

Maceration- Surest Sign of IUD

Kamal Singla^{1*}, S. K. Dhatarwal²

¹Resident, Department of Forensic Medicine, Pt. B. D. Sharma, PGIMS, Rohtak, Haryana, India

²Senior Professor & Head, Department of Forensic Medicine, Pt. B. D. Sharma, PGIMS, Rohtak, Haryana, India

*Corresponding Author:

Name: Dr. Kamal Singla

Email: kamalsingla5150@yahoo.com

Abstract: All ante-partum (beyond 28 weeks) and intra-partum deaths for practical purposes are termed as intrauterine deaths. The cause of intrauterine death (IUD) is reported to be unknown in 25-60% of all cases. The cases where a cause is clearly determined, the cause of intrauterine death (IUD) can be referred to fetal, maternal, or placental pathology. One of the maternal factor which also causes a significant proportion to intrauterine fetal death is trauma to mother may be in the accidental, suicidal or homicidal manner. Most intrauterine death happens in full term pregnancies. In the present case trauma in the form of accidental thermal burns to mother leads to fetal loss. A great challenge occurs on the part of forensic pathologist when he/she received such dead fetus in the mortuary for post-mortem examination (to determine whether the fetus was dead, still or live born). Maceration is the process of aseptic autolysis which begins to occur as soon as an undelivered infant dies and considered to be the surest sign of intrauterine fetal death. It arises secondary to the effects of autolytic enzymes. Since this process occurs in what is usually a sterile environment, the changes which arise are unlike those which occur following other deaths.

Keywords: IUD, Maceration, Burns.

INTRODUCTION

All ante-partum (beyond 28 weeks) for practical purposes are termed as intrauterine deaths [1]. The cause of intrauterine death is unknown in 25-60% of all cases. In the cases where a cause is clearly determined, the cause of IUD can be referred to fetal, maternal, or placental pathology [2].

CASE REPORT

In the present case patient came to accident & emergency with alleged history of accidental burns with eight months pregnancy. There were 90-95% superficial to deep burns over the body. On examination fetal heart sound could not be auscultated and USG of the patient confirms the intrauterine death. According to the delivery notes of the gynaecologist there was spontaneous expulsion of IUD baby followed by manual removal.

Autopsy findings

On 28/1/2014 we received above mentioned baby for post mortem examination at the mortuary. Following general and systemic findings were observed during post mortem examination:

Body was naked completely. Length of the body was 51cm, weight was 2.2kg and head circumference was 32 cm. Scalp hairs were black & 3-

4cm long. Eyes, eyebrows and eyelashes were well developed and both eyes were closed. Lanugo hairs were absent except at the shoulders. Nails project beyond the end of fingers. Mouth was closed. Umbilical cord was of length 23 cm with one end attached to umbilicus and other end irregularly torn however no ecchymosis was seen at the torn end. Skin was reddened with slippage and peeling off skin was seen. It was soft, flaccid and flattened when placed on level surface. Epidermis detached easily and leaves moist area. All the joints were abnormally mobile

Skull bones were separated out and brain & membranes were converted into grayish red pulpy material. Meconium was seen at the rectal end. Liver, spleen and kidneys were softened and edematous. Testis were present in the scrotum. Ossification centres of lower end of femur, calcaneum and talus were seen. After completing the autopsy we were of the opinion that, this was a body of a dead born full term fetus.

DISCUSSION

Maternal injury may cause direct fetal death or may precipitate death by different means [3]. The trauma to mother may be in the accidental, suicidal or homicidal manner.

History and physical examination are of moderate value in the diagnosis of intrauterine death. Diminished fetal movement is the = only symptom in most patients. An inability to obtain fetal heart modulates upon examination suggests intrauterine death. However, it is not diagnostic and death must be confirmed by ultra-sonographic examination. Confirmation of intrauterine death is done by visualization of the fetal heart and the absence of cardiac activity [2].

A great challenge occurs on the part of forensic pathologist when he/she received such dead fetus in the mortuary for post-mortem examination (to determine whether the fetus was dead, still or live born).

Maceration is the process of aseptic autolysis that occurs as soon as an undelivered infant dies and considered to be the sign of intrauterine fetal death. It arises secondary to the effects of autolytic enzymes and occurs in the sterile environment [4].

The various signs of maceration described above concluded that the intrauterine death was due to maternal factor in the form of thermal accidental burns.

CONCLUSION

In the present case after thorough post mortem examination and detailed case history, we were of the opinion that, this was a body of a dead born full term fetus. Various signs of maceration described above are surest and conclusive of intrauterine death due to maternal factor in the form of thermal accidental burns. Maceration is the process of tissue degeneration which begins to occur as soon as an undelivered infant dies and considered to be the surest sign of intrauterine fetal death, arising secondary to the effects of autolytic enzymes. Since this process occurs in what is usually a sterile environment, the changes which arise are unlike those which occur following other deaths.

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