

Case Report

The case of a hanged man with weight plate hanging from his neck

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Abstract

Bound extremities and unusual objects at a hanging scene can complicate the determination of the manner of death. We report the case of a 44-year-old man found hanging at home with his hands and ankles bound and a 10-kg weight plate suspended from his neck. A four-page suicide note was recovered at the scene. Autopsy revealed neck muscle hemorrhages, a hyoid fracture, and a fracture of the fourth cervical vertebral body. Toxicological analyses were reported as negative for the substances investigated. The combined scene, autopsy, and investigative findings supported death due to hanging, with suicide as the manner of death. This case highlights the importance of evaluating bindings and additional weights in their overall context rather than treating any single unusual feature as evidence of homicide.

Keywords: Asphyxia; complicated suicide; forensic pathology; autopsy

INTRODUCTION

Hanging is a leading method of suicide in Türkiye [1]. International mortality data show substantial variation in the distribution of suicide methods between countries, with hanging accounting for a large proportion of deaths in many settings [2]. Unusual findings, including bound extremities, may complicate the assessment of an apparent hanging. However, self-applied bindings have been documented in suicidal deaths and should not, by themselves, be interpreted as evidence of homicide [3].

We report a case of hanging involving bound hands and ankles, a covered face, and a weight plate suspended from the neck. The case illustrates the need to distinguish observed findings from reconstruction and to evaluate the scene and postmortem findings together when determining the manner of death.

CASE

History and Scene Findings

The deceased was a 44-year-old unmarried male teacher who lived alone. According to his father, who had last seen him the previous day, he had recently disclosed having bank debt. When the father could not reach him by telephone the following day, he went to the residence and opened the locked door with a spare key. He found his son hanging from a natural gas pipe in the hallway, with an overturned chair nearby.

The father reported no known illnesses or medication use. Review of the available medical records through the National Judiciary Informatics System (UYAP) and its e-Nabız connection identified no documented psychiatric diagnosis or treatment.

CITATION

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A four-page suicide note was found on a table in the living room. The note expressed regret concerning cryptocurrency. Scene examination documented a climbing rope secured to the natural gas pipe with four knots. A blue T-shirt covered the face, and part of the fabric was interposed between the neck and the rope. A 10-kg weight plate was suspended from the neck (Figure 1).



Figure 1. Position of the body at the scene, showing the extremity bindings and the weight plate suspended from the neck.

The scene report recorded the pipe at a height of 240 cm above the floor. The toes were touching the floor, indicating incomplete suspension, and the overturned chair was approximately 60 cm from the body.

Autopsy Findings

The body measured 175 cm in height and weighed approximately 75–80 kg. Rigor mortis was present. Postmortem lividity was prominent distally in the upper and lower limbs, with a glove-and-stocking distribution, and was also present over the upper back.

Removal of the blue T-shirt revealed a green-and-white cloth partially inserted into the mouth, with a portion protruding

externally. A thick rope encircled the neck in four turns, with the knot below the right mandibular angle. The neck ligature mark was described as ascending and becoming shallower toward the knot. A binding of the same type of material connected the hands and extended downward to the regions above both ankles; a sliding knot was present in this arrangement.

After the ligatures were removed, marks were observed at the sites of binding. An additional ligature mark extended from the midpoint of the left clavicle toward the left side of the xiphoid process. A circular mark approximately 20 cm in diameter, situated about 10 cm above the umbilicus, corresponded to the weight plate documented in the scene photographs (Figure 2).



Figure 2. Circular mark on the upper abdomen corresponding to the weight plate documented at the scene.

Internal examination revealed petechial hemorrhages beneath the scalp and in the conjunctivae. Hemorrhage was present at the clavicular attachments of both sternocleidomastoid muscles and in the sternohyoid muscle. A fracture with associated hemorrhage involved the right horn of the hyoid bone, and hemorrhage was present in the soft tissues surrounding the left horn. A fracture of the fourth cervical vertebral body was also identified. No gross abnormality of the spinal cord was observed after the spinal canal was opened. The stomach contained undigested food. Apart from congestion and edema, no additional gross abnormalities of the internal organs were reported.

Toxicology and Medicolegal Assessment

Toxicological analyses of blood, intraocular fluid, internal organ samples, and gastric contents were reported as negative for alcohol, sedatives, narcotic drugs, and other toxic substances included in the investigation.

Examination of the bindings led the investigating team to consider self-application feasible. This assessment represented a reconstruction based on the observed arrangement rather than a directly witnessed sequence of events. The locked residence, the four-page note attributed to the deceased, the binding configuration, and the autopsy and toxicological findings

were evaluated together. The cause of death was recorded as mechanical asphyxia due to hanging, and the manner of death was determined to be suicide. The Public Prosecutor's Office subsequently issued a decision not to prosecute.

DISCUSSION

Although most hanging deaths are suicidal, homicidal and accidental hangings are documented and must remain part of the differential assessment [4,5]. Unusual scene findings should therefore prompt careful investigation without predetermining the manner of death. In the present case, the combination of bound extremities, facial covering, an intraoral cloth, and an additional weight made assessment of the entire scene particularly important.

Published cases demonstrate that extremity bindings can occur in suicidal hanging. Yılmaz et al. described a hanging with bound hands [3], while Cantürk et al. reported a case in which the wrists and ankles were linked [6]. Turla and Özkanlı [7] and Tuğcu et al. [8] also documented hanging cases with self-binding considered in the medicolegal assessment. Benomran et al. described suicidal hanging with both facial covering and hand bindings [9]. These reports provide relevant comparisons for the present case, but similarity to a published case is not sufficient to establish the manner of death in an individual investigation.

The configuration and accessibility of the bindings are more informative than their presence alone. In a comparative study of case material and experimental tying tasks, Chisnall examined multiple features, including knot type, ligature tension, wrist gaps, and access to the knots [10]. This approach supports a structured assessment rather than a categorical rule that self-applied bindings must always be loose or have one particular arrangement. In our case, the investigating team considered the binding configuration compatible with self-application. Nevertheless, the precise sequence of events could not be established from the postmortem findings alone.

Additional weights have also been described in hanging deaths. Sikary et al. reported a suicidal hanging involving hand bindings and a bag containing books [11]. Russo et al. described complete decapitation in a suicidal hanging in which the deceased was wearing a weighted rucksack [12]. These cases differ from the present case in the position of the weight and the suspension circumstances. They should therefore be used as contextual comparisons rather than as direct evidence of the mechanical effect of the neck-suspended plate in our case.

The circular mark on the upper abdomen was consistent with contact from the weight plate. The cervical vertebral fracture is also a relevant finding, but its presence does not establish that the plate caused the injury. The available description does not permit calculation of the forces involved or isolation of the plate's contribution. Likewise, the bindings and weight may have reflected deliberate preparation, but their specific purpose

cannot be established with certainty. An intention to prevent interruption of the act remains an interpretation rather than an observed fact.

The interpretation of neck injuries requires similar caution. Crudele et al. examined pathological findings in 399 autopsies, including 32 hanging deaths, and assessed their association with hanging compared with other causes of death [13]. Their work supports evaluating the diagnostic significance of individual findings critically. In our case, the neck muscle hemorrhages and hyoid fracture were considered alongside the scene evidence. Such injuries cannot independently establish a suicidal manner of death.

The absence of a recorded psychiatric diagnosis should not be equated with the absence of psychological distress. The reported debt and the contents of the note provided context, but did not establish a psychiatric diagnosis or a single definitive motive. Similarly, negative toxicological findings must be interpreted within the scope of the substances and methods used. The determination of suicide rested on the combined investigative findings rather than any one of these observations.

Limitations

This single case cannot establish the frequency or diagnostic specificity of the reported combination of findings. The sequence of self-binding was reconstructed rather than witnessed. A biomechanical analysis of the additional weight is not available in the case description. The description also does not establish the independent contribution of the intraoral cloth to airway obstruction. These limitations restrict conclusions about the individual's intent and the contribution of each feature to the fatal mechanism.

CONCLUSION

Bound extremities and an additional weight can be encountered in suicidal hanging. Their presence warrants detailed documentation and assessment of whether the configuration is compatible with self-application. In this case, the scene findings, suicide note, autopsy, toxicology, and judicial investigation collectively supported suicide. The principal forensic lesson is to integrate these sources of evidence while keeping observed findings separate from assumptions about intent or injury mechanisms.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

Ethical approval was obtained from the Scientific Research and Publication Ethics Committee of the Council of Forensic Medicine, Ministry of Justice, on March 18, 2025 (decision no. 21589509/2025/364).

Informed Consent

Written informed consent for publication of this case report was obtained from the deceased's next of kin.

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