



### H114 A Frozen Newborn: A Multidisciplinary Approach in a Case of Infanticide

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The goal of this presentation is to introduce a multidisciplinary approach to a complex case of a newborn infant found deceased in a house freezer. In order to assist the judicial authorities and police inquiries in classifying a crime, radiologists, gynecologists, and forensic pathologists need to be involved. In these cases, the role of the medicolegal team was pivotal in clarifying the newborn's cause and time of death, separate existence, and viability. According to Italian law, infanticide is a crime committed by a mother against her own infant child "immediately after or during delivery," who has suffered "conditions of abandonment connected to childbirth."<sup>1</sup>

Little is written in the literature regarding how to handle this type of forensic case; therefore, this presentation will impact the forensic science community by providing a methodical approach to this medicolegal issue.

A 40-year-old woman, *gravid* 5, *para* 5, was admitted to the emergency department with headache, asthenia, and metrorrhagia. On admission, the patient was conscious and alert, but soon after became confused and disoriented, complaining of loss of sensation in both legs. At the evaluation, she was hemodynamically unstable, with a significant drop in her hemoglobin level (Hb 3.7g/dl); an abdominopelvic Computed Tomography (CT) scan with angiography detected an enlarged uterus (25cm) with thick myometrium and the presence of mixed-density fluid and gas within the endometrial cavity. She was immediately taken to the operating room for an instrumental revision of the uterine cavity. The placenta was spontaneously delivered and macroscopic features revealed that it was full-term. According to hospital records, the previous delivery, which occurred at home in the bathroom, was unexpected, resulting from an unknown pregnancy. Nothing else was reported from her recent gynecological and obstetrical history.

Subsequently, the police, assisted by the medicolegal team, searched the woman's house for the missing newborn. The crime scene investigation revealed the home was full of clutter and garbage, with many household pets and mice. After two days of intensive searching, a newborn infant was found in a hidden freezer. The infant was stacked in the freezer with several frozen foods, wrapped in a wool sweater, and enclosed in two plastic bags. The body was naked and in the fetal position, and sex could not be determined in the frozen state as the genitalia were hidden by the legs.

A multidisciplinary forensic approach included a CT scan and genetic and toxicological analyses; an autopsy was then performed. The histological and immunohistochemical examination of specimens from the newborn, the placenta, and the umbilical cord were helpful for the postmortem investigation.

The CT scan demonstrated the anthropometric parameters were appropriate for the gestational age of a full-term infant. Furthermore, it revealed air in subsegmental regions of the lungs, as well as in the stomach. No fractures were detected.

The body was thawed at the time of the autopsy, seven days after being found. The external examination verified a newborn female infant, full-term at the time of death. The umbilical cord was still anchored to the abdominal wall and lacerated at its distal part. There were no injuries on the skin or signs of suspected asphyxia. The autopsy also revealed a subgaleal hematoma over the right temporal-parietal scalp, and no apparent subdural or subarachnoid hemorrhages. No cardiac malformations were found. When the lungs and the clipped stomach were placed on water, they floated. All findings demonstrate that the newborn infant was born alive. Further investigation revealed characteristics of a dysfunctional family and led to the intervention of protective services.

#### Reference(s):

1. Italian Law no. 442, art. 2, 5<sup>th</sup> of August 1981. *Gazzetta Ufficiale*. 10 August 1981; 218:5224-5225.

#### Infanticide, Frozen Newborn, Histopathology