

MEDICO-LEGAL

Infanticide

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THE deliberate killing of a newborn infant by any person usually constitutes the crime of murder. Recognition of the fact that, in some cases, pregnancy, parturition, and lactation were accompanied by mental disturbance which might lead to the killing of the newborn child by a mother so affected led to the passing in England, in 1922, of an "Infanticide Act" which classified the crime in such cases as "infanticide" rather than as murder. The wording of this act was not sufficiently clear, and the age limits of the "newborn" child were not set out. The 1922 Infanticide Act was replaced by the Infanticide Act of 1938, which provided that: "Where a woman, by any wilful act or omission, causes the death of her child, being a child under the age of 12 months, but, at the time of the act or omission, by reason of her not having fully recovered from the effect of giving birth to the child, or by reason of the effect of lactation, then, notwithstanding that, but for this Act, the offense would have amounted to murder, she shall be guilty of felony, to wit, of infanticide, and may, for such offense, be dealt with and punished as if she had been guilty of the offense of manslaughter of the child." In Canada, similar legislation was placed on the statute books, about the same time, whereby, under the circumstances outlined above, the charge of infanticide replaces that of murder.

To support a charge of infanticide, it is necessary to establish that the mother, at the time, was suffering from *mental disturbance*, related to her pregnancy; that the child was *viable*; that the child had had a *separate existence*; the cause of death; that the cause of death was the result of some act or some omission on the part of the mother.

The attending physician, the psychiatrist, and the forensic pathologist, play important and, at times, indispensable parts in the provision of the necessary evidence.

THE PSYCHIATRIC ASPECT

The psychiatric aspect of such a case is a matter for the attending or family physician, if there be one, and for the specialist in psychiatry, not for the forensic pathologist. Mental disturbances during pregnancy, at the time of delivery, or in the early period of lactation have long been recognized. These conditions tend to aggravate any pre-existing psychopathic state, even in the case of married women. In the case of the unmarried

mother, mental and emotional stress is an added factor. About one-half of the cases of mental disturbance associated with pregnancy occur around the time of delivery and about one-third are related to lactation. While the killing of a newborn infant by a mother, who is of sound mind at the time, constitutes murder, yet, if it be established that she suffered from mental disturbance related to her pregnancy, she is, according to the Act, "guilty of a felony, to wit, infanticide—as if she had been guilty of manslaughter of the child".

VIABILITY OF THE INFANT

The viability of the child is a matter of extreme importance. Normally, the full term of pregnancy is 40 weeks or 280 days. There is, of course, some degree of variation in the length of this period, since the exact time of conception is difficult to determine in any given case. The full-term infant is capable of normal life and development. The infant born before it has reached a fetal age of seven lunar months, or 28 weeks, has, ordinarily, no chance of survival, and is therefore not viable in the eyes of the law. When it has reached or passed the full fetal age of 28 weeks, it has, under favourable conditions, a chance of survival. Viability is thus based on a stage of development normally reached at, or after, 28 weeks of fetal life.

The determination of viability, in the case of the deceased newborn infant, is a matter for the forensic pathologist and his careful autopsy. He is familiar with the criteria of the various stages of development of the embryo and fetus, from conception to full term. The fetal age can be estimated by a study of the crown-to-heel length of the body, its weight, and of the presence, in certain of the cartilaginous structures, of centres of ossification. At 28 weeks, the body length of the fetus is 35 cm. (14 in.). Its weight is close to 3¼ lb. If it shows a centre of ossification in the astragalus, it is judged to be viable. If this centre of ossification has not yet appeared, it is judged to be not viable. However, even if these criteria indicate a fetal age of more than 28 weeks, anatomical defects or anomalies may render it not viable.

SEPARATE EXISTENCE OF THE INFANT

The determination of separate existence is again a matter for the forensic pathologist and his autopsy. If he has the body of the fetus in a relatively fresh condition, he will be faced with the problem of deciding whether he has a case of stillbirth or

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whether there has been a separate existence. In the case of stillbirth, where intrauterine death has taken place, the body may show evidence of maceration. The presence of maceration rules out all possibility of separate existence. If there is no maceration, evidence of live birth and of separate existence must be sought. Of course, advanced postmortem degeneration may obscure much or all anatomical evidence. Evidence of separate existence depends mainly upon careful examination of the lungs, the digestive tract, and the umbilical cord.

The lungs.—When a newborn infant breathes and cries, it expands its hitherto airless lungs, fills them with air, and starts the circulation of blood through them. This more than doubles their weight and changes their colour. Before aeration, they sink in water; after aeration, they float. Microscopic examination of the lungs will give evidence as to whether the lung expansion is due to breathing or to the formation of gases from advancing post-mortem change.

The digestive tract.—The presence of food in the stomach, duodenum or intestine of the newborn infant is, in itself, evidence of separate existence. In the stomach or duodenum the presence of air, which may have been swallowed during early breathing or feeding efforts, is strongly suggestive of separate existence.

The umbilical cord.—The condition of the umbilical cord may furnish evidence of separate existence. The veins of the cord begin to thrombose within three or four hours after birth. The cord itself begins to dry at its base within 24 hours. In six or seven days, it is ready to separate from the umbilicus. The stage at which these changes are found gives the pathologist an indication of the length of the postnatal life of the infant in the first week after delivery, and hence furnishes evidence regarding separate existence.

THE CAUSE OF DEATH

The cause of death must, if at all possible, be determined. Advanced postmortem degeneration may, of course, render this impossible. The pathologist's function is to distinguish between deaths from natural causes (mainly disease) and deaths from unnatural causes. Some cases of the latter may be criminal in nature, and this applies, as well, to a certain number of neonatal deaths.

Natural causes of death.—In newborn infants, the natural causes of death are legion. Aside from stillbirths and congenital anatomical abnormalities, diseases such as inherited syphilis, atelectasis, and the various forms of pneumonia take their toll. Suffocation from the aspiration of natural fluids of the mouth and throat, or of regurgitated feedings, accounts for many deaths. The disposition of the umbilical cord during birth may so interfere with circulation as to cause the death of the infant from

anoxia. Hemorrhage from an untied cord may end fatally.

Accidental causes of death must be considered. Injuries from falls may result in fractures or ruptures of organs. A precipitate delivery into a toilet bowl may result in death from drowning, without any intent on the part of the mother to do harm.

Causes of death in cases of infanticide.—Such causes of death must be related to some wilful act of commission or of omission on the part of the mother, in the circumstances outlined in the Act, which results in the death of the infant.

Violence.—The use of blunt force, or the violent application of the body of the infant to some hard surface or object, may cause death from fracture of the skull, with cerebral hemorrhage and cerebral damage. Violence applied to the abdomen may result in rupture of the liver or spleen, with death from hemorrhage. Crushing injuries to the chest may result in severe pulmonary and cardiac damage. Cutting, stabbing or gunshot killings are rare. The careful study of the external and internal lesions will enable the forensic pathologist to form an opinion as to the character of the act which resulted in the injuries.

Suffocation.—Deliberate omission of the clearing of body fluids incidental to delivery, from the air passages can rarely be proved. Wilful suffocation could, however, be accomplished by leaving the infant under bedclothes or face-down on some soft material. Smothering may be accomplished by pressure of the hand over the nose and mouth for a few minutes. The writer has had a number of cases of gagging by the pressure into the pharynx of various types of foreign material.

Strangulation.—This may be carried out manually, in which case nail or fingermarks may be left on the skin of the throat. It may be accomplished by tying a cord or some other object tightly round the neck. These methods are likely to leave tell-tale marks.

Drowning.—Wilful drowning is probably a rare occurrence, but the death of a newborn infant delivered into a lavatory pan or toilet bowl may be due to drowning. It is, however, virtually impossible to prove intent in such cases.

Poisoning.—This method is rarely used. In the case of older infants, it is quite possible to incorporate toxic substances with feedings. The unexpected illness and death of infants under a year of age, not otherwise explainable, suggest the need for toxicological investigation.

Exposure.—Deliberate exposure of the newborn infant to extremes of temperature, or for a sufficient length of time to moderate temperatures, is a means of causing death.

RELATING THE DEATH TO THE MOTHER'S ACT OR OMISSION

This is often difficult. The body must first be identified as that pertaining to the pregnancy of

the accused mother, and this cannot be established by the coroner and pathologist alone. The direct relationship between the cause of death and the mother's act or omission must be clearly shown.

ILLUSTRATIVE CASES

The case of the hidden shoes.—The body of a full-term newborn infant, wrapped in newspapers, was found in a snowbank. A coroner ordered an autopsy. The newspaper wrappings led to the location of an unmarried mother who was found to have been recently delivered. Autopsy showed the body to be that of a full-term viable infant who had breathed, and who had died from the application of violence to the head, with a resultant fracture of the skull and cerebral hemorrhage. On the face and forehead were three roughly circular marks $\frac{3}{4}$ in. in diameter, with a peculiar pattern of skin bruises inside the circle. The mother claimed that at the time of birth the infant had fallen and struck its head. She admitted delivery in her apartment. We searched carefully in the apartment and among her personal effects for some object capable of making the circular marks found on the infant's face. Later we found a pair of her high-heeled shoes which she had carefully hidden. The heels carried a metal plate which corresponded in shape and size to the marks seen on the infant's face. Her subsequent confession led to a conviction on a charge of manslaughter.

The case of the desiccated remains.—In the course of searching a residence for evidence, the police found a suitcase heavily weighted with cement. On being opened, it revealed the presence of the desiccated remains of a newborn infant. The body was wrapped in clothing labelled with the name of the mother. Investigation showed that this mother had, a year earlier, been delivered of a baby in a local hospital, and that she had left the hospital a week later with the healthy infant. Thereafter, nothing further had been heard of the infant. The finding of the infant's body was incidental to the search of the residence for evidence on another charge. A further charge of child murder was laid. Little but the skeleton and the skin of the infant remained. The sex was evident, and bone measurements indicated that the body was that of a full-term infant and therefore viable. The hospital chart proved separate existence. Determination of the cause of death was, indeed, a problem. However, around the cervical vertebrae was found a piece of stout string, firmly knotted. I measured the circumference of the loop, and then secured measurements of the necks of 12 newborn infants, from seven to 10 days of age, in the maternity wards of the hospital. The circumference of the loop of string measured one inch less than the smallest neck circumference measured. The hospital record showed the deceased infant to have been of average size and weight. I gave it, as my opinion, that, in the absence of evidence of any other cause of death, death was due to strangulation resulting from the knotting of string around the neck. The jury found the mother guilty of child murder.

CONCLUSION

The killing of a newborn infant constitutes, ordinarily, the crime of *murder*. But the killing of

a newborn infant, under the age of 12 months, by its mother who "has not fully recovered from the effect of giving birth to the child, or by reason of the effects of lactation" is a "felony, to wit, *infanticide*". The significant point in the second case was that the mother had spent a week in hospital after delivery, during which time no evidence of mental disturbance, on which to base a charge of infanticide, was noted: hence the charge was that of child murder. Most cases of infanticide involve unmarried women. In consideration of the attitude of society toward illegitimacy, and of the consequent mental and emotional strain of the unmarried mother, some degree of mental derangement at the time of delivery is understandable.

Over a period of 35 years of service as forensic pathologist to the Hamilton area, the author performed autopsies on the bodies of many newborn infants, found in a variety of locations. In many cases the body could not be identified, nor could the mother be found. Occasionally, however, the wrappings of the body furnished evidence, in the form of clothing labels, laundry marks, or newspaper dates and addresses, upon which to identify the mother. In these cases the holding of a coroner's inquest sometimes resulted in the laying of a charge of infanticide. The secrecy attendant on the birth and the killing limits the evidence as to the commission of the crime to the mother's statement. There is usually little or no evidence as to the psychiatric state of the mother at the time. There is a natural sympathy, on the part of the juror, toward the accused. These factors militate against the securing of convictions.

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PAGES OUT OF THE PAST: FROM THE JOURNAL OF FIFTY YEARS AGO

Correspondence has been carried on between the Association and the provincial secretaries with the object of evolving as uniform a scheme of organization as the varying constitutions of the provincial associations will permit. The importance of having numerous local medical societies throughout the country, all closely affiliated with the larger associations, cannot be too strongly emphasized. They are the units of which alone a strong and efficient national organization can be composed. The membership of the Association numbers at present about one thousand five hundred. There was a net gain of over sixty during the year. The treasurer's statement for the calendar year 1913 shows that the finances of the Association are in a satisfactory condition.—Editorial: *Canad. Med. Ass. J.*, 4: 806, 1914.