carrier gas at a flow rate of 2 ml/min.

DISCUSSION

Body packing is a method for smuggling of illicit drugs and has become a common problem at borders and airports of several countries. Smuggling of cocaine by means of body packing is a common problem at the United States airports and heroin body packing seems to be more frequent in Europe [9]. There are not statistic data for drug smugglers worldwide because few of them are arrested. The number of



Fig. (3). Fifty-five identical oval shaped "egg" packets. One packet was punctured.

undetected cases is undoubtedly high. The term "Body packing syndrome" was first used in 1981 for 10 died persons transporting cocaine after ingestion of parcels filled with the illicit drug [12]. A sudden death can be observed in "body-packing syndrome" due to fatal acute intoxication, intestinal obstruction and delirium [13].

The use of body packing as a way of smuggling illicit drugs can be extremely hazardous, because of the risk of leakage or bursting of the container [10]. Due to this high risk acute lethal intoxication is the most common cause of death among body packers. Among 50 dead body packers in New York 37 died from fatal overdose due to leaking drug parcel in the gastrointestinal tract [2]. But sometimes drug packets can be found out during autopsy by forensic pathologists in some lethal cases with unidentified cause of the death or in some accidental deaths (as in our case) [14].

Four fatalities over 13 years in the area of Hamburg indicate that professional body packing may be a calculable risk for the offenders [9]. Poor or inadequate packaging may result in rupture and leaking of the drug packet with subsequent bowel absorption. Damage of the pack can be caused in stomach by mechanical movements or chemical digestion of the binding by which the pack is tied. Cocaine, heroin and rarely amphetamines are the illicit drugs usually transported by body packers. Generally, the purity of the transported drugs is usually 5-8 times higher compared with those bought on the street [9]. Each pack usually contains some grams of the illicit drug and if a single pack bursts, taking into account the high purity of the drug, the amount of the toxic substance that enters the blood circulation is higher than in cases of common drug abuse. However, the absorption from the gastrointestinal tract may be slower than direct intravenous injection.

In a previous report [2], out of 50 deaths of body packers, the number of parcels discovered in gastrointestinal tract ranged from 1 to 111 (average 46) and the weight of the packets varied between 9.4 and 1200 g (average 377 g). The found packets of our case (55) are close to the average number. From other published data, the reported total amounts of the illicit drugs per person in body packing cases ranged from 9 g up to 1400 g [3, 5, 8-10]. In the present case the amount of the packet's content (800 g) was much larger than the reported average weight from other cases.

Heroin after oral administration is well absorbed in the gastrointestinal tract and undergoes excessive first-pass deacetylation to morphine [15, 16] and yields morphine and morphine like metabolites. Due to this extensive gastrointestinal first pass effect on heroin, morphine was the only metabolite of heroin that was detected in blood of the deceased. Opiates overdose can cause central nervous system and respiratory depression, pulmonary edema and finally death. In the present case, opiates intoxication can explain viscera edema and pulmonary congestion of the deceased.

In the present case the "mule" was in panic trying to escape from the train and finally jumped off this under the influence of the drug. The likely explanation of this panic is the fact that the train approached the final rail station and the deceased had the fear of arrest.

But no police officer was present in the train and neither suspicion of likely control in the rail station was existent. Maybe this symptomatology is included in the "Body packing syndrome".

CONCLUSION

The present paper presents an accidental death of a heroin body packer in Greece. The deceased was in panic and jumped off a moving train. The autopsy and toxicological analysis revealed 54 intact wrapped packets containing heroin in gastrointestinal tract, one ruptured packet in the large

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bowel and a morphine blood concentration of 1.45 μ g/ml. The internal examination indicated generalized viscera congestion, pulmonary edema. This first accidental death of a body packer in Greece indicates that body packing is an existing problem in Greece.

REFERENCES

- Deitel, M.; Syed, A.K. Intestinal obstruction by an unusual foreign body. *Can. Med. Assoc. J.*, **1973**, *109*, 211-212.
- [2] Gill, J.R.; Graham, S.M. Ten years of "body packers" in New York City: 50 deaths. J. Forensic Sci., 2002, 47, 843–846.
- [3] Wetli, C.V.; Rao, A.; Rao, V.J. Fatal heroin body packing. Am. J. Forensic Med. Pathol., **1997**, *18*, 312 -318.
- [4] Fineschi, V.; Centini, F.; Monciotti, F.; Turillazzi, E. The cocaine "body stuffer" syndrome: a fatal case. *Forensic Sci. Int.*, 2002, 126, 7-10.
- [5] Abolmasoumi, Z.; Afshar, M.; Mahfoozi, A.; Hassanian, H. Twelve death cases of "body packer syndrome" in Tehran (April 1999 -December 2000), Proceedings of the 40th International Meeting of the International Association of Forensic Toxicologists, Paris, France, August 26-30, 2002.
- [6] Traub, S.J.; Kohn, G.L.; Hoffman, R.S.; Nelson, L.S. Pediatric "body packing". Arch. Pediatr. Adolesc. Med., 2003, 157, 174-177.
- [7] Greenberg, M.I.; Shrethra, M. Management of the pregnant body packer. J. Toxicol. Clin. Toxicol., 2000, 38, 176-177.
- [8] Patel, F. A high fatal postmortem blood concentration of cocaine in a drug courier. *Forensic Sci. Int.*, **1996**, 79, 167-174.

Received: November 17, 2009

Revised: January 29, 2010

Accepted: March 15, 2010

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- Heinemann, A.; Miyaishi, S.; Iwersen, S.; Schmoldt, A.; Puschel, K. Body-packing as cause of unexpected sudden death. *Forensic Sci. Int.*, **1998**, *92*, 1-10.
- [10] Stichenwirth, M.; Stelwag-Carion, C.; Klupp, N.; Honigschnabl, S.; Vycudilik, W.; Bauer, G.; Risser, D. Suicide of a body packer. *Forensic Sci. Int.*, 2000; 108, 61-66.
- [11] United Nations, Manual for use by national laboratories, ST/NAR/27, Recommended methods for the detection and assay of heroin, cannabinoids, cocaine, amphetamine, methamphetamine and ring-substituted amphetamine derivatives in biological specimens, **1995**.
- [12] Wetli, C.V.; and Mittleman, R.E. The "Body Packer Syndrome"toxicity following ingestion of illicit drugs packages for transport, *J. Forensic Sci.*, **1981**, *26*, 492–500.
- [13] Marchei, E.; Colone, P.; Nastasi, G.G.; Calabrò, C.; Pellegrini M.; Pacifici, R.; Zuccaro, P.; Pichini, S. On-site screening and GC-MS analysis of cocaine and heroin metabolites in body-packers urine. *J. Pharm. Biomed. Anal.*, 2008, 48, 383-387.
- [14] Hassanian-Moghaddam, H.; Abolmasoumi, Z. Consequence of Body Packing of Illicit Drugs. Arch. Iranian Med., 2007, 10, 20-23.
- [15] Girardin, F.; Rentsch, K.M.; Schwab, M.A.; Maggiorini, M.; Pauli-Magnus, C.; Kullak-Ublick, G.A.; Meier, P.J.; Fattinger, K. Pharmacokinetics of high doses of intramuscular and oral heroin in narcotic addicts. *Clin. Pharmacol. Ther.*, **2003**, *74*, 341-52.
- [16] Jordan, M.T.; Bryant, S.M.; Aks, S.E.; Wahl, M. A five-year review of the medical outcome of heroin body stuffers. J. Emerg. Med., 2009, 36, 250-256.