

# Hemopneumothorax Caused by Domestic Violence Against Women

## Kadına Yönelik Aile İçi Şiddet Sonucu Ortaya Çıkan Hemopnömotoraks

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### ABSTRACT

Violence against women is not only a major clinical problem but also an important public health problem. In this case report, the case of a patient who had a penetrating tool wound as a result of domestic violence against women and who was brought to the emergency room with hemopneumothorax is described. A 24-year-old female patient was brought to the emergency room by the 112 ambulance due to a penetrating tool wound that occurred 30 minutes ago. The wounds were made with a penetrating tool on the body and left upper extremity of the patient. It was learned from the patient's relatives that the current wounds of the patient were made with a bread knife by her husband, who was about to get divorced. A hemopneumothorax was observed on the right in the thorax tomography. A thorax tube was inserted under local anesthesia in the emergency room. Cases of thoracic trauma, both resulting from violence against women and other thoracic trauma cases, must be rapidly evaluated, diagnosed, and treated at the emergency room.

**Keywords:** Hemopneumothorax, penetrating tool injury, violence against women

### ÖZ

Kadına yönelik şiddet büyük bir klinik problem olmasının yanı sıra önemli bir halk sağlığı sorunu- dur. Bu olgu sunumunda kadına yönelik aile içi şiddet sonucunda delici kesici alet yaralanması olan ve hemopnömotoraks tablosuyla acil servise getirilen bir hasta anlatılmıştır. Yirmi dört yaşındaki kadın hasta 30 dakika önce gerçekleşen delici kesici alet yaralanması nedeniyle 112 ambulansı aracılığıyla acil servise getirildi. Hastanın gövdesinde ve sol üst ekstremitesinde penetran bir aletle yapılmış yaralar vardı. Hasta yakınlarından hastanın mevcut yaralarının boşanmak üzere olduğu eşi tarafından ekmek bıçağıyla yapıldığı öğrenildi. Çekilen toraks tomografisinde sağda hemopnömotoraks izlendi. Hastaya acil serviste lokal anesteziyle toraks tüpü takıldı. Hem kadına yönelik şiddet sonucu ortaya çıkan hem de diğer toraks travması olguları acil serviste hızla değerlendirmesi, tanı ve tedavi alması gereken bir gruptur.

**Anahtar Kelimeler:** Kadına yönelik şiddet, delici kesici alet yaralanması, hemopnömotoraks

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### Introduction

Violence against women is an important public health problem and a major clinical problem. Globally, one in three women has experienced physical and/or sexual violence in their lifetime. A partner such as a lover or a spouse is mostly responsible for this violence (World Health Organization (WHO), 2021). According to the Turkey Violence Against Women Survey 2014, 38% of women are exposed to physical and/or sexual violence at some point in their lives. Women are most frequently exposed to violence by their spouses/partners (HÜNEE, 2014, p. 7-9). In addition, cases of domestic violence against women increased during the coronavirus disease 2019 pandemic (Ünal & Gülseren, 2020, p. 92; Yılmaz & Aydın Doğan, 2021, p. 46).

Violence can have physical consequences such as fractures, open wounds, burns, abdominal trauma, chest trauma, head trauma and psychological and behavioral health consequences such as alcohol and stimulant abuse, depression, anxiety, eating disorder, sleep disorder, and post-traumatic stress disorder (WHO, 2014, p. 3). Six of ten women who are victims of violence in Turkey have been injured three or more times as a result of the violence they have been exposed to, and nearly half of these injuries require medical treatment (HÜNEE, 2014, p. 22). Recognition of violence against women by

healthcare professionals is important (Durduran et al., 2021, p. 57; Kara et al., 2018, p. 116).

Pneumothorax is an air collection situation between the parietal and visceral leaves of the pleura. Although it is mostly spontaneous, it can also occur secondary to trauma. Hemothorax, on the other hand, is the blood collection situation between the leaves of the pleura, and often, there is an underlying trauma. In trauma cases, both pneumothorax and hemothorax can occur together. Although the treatment is decided according to whether the trauma is penetrating or blunt, chest tube insertion may be required in some cases (Metin, 2018; Nadir & Şahin, 2010).

In this case report, the case of a patient who had a penetrating tool wound as a result of domestic violence against women and who was brought to the emergency room with hemopneumothorax is described.

### Case Presentation

A 24-year-old female patient was brought to the emergency room by the 112 ambulance due to a penetrating tool wound that occurred 30 minutes ago. The patient's Glasgow Coma Score was 15, her general condition was moderate, she was conscious, her pulse was 112/min, and her blood pressure was 90/50 mmHg. The patient has multiple smooth-edged wounds. These were the level of the 8-9th costa 4 cm long and 7 cm deep on the right anterior axillary line, 6 cm long and 6 cm deep at the lower end of the scapula on the right mid scapular line on the back, 2 cm long and 1 cm deep on the left breast, 3 cm long and 1.5 cm wide on the left axillary region and 10 cm long on the left forearm with a depth extending to the muscle. It was learned from the patient's relatives that the current wounds of the patient were made with a bread knife by her husband, who was about to get divorced.

Although no problem was observed in the neurological, cardiac, and abdominal examinations of the patient, in the respiratory system examination, respiratory sounds were not obtained in the right hemithorax, and the right hemithorax did not participate in



**Figure 1.**  
*Hemopneumothorax Image in the Patient's Thoracic Tomography.*

respiration. The patient's laboratory values were as follows: white blood cell count: 10.85 K/ $\mu$ L, hemoglobin: 11.1 g/dL, hematocrit 34.3%, platelet count: 404 K/ $\mu$ L. Pneumothorax was detected on the right in the posteroanterior chest x-ray. A hemopneumothorax was observed on the right in the thorax tomography (Figure 1). There was no rib fracture and mediastinal shift, and the left hemithorax was normal. No abnormality was detected in the brain and abdomen tomography. A thorax tube was inserted under local anesthesia in the emergency room. Wounds were sutured and dressed. Triple antibiotic prophylaxis (cefazolin, metronidazole, and gentamicin), analgesic, and tetanus vaccine were given to the patient.

The patient was transported by 112 ambulance to a center in the presence of a thoracic surgeon. It was learned that the patient did not have any additional complaints during the follow-ups and no complications developed.

### Discussion

It is known that women are exposed to violence most frequently by their partners both in the world and in our country, and they can suffer both physical and psychological injuries as a result of violence (HÜNEE, 2014, p. 7-9; WHO, 2014, p. 3 WHO, 2021). According to the We Will Stop Femicide Platform 2020 report, 180 of the 300 women killed in 2020 were killed by their partner/ex-partner. In these murders, firearms were used most frequently followed by the use of penetrating tools (Kadın Cinayetlerini Durduracağız Platformu, 2020). In addition, the findings of a study evaluating femicides in 2017 were similar (Uyar et al., 2019, p. 76). The case presented is an example of domestic violence against women in accordance with the literature and was subjected to physical violence by her husband with a penetrating tool. The main reason for the situation in the literature is gender inequality (WHO, 2021). In the study conducted by Caliskan and Cevik (2018) with the data of domestic violence against women in Turkey 2008, a relationship was found between physical violence and variables such as increase in the number of children, bad health, suicidal ideation, suicide attempt, marriage without consent, alcohol use by man, and social insecurity of man (Caliskan & Cevik, 2018, p. 228). In the study by Şahin and Yıldırım (2019), it was found that the frequency of physical violence increased in women with low wealth and low education levels compared to high wealth and high education levels (Şahin & Yıldırım, 2019, p. 138).

Thoracic traumas, which are frequently seen in the community, are situations that require urgent and close follow-up, as they can result in death and complications may occur in the process (Kandiş et al., 2009, p. 20). Penetrating thoracic traumas are observed as a result of firearms or penetrating tool wounds (Kaplan et al., 1999). Studies have shown that hemopneumothorax is the most common clinical form after thoracic trauma (Erdik et al., 2007, p. 59). It is possible to treat stab wounds and low-velocity gunshot wounds with tube thoracostomy without the need for surgery, especially in hemodynamically stable patients (Marsico et al., 2008, p. 241). The case we present had hemopneumothorax resulting from a stab wound, and the treatment was done with a tube thoracostomy.

### Conclusion and Recommendations

Unlike many other case reports, this case report does not deal with a case that is rare or treated differently but rather a situation that is frequently encountered in society and hospitals. Although

this is considered a superior aspect and an advantage by us, it is a limitation for some.

Violence against women continues to be an important problem worldwide and in our country. Physical violence can have serious consequences such as life-threatening hemopneumothorax. Cases of thoracic trauma, both resulting from violence against women and other thoracic trauma cases, must be rapidly evaluated, diagnosed, and treated at the emergency room.

**Informed Consent:** Consent was got from the patient that the clinical and social features of the event would be used in a scientific research without revealing her true identity.

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