



## An important topic in medical education: Multidisciplinary approach to a sexual assault case in the emergency clinic

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### ABSTRACT

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Alcohol related sexual violence is an important public health problem. However, there is a few research conducted on this problem in Turkey. The purpose of this case report is to compose a scientific approach in the view of literature. We report an alcohol related sexual assault case for presenting adequate approach to these cases according to current guidelines. The victim was 17 years old female adolescent diagnosed and treated in the emergency service. The patient was hospitalized in the Child and Adolescent Psychiatry Service after emergency treatment in the Pediatric Emergency Medicine and Intensive Care Unit. A review and discussion of alcohol related sexual assault case is presented, and also multidisciplinary diagnosis and treatment approach is offered for this entity. The blood alcohol level of the patient was 410 mg/dL, Glasgow coma scale (GCS) was seven and body temperature was 35°C in the emergency service. Whole body examination findings revealed physical assault and also genital examination findings confirmed sexual assault. It should be remembered that delay in diagnosis and treatment of cases may lead to significant health problems in the victims of sexual assault. Also assessing sexual assault cases, especially in emergency services needs to integrate assessments of different social and medical disciplines. Thus, latest guidelines for the evaluation of sexual abuse of children in emergency services must be learned by medical students and physicians.

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### 1. Introduction

Rape is defined as engaging vaginal, anal or oral sexual intercourse acquired through force without a person's consent or in situations where that person is unable to give consent (for reasons of mental disease, intoxication, age, etc.) (Abbey, 2002). Studies in the literature show a correlation between cases of sexual assault and alcohol use, a positive correlation between sexual assault and alcohol use by the aggressor, victim or both (Abbey et al., 1996; Ullman et al., 1999; Abbey, 2002). In one study of 391 cases subjected to sexual

assault in Great Britain, 81% of victims were reported to have taken alcohol, and 60% had blood alcohol levels above 150 mg/dL during the incident (Scottham and Burton, 2006). Additionally, the aggressor having an irascible character and using alcohol has been determined to increase the degree of the victim's physical injuries (Ullman and Brecklin, 2000). The purpose of this study is to describe the adequate medical approach steps in a case attending the emergency department with suspected sexual assault and to discuss importance of topic in medical education.

## 2. Case

A 17 years old female patient had been found in an unconscious state in an empty area and brought to pediatric emergency department. In physical examination: general condition was poor; she was unconscious, exhibited involuntary retching and Glasgow Coma Scale (GCS) score was 6-7. Blood pressure was 80/50 mmHg, heart rate was 78/min and body temperature was 35°C (hypothermia). The appropriate first emergency interventions were performed, and heat was applied to the trunk for warming. Laboratory tests showed a blood alcohol level of 410 mg/dL. The child psychiatry, pediatric surgery, gynecology and forensic medicine departments were consulted. Blood samples, vaginal and anal smear specimens were sent to the judicial authorities in line with procedures for the appropriate investigations. At consultation in the emergency department with the child psychiatry department on the day of presentation, no psychological examination could be performed as the patient was still unconscious. At forensic medicine consultation which held in the pediatric emergency department, the patient was conscious, but not oriented and cooperated. Examination revealed superficial, red skin abrasions measuring 3x0.1 cm, 4x0.1 cm and 2x0.1 cm beneath the umbilicus on the right side of the abdomen, a superficial red skin abrasion measuring 3x0.2 cm 10 cm beneath the umbilicus on the middle of abdomen, a 3x1 cm red skin abrasion 3 cm beneath the left iliac crest bone, purple ecchymosis approximately 4x15 cm in size on the back region near the inferior part of the left rib cage and two superficial skin abrasions 1 cm in diameter to the right and left of the midline in the vaginal region. No significant pathology was determined at anal examination. Since the patient was unconscious and in a recumbent position, not moving voluntarily and hypothermic, and since emergency medical interventions were still being performed, the internal genital region could not be accurately assessed. Gynecological and obstetric examination was therefore advised. Two vaginal and one anal smear specimens were provided for the emergency clinic. No intra-oral smear specimen could be collected as the patient was vomiting and a breathing tube was attached to the mouth. Examination at the gynecology and obstetric department revealed an annular-type hymen. Two new abrasions were identified, one extending to the floor in a 7 o'clock direction and one not extending to the floor in a 5 o'clock direction. The pediatric surgery department report described that a 15x4 cm ecchymosed area on the left side of the lumbar region and a 3 cm skin abrasion on the left of the pelvis. No ecchymosis or hematoma was observed at anal examination. No findings suggestive of fissure or abrasion were determined in the four quadrants, sphincter tonus could not be clearly assessed at rectal palpation, and the patient was transferred to the pediatric intensive care unit for maintenance of existing treatment. O<sub>2</sub> blood saturation was between 92% and 96%. The pupils were mydriatic, the extremities were cold, spontaneous respiration was present (20/min) and no deep tendon reflexes were elicited. The pediatric intensive care report dated the following day stated that she had been transferred to the pediatric intensive care with pre-diagnosis of alcohol intoxication and sexual abuse, that a toxicologist had been contacted and his advice sought, that the patient's blood pressure had fallen and she had been loaded with saline solution one time, that blood alcohol level measured in the evening was 332 mg/dL, that her GCS rose

under observation, that the blood alcohol level decreased to 65 mg/dL, that at 24-h observation vital signs were stable, she was conscious and her general condition had improved.

She was recommended to be transferred to the general pediatric unit and from there to the child psychiatry department for psychiatric monitoring and assessment. History taken by a doctor from forensic medicine specialist accompanied by a child psychiatry department revealed that she had gone for a walk with a male friend studying at the same high school, that the friend forced her to drink alcohol, that she did not fully recall the course of events and that menstrual bleeding has taken place on the day of the incident, that the patient also stated that the pain in the back region still persisted, and pulmonary imaging revealed normal thoracic bone structures and surrounding soft tissues. The patient was examined after a year to determine the effects of the incident on the victim's mental and physical health, no sexually transmitted disease was found. Inspections and control examinations of the case was performed in a child and adolescent psychiatry clinic and necessary treatment approach was implemented.

## 3. Discussion

High concentrations of blood alcohol have been reported to lead to vomiting, disorientation and memory loss (Knight, 1997). Alcohol is also known to compromise individuals' decision making ability and adversely affect the capacity to decide on any course of action (Finch and Munro, 2003). In high doses it can lead to loss of memory and consciousness (Scottham and Burton, 2006). During sexual assault, these states will clearly compromise the individual's ability to resist and make self-defense impossible. Our patient was a high school student. We encountered no studies regarding the prevalence of sexual assault at secondary school and university years in Turkey. Studies performed abroad, particularly among college students, have reported that incidents of sexual assault are frequently encountered and can have a severe impact on victims' health (Abbey, 1991; Abbey et al., 1996). Careful investigation of the causes of sexual assault and the development of preventive public health programs aimed at the causes can prevent such incidents and/or reduce their negative impacts on health. Additionally, we think that it will be useful to train doctors and assistant health personnel in emergency departments in Turkey on the subject of an up-to-date standard algorithmic approach to the identification and treatment of individuals injured as a result of sexual assault.

Sexual assault victim frequently apply to hospital emergency departments and are always medicolegal in character. Appropriate diagnostic and therapeutic approaches will save a patient's life. With an appropriate forensic medical approach, medical evidence can be obtained, the guilty party or parties can be identified, and the legally appropriate sentence can be handed down. With the identification and treatment of sexually transmitted infectious diseases, the health of the individual can be protected and serious infections (such as hepatitis B, HIV etc.) that might affect results of forensic evaluation can be identified. Psychiatric treatment, rehabilitation and evaluation by social services will guarantee that the patient can continue living a healthy life. To provide adequate treatment, multi-dimensional medicolegal approach must be educated before graduation in medical school.

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