



Case Report

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Clinical Forensic Examination on Mass Violence's Victim With Head and Ocular Injury (A Case Report)

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ABSTRACT

**Introduction:** Clinical forensic medicine is a branch of medicine that applies medicine to uphold justice in the case of living victims. In accordance with this understanding, the handling of cases of living victims, especially victims of crime, must involve doctors in the field of forensics, in addition to doctors in other fields according to their competence. With so many cases of violent crime, a doctor must be able to provide a report on the results of the examination to the legal apparatus to assist in the judicial process. **Case:** A man, aged 44 years, found bruises on right eyelid, left eye, left cheek, left and right scalp; blisters on the left and right eye membranes; a cut wound on the right eye membrane and the left eyelid; bleeding under the thick membrane of the brain and swelling of the brain. **Discussion:** Injuries can occur as a result of violence perpetrated by criminal offenses, such as cases of theft by violence, murder, traffic accidents or ill-treatment. The doctor must be able to mention that the wound examined is caused by sharp violence, blunt force, electrical trauma, thermal trauma, chemical trauma, or other causes of trauma. Determination of the magnitude of the effect of injury to the victim, related to criminal sanctions that will be imposed on the perpetrators of criminal acts. The head is an organ that is often the target of violent blunt crimes. The brain and the surrounding layers are easily susceptible to trauma, resulting in death compared to other body parts. The wound is in accordance with Criminal Code article 90 concerning serious injuries, which results in injuries that do not give any hope of healing at all.

**Introduction**

Clinical forensic medicine is a branch of medicine that applies medicine to uphold justice in the case of living victims (Kusuma, 2012). In accordance with this understanding, the handling of cases of living victims, especially victims of crime, must involve doctors in the field of forensics, in addition to doctors in other fields according to their competence. In handling casualties who are victims of

criminal acts, doctors can have two positions, namely medically and legally physician, between doctor and victim is a therapeutic relationship, which must fulfill the doctor-patient's rights and obligations. Handling of victims or patients to provide medical measures. Doctors in carrying out their duties are bound by professional ethics and carrying out their duties must be in accordance with professional standards and operational procedure standards. The documents produced were in the form of

medical documents. Whereas legally the relationship between the doctor and the victim is a request from law enforcement officers in law enforcement efforts of a case. Doctors in checking must get an official request letter from law enforcement agencies. The results of the examination in the form of a report that will be used by law enforcement agencies in the judicial process. The documents produced are in the form of legal documents namely medical report. According to the WHO UNDP report in 2014, more than 1.3 million people worldwide die each year from violence (whether against oneself, between individuals, or between groups), accounting for 2.5% of the global death rate. For people aged 15-44 years, violence is the fourth leading cause of death worldwide. In addition, tens of thousands of people around the world are victims of non-fatal violence every day. Including physical injuries due to self-defense that requires treatment in the hospital emergency department (UNDP, 2014). With so many cases of violent crime, a doctor must be able to provide a report on the results of the examination to the legal officer to assist in the judicial process. In this article, the management of case of torture by violence to the head and eyeball will be explained.

### Case Report

A man, aged 44 years, had been beaten at his workplace at a billiard place by several unknown person. The victim arrived at General Hospital Dr. Soetomo Surabaya was brought by the police with wounds on the entire face and chest pain. According to the request legal form that we received from Police said that victim

suffered serious injuries that were allegedly due to being beaten or tortured.

On examination found bruises on right eyelid, left eye, left cheek, left and right scalp; blisters on the left and right eye membranes; a cut wound on the right eye membrane and the left eyelid; bleeding under the thick membrane of the brain and



swelling of the brain. Those injuries are due to blunt force injury. The wound resulted in a wound that did not give any hope of healing (severe injury).

**Figure 1.** CT-scan result

### Discussion

Injuries can occur as a result of violence perpetrated by criminal offenses, such as cases of theft by violence, murder, traffic accidents or ill-treatment. In dealing with injuries caused by criminal acts, investigators may request the assistance of a doctor in accordance with article 133 paragraph (1) of the Criminal Procedure Code (Laksana, 2014). In examinations by experts, in the case of doctors, whether

forensic doctors, general practitioners or other expert doctors, are carried out keeping in mind the oath that requires him to carry out the examination to the authorities at the level of investigation and at the trial level, the assistance contains the correct information actually according to the best of knowledge (Kusuma, 2012). The qualification of the injury that must be determined by the doctor, includes the source of the trauma that caused the injury and how much effect the wound has on the condition of the cob. The doctor must be able to mention that the wound examined is caused by sharp violence, blunt force, electrical trauma, thermal trauma, chemical trauma, or other causes of trauma. Determination of the magnitude of the effect of injury to the victim, related to criminal sanctions that will be imposed on the perpetrators of criminal acts. In the Criminal Code there are three types of qualifications due to acts of torture, namely: a. ill-treatment that does not cause illness or interference in carrying out the work, position or livelihood mentioned in article 352 (minor maltreatment), b. maltreatment which causes illness and interference in carrying out the work of occupation and livelihood mentioned in article 351 paragraph (1) (persecution), c. the torture which caused serious injuries mentioned in article 351 paragraph (2) and article 90. In article 90 of the Criminal Code, serious injuries: a. getting sick or getting a wound that doesn't give any hope of being healed at all or that poses a danger of death, b. incapable of continuing to carry out job duties or work for a living, c. lost one of the five senses, d. got severely handicapped, e. suffer from paralysis, f. thought disturbed for 4 more weeks, g. death or death of a woman's womb (Laksana, 2014). In dealing with injured

victims due to criminal acts, doctors are bound by regulations governing the obligations of doctors to patients. Doctors have the obligation to provide medical services in accordance with professional standards and operational procedure standards and medical needs of patients, as stipulated in Law number 29 of 2004 concerning medical practice, article 51 letter a (Lembaran Negara, 2004).

The head is an organ that is often the target of violent blunt crimes. The brain and the surrounding layers are easily susceptible to trauma, resulting in death compared to other body parts. Blunt hardness on the head can affect three components, namely the scalp (scalp), skull and brain. Bruises on the scalp easily appear as a protrusion and are easy to feel, because blood cannot spread inside because there are skull bones. Examination of the laceration on the scalp must be thorough, example the presence of abrasions or bruises around it, accompanied by a bridge of tissue. The head bone consists of 8 flat bones whose thickness is not the same, one and the other connected with a suture line. The skull bone structure is not rigid, and has the ability to flex between bones, if there is a force about it. If there is a force about it that is outside the limits of the bone's ability to flex, a skull fracture occurs. So that if a skull fracture occurs, this indicates the existence of a large force on the head. This explains that severe brain injury can occur without a skull fracture (Knight, 2016).

Intracranial hemorrhage is a significant cause of death in head trauma. Bleeding inside the closed head cavity can compress the brain (herniation), and cause increased intracranial pressure. Increased intracranial pressure will cause a decrease in blood

flow to the brain, and if intracranial pressure equals arterial pressure, then blood flow to the brain will stop. The meningeal artery runs on gaps in the internal tabula and outside the dura mater. In general, it can protect blood vessel tears if there is spontaneous movement in the head. But these arteries can rupture if a skull fracture occurs, and cause epidural bleeding. Frequent ruptured blood vessels namely the media meningeal arteries that run on the temporal bone. Blood vessels that travel between the dura mater connect blood vessels between the sinus blood vessels and cortex blood vessels. These blood vessels will not be damaged by a fracture of the head, but can be torn if there is a difference in motion between the brain and the head bone, which causes subdural bleeding. The two hemorrhages, epidural and subdural, have the same effect that can suppress the brain, and in serious cases herniation of cerebral tentorium can occur (DiMaio, 2001).

Narrowing subarachnoid hemorrhage often occurs in brain injuries, both violence that causes skull fractures, as well as brain movements that affect the surface in the head cavity, namely acceleration and deceleration trauma. Direct trauma to the brain, such as depress or comminuted fractures, can result in bruising or laceration of the cerebral cortex, and is often associated with extensive bleeding. In trauma that does not cause penetration or bleeding, brain injury can occur due to rotation or deceleration, which causes tears in the membranes and brain due to differences in motion and speed. It can cause cerebral contusions and deeper cerebral laceration (Knight, 2016). Management of head injuries can be carried out operatively or non-operatively, this is accompanied by close observation

of the patient's vital signs and awareness (Tim Neurotrauma, 2014).

Oculi trauma is one of the main causes of vision problems and blindness in one eye that can be prevented. Oculi trauma can be divided into sharp trauma, blunt trauma, chemical trauma, thermal trauma, physical trauma, extra ocular foreign body, and penetrating trauma based on the mechanism of trauma. Oculi trauma can occur in various places, in the household, at work, or on the highway. The prevalence of oculi trauma in the United States is 2.4 million per year and at least half a million of them cause blindness. In the world, there are approximately 1.6 million people who experience blindness, 2.3 million have decreased bilateral visual function, and 19 million have decreased unilateral visual function due to trauma to the oculi. Based on sex, several studies using hospital baseline data and population data, show that men have a higher prevalence (Djelantik, 2010).

Complications caused by trauma to the eye can include all parts of the eye, namely complications of the eyelid, eyeball surface, anterior ocular camera, vitreous, and retina. The types of trauma involving the orbit or intra-ocular structures can be caused by sharp objects, blunt objects, physical trauma, or chemical trauma. The type and extent of damage due to trauma to the eye depends on the mechanism and the strength of the trauma that occurs. A trauma that penetrates intra oculi both large objects and small objects will cause greater damage than trauma due to collisions. Early treatment of trauma oculi appropriately can prevent blindness and decreased visual function. Comprehensive treatment of trauma to the oculi in less than 6 hours can produce better results. But unfortunately, eye health services that

are still rare and incomplete often cause delays in handling oculi trauma, in addition to lack of knowledge and economic problems. This type of trauma is closely related to the type of complications that occur. Sharp trauma can cause more complications than other trauma and can affect multiple organisms, while blunt trauma can cause more severe complications, such as vitreous bleeding, retrobulbar hemorrhage, orbital fracture, to blow out fracture. In general, the more posterior the penetration and the greater the laceration or rupture, the worse the prognosis (Kuhn, 2008).

Initial examination in this case found complaints of sores on the face and chest pain. Neurological examination cannot be evaluated because the eye response is difficult to evaluate, lateralization signs in the pupil are also difficult to evaluate, but the patient's awareness is good. After additional examinations, bleeding was found under the thick membrane of the brain, rupture of the right eye sclera and laceration of the left eye palpebra. In bleeding under the thick membrane of the brain given conservative measures with an indication of the minimum amount of bleeding and no neurological abnormalities found in patients followed by observation and evaluation of vital signs and awareness. In scleral ruptured eye trauma, operative measures are performed, namely eyeball exploration and sclera laceration sewing. For recovery, patients need special care if complications occur and routine control for evaluation of visual function because it can result in blindness. The wound is in accordance with Criminal Code article 90 concerning serious injuries, which results in injuries that do not give any hope of healing at all.

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