



K27 Exsanguinating Hemorrhage From a Ruptured Gravid Uterus Resulting in Maternal and Near Full Term Infant Death Following Cocaine Abuse

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After attending this presentation, attendees will gain an understanding of some of the complications associated with heavy cocaine use during the late stages of pregnancy. Specifically, this presentation addresses the postmortem analytical results of a mother and her in-utero fetus that died following uterine rupture after a period of cocaine use. This information may be applicable to previous, current or future cases that involve similar circumstances, whether the case leads to the death of the fetus, mother, or both.

This presentation will impact the forensic community by providing pharmacokinetic data for a case in which limited data are currently available. This presentation describes to the forensic sciences community a case that involves late term pregnancy, cocaine use, and the problems encountered by both mother and fetus. While previous studies have shown that cocaine use during pregnancy impacts the uterus' vasculature, as well as the overall health of mother and fetus, the exact anatomical and physiological impacts have not been determined. The demand for focus on cocaine use by pregnant women has been steadily increasing since the 1980's. While the effects of cocaine on the average person are better understood, the drug's effects on a developing fetus and the uterine structure are less evident. This case may help to define the distribution of cocaine between mother and fetus during heavy cocaine use.

Case History: A 32-year-old gravid 4, para 3 mother in her 36th week gestation was found in the morning sitting on a toilet slumped to the left with her head resting on the sink. A small amount of vaginal bleeding was observed and white powder was found at the scene. Emergency personnel were called and the patient was transported to a regional medical facility. Cardiac monitoring and EKG showed sinus rhythm, but no pulse. No fetal heart tones were detected. Resuscitation efforts were terminated 2 hours later.

Analytical Results:

	Mother		Fetus		
	Cocaine	BE	Cocaine	BE	
Right Heart Blood	3,756	9,368	524	3,734	(Heart Blood)
Femoral Blood	1,470	11,648	1,996	18,120	(Umbilical)
Urine	4,674	88,006	1,159	4,643	(Kidney)
Vitreous	3,167	3,590	1,023	5,103	(Liver)

Analytical data of lung, muscle, brain, adipose, and epidermis (from skin slippage) from the fetus were also obtained.

The mechanism of death in this case is exsanguination from the ruptured uterus through a previously thinned uterine wall. The approximate 36-week gestation female infant was partially extruded or expelled through the ruptured uterus into the peritoneal cavity. The infant died due to exsanguinating hemorrhage of the mother following rupture of the gravid uterus through the previous C-section scar. Cocaine abuse contributed to the uterine rupture and infant death.

Uterine Rupture, Cocaine, Exsanguination