

NEONATICIDE – LIGATURE STRANGULATION OF A NEWBORN

Biliana Mileva*, Teodora Kiryakova, Dimitar Nikolov, Alexandar Alexandrov

Department of Forensic medicine and deontology, Medical Faculty, Medical University-Sofia

**Corresponding author:*

Medical University, Sofia-1431, Bulgaria

Department of Forensic Medicine and Deontology, Sofia, Bulgaria

1 Georgi Sofiiski blvd.

Tel: +359878456219

Fax: +35929230412

E-mail: bibs_15@abv.bg

ABSTRACT:

Introduction: Child murder dates back to the beginning of recorded history as children were intentionally killed or left to die for different reasons. It can be divided to three main groups – neonaticide, filicide or infanticide, depending on the age of the child and the perpetrator of the crime. Neonaticide refers to the homicide of a newborn within the first 24 hours after birth committed by the biological mother. **Material and methods:** Full forensic examination of the cadaver including external and internal examination was performed. The tests of Galen and Breslau were performed. Material for DNA-analysis was taken from the baby to compare with a suspected mother. **Case presentation:** A cadaver of a naked male baby was found in a trashcan. The cadaver was sent for autopsy in the Department of Forensic medicine and deontology in Sofia. The baby was born alive, mature and without any congenital malformations. The autopsy revealed the classical picture of ligature strangulation. **Discussion and Conclusion:** Women who commit neonaticide generally have made no plans for the birth or care of their child, as they often conceal the pregnancy throughout gestation from both family and friends. Therefore collaboration between different medical units and centers for psychosocial support is needed to find women at risk and to give them the needed help. Parents must be thoroughly educated about the extreme stress of the process of giving birth, and the further growth and development of the child.

Key words: Neonaticide, ligature strangulation, newborn, forensic examination

INTRODUCTION:

Child homicide dates back to the beginning of recorded history [1]. Infants born with physical abnormalities were viewed as punishment and an inappropriate drain on scarce resources. These children were routinely sacrificed - often intentionally killed or left to die [2]. Still the murder of a child today is considered to be an unfathomable act, especially committed by its own parents. The term neonaticide is used when the child is killed, by its mother, within the first 24 hours of life. After that, the terms used by authors are filicide when the murderers are the child's parents, and infanticide when they are other family members or strangers [3-8]. It was not until 1927, when it was understood that child-birth and lactation entail a severe stress on women and under certain circumstances, it was believed to cause a specific psychological state of insanity, during the course of which attempts of neonaticide and suicide were common [9]. Therefore, judges and juries give less severe sentences in such cases because it is presumed that the mother might be in a specific psychotic state right after giving birth [10]. Modern reasons for the murder of one's own child include the inability of the mother to take care for the child, illegitimacy, the manipulation of family size or composition, fear or denial. In the majority of the observed cases the mother is single and

very young [6, 11-13]. Also, birth is given without any kind of medical assistance due to the fact that the pregnancy was kept a secret from relatives and friends [14, 15]. Results from scientific researches show that in approximately 2/3 of the cases the murder of the child was active due to mechanical asphyxia (manual strangulation, suffocation, blockage of the airways by foreign bodies, ligature strangulation, drowning) and blunt trauma [16- 22], whereas in one third of them it was passive as a result of abandonment or lack of care [23]. In most of the observed cases the cadavers were found in city dumps, thrown or buried in green areas, found on street, in toilets, basements, manholes or constructions. In cases of neonaticide the proof of life birth is extremely important for the forensic examination and conclusion. The results from DNA-analysis are useful for establishing the biological parents of the victim in cases where the mother is suspected or unknown [24, 25]

MATERIALS AND METHODS:

The cause and manner of death were established by autopsy – full forensic examination of the cadaver including external and internal examination were performed. During the autopsy material for DNA-analysis was taken for future comparison with suspected women.

CASE PRESENTATION:

A cadaver of a naked male baby was found in a trashcan. The cadaver was sent for autopsy in the Department of Forensic medicine and deontology in Sofia. The examination of the body showed that the baby weighted 3600 grams and had a height of 53 cm, with a head diameter of 35 cm and the following dimensions: front-occipital diameter -13 cm, biparietal-10 cm, mento-occipital-12 cm, biacrmial-13.5 cm, bitrochanteric – 12sm. It was full-term and mature, without any external malformations.

A double sliding noose of a white colored belt, about 2 centimeters wide, drenched with blood, was observed around the neck. The loop was fixed with an "ordinary" knot on the left side of the neck. After removing the noose, along the entire circumflex of the neck, two parallel and horizontal strips of compression were present, corresponding to the course and direction of the belt. The furrows were 2 cm wide (in total 4 cm) at the front and right side of the neck, and on the left immediately after the fixation node, it was divided into two separate strips of 2 cm of mechanical compression, 1 cm apart from each other. The furrows then gradually narrowed to their full approximation, thus forming a section of uncompressed skin with a triangular shape with a base facing the knot. Along the central section located between the two striping furrows the epidermis is raised (pinched) and bruised (Figg. 1, 2, 4). The skin along the course of the furrow was slightly thick with a pale pinkish yellowish color. The depth of the furrows was from 1-2mm to 3-4mm. There were spot-like hemorrhages under the conjunctives of both eyes (Figure 3).



Figure1: Newborn with a soft belt around the neck



Figure 2: Strangulation mark with two furrows and small hemorrhages in-between them



Figure 3: Spot-like subconjunctival hemorrhages



Figure 4: Newborn – torn and bruised umbilical cord attached to the placenta

The abdomen of the cadaver was below the chest level, with blood and meconium stains (more pronounced meconium spotting in the inguinal areas), with an umbilical cord extending out of the umbilicus with a length of 98 cm, the latter attached to the placenta. The umbilical cord was continuous, healthy, juicy, with a glossy surface and whitish pink color, with no pathological changes. The placenta was oval in size 20 / 22cm with a dark red brownish color about 2-2.5cm thick. Congenital malformations were not found during the external and internal examination of the body. There were spot-like hemorrhages under the epicardium and in the subpleural area of the lungs. The lungs were expanded, filled almost entirely the pleural cavity, the medial edges overlapped the mediastinum and part of the pericardium. Their color was light rose, with mottled, doughy irregular surface. On slicing spontaneously, a reddish foamy liquid was present. Both Galen's (hydrostatic pulmonary docimasy) and Breslau's tests (Hydrostatic gastrointestinal docimasy) were positive. Galen's test showed that the entire cervical complex as well as both lungs and their individual parts were floating. Breslau's test detected air in the stomach and in the initial part of the small intestine (the first 15-16 cm of its length). In addition, ossification centers were present in the distal end of the femur (Beclard center), the proximal epiphysis of the tibia (Tapon center) and the calcaneus. There was no data about the mother. DNA samples were taken from the cadaver for possible future identification of the biological mother.

DISCUSSION AND CONCLUSION:

The forensic examination of the body showed that the baby was born alive, full-term, and mature. The umbilical cord was not properly cut, which also indicates the intension of the mother not to take care of the baby. There were no physical abnormalities or congenital malformations of the child. The cause of death was concluded to be due to mechanical asphyxia by ligature strangulation of the newborn, which was demonstrated morphologically by the specific findings in the area of the neck. According to the morphological findings death occurred 15-20 minutes after birth and the post mortem changes showed that birth was approximately 12-24 hours before the autopsy.

Child murder was and still is a phenomenon that deserves a high level of professional attention to further identification of the risks. As most of the women who commit neonaticide are denying or concealing their pregnancy since conception, on time diagnosis of hidden and neglected pregnancies is extremely important for preventing it. Respectively, it is important to

identify the risk factors and signs of potential psychotic states in pregnant women. The collaboration between medical specialist and non-medical professionals encountering high-risk women is crucial as well. Parents must be thoroughly educated about the extreme stress of the process of giving birth, and the further growth and development of the child.

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