

FATAL AMPHETAMINE AND METHAMPHETAMINE POISONING DUE TO BODY PACKER SYNDROME: AUTOPSY CASE

PAKET VÜCUT SENDROMUNA BAĞLI ÖLÜMCÜL AMFETAMİN VE METAMFETAMİN ZEHİRLENMESİ: OTOPSİ OLGUSU

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ABSTRACT

People who hide illegal substances in body cavities and pass them through checkpoints are called body packers. With this method, many illegal substances such as cocaine, heroin, hashish, amphetamines, methamphetamine, and ecstasy are transported, often hidden in small packages. In our study, a 27-year-old male who was found dead in his hotel room and who was determined to be a body packer after autopsy is presented. During the autopsy, a foreign substance weighing 465 grams in total, packaged in different coloured packaging materials, was detected in the patient's stomach and intestines. Some packages were found to have been opened. Because of opening of the packages, illegal substances can be absorbed and cause fatal poisoning. Therefore, relevant law enforcement officers, medical personnel, and especially forensic medicine professionals must have sufficient knowledge in the antemortem or postmortem approach to package body syndrome cases. In our study, we aimed to contribute to the literature by sharing, discussing and evaluating autopsy findings with forensic and medical documents.

Keywords: Body packer, forensic autopsy, methamphetamine and amphetamine poisoning

ÖZET

Yasadışı maddelerin paket içerisinde vücut boşluklarına saklanarak kontrol noktalarından geçiren kişiler vücut paketçisi olarak da adlandırılmaktadır. Bu yöntemle sıklıkla küçük paketler içine saklanan kokain, eroin, haşhaş, amfetaminler, metamfetamin ve ekstazi gibi çok sayıda yasadışı maddeleri taşınmaktadır. Çalışmamızda otel odasında ölü olarak bulunan ve otopsi sonrasında vücut paketçisi olduğu tespit edilen 27 yaşındaki erkek olgu sunulmuştur. Otopsi sırasında olgunun midesinde ve bağırsaklarında çok sayıda farklı renkte ambalaj malzemeleri ile paketlenmiş toplamda 465 gram ağırlığında yabancı madde tespit edilmiştir. Bazı paketlerin açılmış olduğu görülmüştür. Paketlerin açılması sonucu yasadışı maddeler emilerek ölümcül zehirlenmelere neden olabilmektedir. Dolayısıyla paket vücut sendromunu olgularına antmortem veya postmortem yaklaşım süreçlerinde ilgili kolluk görevlilerinin, sağlık personellerinin ve özellikle adli tıp profesyonellerinin yeterli düzeyde bilgi sahibi olması gerekmektedir. Çalışmamızda, otopsi bulgularını adli ve tıbbi belgelerle birlikte paylaşarak, tartışarak ve değerlendirerek literatüre katkıda bulunmayı amaçladık.

Anahtar Kelimeler: Vücut paketçisi, adli otopsi, metamfetamin ve amfetamin zehirlenmesi

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INTRODUCTION

People who carry illegal substances through checkpoints by hiding them in their body cavities are called body packers (1). To prevent leaks, these substances are placed in small packages and generally swallowed and stored in the gastrointestinal tract cavities such as the mouth, stomach, and intestines. In some cases, these packages are inserted into the rectum, vaginal canal, ear or under the skin (2, 3). With this method, many illegal substances such as cocaine, heroin, hashish, amphetamines, and ecstasy are transported, often hidden in small packages (1, 4). In this study; a 27-year-old male who was randomly detected to be a body packer during the forensic autopsy with an allegation of suspicious death was evaluated and presented in terms of forensic medicine practise. By discussing the case within the scope of the literature, we aimed to raise awareness that toxic-related deaths may occur as a result of the tearing of the packages on the bodies of body packers and the absorption of illegal substances, and to contribute to the literature.

CASE PRESENTATION

Case history and crime scene investigation

The body of a 27-year-old man was found naked, lying face down on the floor of the hotel room, and was sent to the Autopsy Centre for forensic autopsy. According to the information obtained from the research conducted before starting the autopsy; it was learned that a legal action was taken against him in another city three months ago for drug trafficking and that he did not have any history of illness in his past.

Radiological examination and autopsy findings

In the scopy taken before the autopsy, many radiopaque areas with round shapes and regular boundaries were observed in the abdomen (Figure 1). In the external examination; it was determined that there were abrasions and ecchymotic areas on the forehead, nose and lips, and blood smears inside the mouth and nostrils. In the internal examination; it was observed that the stomach was completely filled with foreign matter (possible drug substance) packed in different coloured packaging bags, the largest being 1.5 cm in diameter and the smallest being 0.8 cm in diameter. In examining the small and large intestines; foreign substances detected in the stomach were also detected in different segments of the small and large intestines, and some packages were found to be torn (Figure 2). All foreign substances detected in the digestive system were weighed as 465 g in their current packaged form. Cardiac conduction system examination was performed together with routine histopathological examinations and prominent multifocal infarct areas were observed in myocardial tissues in the left ventricle.

Toxicological examination

In the toxicological examination using the AB SCIEX 5500 QTRAP LC/MS/MS system; 776,0 ng/ml Methamphetamine, 18,4 ng/ml Amphetamine were found in blood, Methamphetamine, Amphetamine were found in urine, Methamphetamine was found in bile, Methamphetamine was found in internal organs (stomach, liver and kidney), Methamphetamine was found in stomach fragment.

Since this was an autopsy case, it was impossible to obtain consent from the case itself. Additionally, our case did not reside in our city and died while staying at a hotel

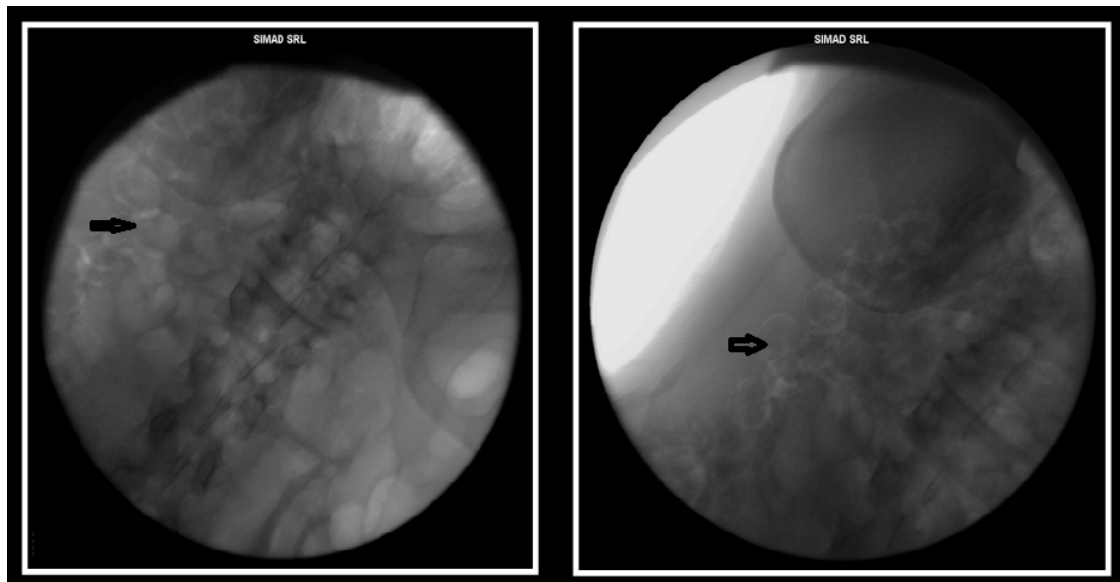


Figure 1: Numerous radiopaque areas with round shapes and regular boundaries in the scopy taken before the autopsy.



Figure 2: Colourful plastic-wrapped packages inside the stomach at autopsy.

for the day. Therefore, consent could not be obtained during the autopsy stage because the patient did not have any close relatives. The study was carried out with the approval of the Education and Scientific Research Commission of the Council of Forensic Medicine (Date: 22.02.2023, No: 21589509/2023/168).

DISCUSSION

Drug abuse is increasing day by day throughout the world and is more common in developed countries than in developing countries. Drugs maintain their regional and global importance as a major security and health problem all over the world (5). One of the complex drug trafficking methods that have been frequently preferred in recent years and that we encounter from time to time is body packers (5, 6). The probability of encountering Body Packer Syndromes in forensic practice is relatively high. For this reason, it is an issue that should be considered by forensic medicine professionals in cases of deaths that often occur without witnesses. Especially in cases where no evidence of trauma is detected, when the cause of death is determined by external examination findings without an autopsy, it is clear that the cases will be easily overlooked and the investigation will progress with difficulty. Therefore, in such cases, forensic medicine professionals should consider that the classical autopsy process should be supported by postmortem radiological examinations.

People who hide illegal substances in body cavities and pass them through checkpoints are called body packers. Illicit drug transport in body cavities was first described in 1973 and since then there has been a worldwide increase in packaged body cases (1, 7). Although the number of body packers is increasing day by day due to the constant need for quick financial gain, it is quite difficult to detect (4, 8). In our case

presentation, the case of a packaged body was incidentally detected during the autopsy we performed on the allegation of suspicious death. This detection also draws attention to the importance of standardising and implementing the autopsy process with a systematic procedure.

In cases of suspicious death, a detailed crime scene investigation and a proper autopsy must shed light on the incident (9). In our study, a detailed crime scene investigation was conducted, and all evidence was collected, photographed, and recorded. No illegal substances were found in the scene. Until the radiological imaging and autopsy, no conclusion could be made that the forensic case was a body packer. This reveals that it is quite difficult to detect body packers and that radiological imaging examinations and systematic autopsy are necessary in suspicious cases (4, 8).

Radiology is one of the most important branches of modern medicine. Post-mortem imaging has led to the establishment of a bridge between radiology and forensic medicine. Forensic radiology is a new field within the forensic sciences. Postmortem imaging methods are increasingly used in conjunction with traditional autopsy in a process called "virtual autopsy" and are viewed by researchers as a complement to autopsy. Radiological methods allow easy examination of areas that are difficult to reach and incision during autopsy (10, 11). Findings obtained through these methods can be visualised and recorded and presented to judicial bodies as evidence, becoming increasingly important. The post-mortem images obtained can be recorded and the identity of the body or the cause of death can be reached by comparing with the ante-mortem images (10-12). Body packers are very difficult to detect because they do not provide accurate anamnesis during routine law enforcement searches or health examinations and are usually clinically asymp-

omatic. Therefore, it is stated that direct abdominal radiography is a good screening tool for the evaluation of suspected body packers due to its low cost, high usability, and sensitivity between 74% and 100%. In addition, this radiological examination has a very important place in terms of evidence. Plain abdominal radiographs show, after the exclusion of nutritional contents in the stomach, small intestine, or large intestine, one or more well-defined radio-opacities (double condom sign), clear air surrounding an oval opacity, a smooth and well-shaped rectangular structure (tic-tac sign). Also, body packing should be considered when hard packages arranged parallel to each other (parallelism sign) are detected in the intestinal lumen. When direct abdominal radiographs give negative results, a low-dose abdominal CT scan is recommended if there is strong suspicion (1, 4). Before starting the autopsy for our case, radiological imaging (scopy) was performed for screening, as stated in the literature. Many radiopaque substances with round shapes and regular borders were detected in the abdomen. After this stage, an autopsy was planned with the preliminary diagnosis that the corpse was the body package carrier. Therefore, we think that it would be beneficial to routinely perform radiological imaging before forensic autopsy procedures to reach a certain preliminary diagnosis and have a more planned and systematic autopsy.

Illegal substances are often transported through the gastrointestinal tract by oral ingestion in small packages to prevent leakage. These packages are intended to be eliminated from the body through defaecation. Latex gloves, nylon bags, condoms, aluminium foil, the finger parts of surgical gloves, and balloon-like materials are often used for packaging (2, 3). With this method, approximately 1 kg of material can be transported in packages between 40 and 100 on average (8, 13). In our study, during the autopsy, a total of 465 grams of foreign matter was detected in the stomach, small and large intestines, packaged in different coloured packaging bags with a diameter of 0.8-1.5 cm. Some packages were torn. In body packers, serious poisoning and death sometimes occur because of small and large intestine obstructions, gastrointestinal perforations, rupture of the package and absorption of the illegal substance. Conservative follow-up and treatment with or without laxatives is recommended in intensive care clinics for asymptomatic patients who are found to be body packers. Endoscopic procedures are not recommended because of the possibility of perforation of the packages. Surgical removal is recommended in case of signs of toxicity, mechanical gastrointestinal obstruction, or the presence of packets in the body during long-term follow-up. Specific antidote treatment should also be applied when possible (7, 8, 13). In our case, no signs of obstruction or perforation were detected in the GIS during the autopsy, and it was determined that some packages were opened. We believe that toxic substanc-

es absorbed into the systemic circulation from packages opened during the autopsy may cause death.

Methamphetamine, an amphetamine-type stimulant of the central nervous system, is a synthetic substance produced in 1919 and can be transported by body packers. Although it is used for treating many diseases such as attention deficit hyperactivity disorder, narcolepsy, and severe obesity, the abuse of this substance has limited its clinical use (14, 15). Since methamphetamine is cheaper and easier to obtain than other illegal substances, its use worldwide is increasing day by day. Studies and United Nations reports indicate that methamphetamine use ranks second after marijuana among recreational drugs and poses a significant global health problem (15, 16). In methamphetamine overdose, tachycardia, hypertension, hyperthermia, seizures, psychosis, memory loss, hallucinations, coma, cardiopulmonary arrest, and death may occur (15-17). This case shows us, in its most concrete form, that the fatal cardiac effects of amphetamine and methamphetamine poisoning occur in line with the literature.

CONCLUSION

Drug and illegal drug trafficking is increasing day by day worldwide and has emerged as a global problem. Packages can cause blockages, perforations, especially in the gastrointestinal tract, and lethal poisoning by the absorption of their illegal content because of opening of the packages. It is very difficult to detect body packers both during routine searches by judicial law enforcement and during routine health checks. Therefore, antemortem or postmortem screening and plain abdominal radiography should be performed in all suspected cases for evidence. Whether symptomatic or asymptomatic, as soon as body packers are detected, they should be immediately admitted to health institutions with intensive care conditions and their follow-up and treatment should begin. We believe that it would be beneficial for law enforcement officers, healthcare personnel, and especially forensic medicine professionals to be trained to have detailed information about package body syndrome, which is a method of illegal substance trade.

Informed Consent: Since this study is about an autopsy case, it is impossible to obtain consent from the case itself. Additionally, the our case did not reside in our city and died while staying at a hotel for the day. Therefore, consent could not be obtained during the autopsy stage because the patient did not have any close relatives.

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