G120 Acetaminophen Induced Death of a Fetus With Maternal Survival: An Unusual Case of a Suicide Attempt Resulting in Fetal Death

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After attending this presentation attendees will learn about an unusual case of a suicide attempt with unexpected complications to an unborn child.

This presentation will impact the forensic community by illustrating the risks of acetaminophen overdose on fetal survival.

Introduction: Suicide represents one of the most common causes of death in young women. Acetaminophen overdose represents one of the most common methods used to attempt suicide. Suicide rates among pregnant women are fortunately rare by comparison. However, poisoning deaths, both suicidal and unintentional are rising.

Material and Methods: The subject of this case is a 32-year-old caucasian woman who was pregnant with a healthy 35 week, 5 day gestation fetus. The subject has a history of depression and is prescribed Zoloft, although she was not compliant with her medications. She has no prior suicide attempts or ideations. She had a fight with her husband and exhibited increasing depressive symptoms. She stated to her husband that she had taken 'all her medicine', but she refused medical attention for approximately thirty six hours. Upon admission to the hospital, she was found to be in liver failure. She was treated with n-acetlycysteine. The next day, she started having uterine contractions. She was not able to clot her blood due to acetaminophen toxicity and liver failure, precluding a Cesarean section. Attempts to delay the delivery were unsuccessful. The fetus became increasingly bradycardic with labor progression and died shortly before spontaneous vaginal delivery (approximately four and one half days after the initial overdose event).

Results: The external and internal examination of the fetus was consistent with a gestational age of 36 weeks. There were no gross malformations, anomalies or evidence of external trauma to either the fetus or to the placenta. Likewise, metabolic screening was negative and postmortem tissue cultures were not helpful. Histologic sections of the fetal tissue were unremarkable with no signs of placental abnormalities or liver necrosis. Neuropathology of the brain revealed findings consistent with fetal distress and hypoxia. Postmortem toxicology on the fetal blood revealed an acetaminophen level of 8.55 mcg/ml.

Conclusion: The cause of death in the previously healthy fetus is attributed directly to the high levels of maternal acetaminophen. In an adult, an intake of 7000 mg or more is associated with death via liver failure in the absence of treatment. The maternal intake in this case is estimated to include 60 tablets of 500 mg each. Acetaminophen readily crosses the placental barrier to alter the function of the immature fetal liver which has only minimal abilities to safely metabolize the drug. The fetus is thus placed at greater comparative risk by acetaminophen than is the maternal source in cases of an acetaminophen overdose.

The mother ultimately survived, although she was placed on full liver support for coagulopathy. She is currently on the liver transplantation list. The fetus, despite survival to within minutes of delivery, died in utero secondary to fetal distress complicated by maternal acetaminophen toxicity.

Suicide, Acetaminophen Overdose, Fetal Complications

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