



A100 The Collection of Forensic Evidence From Prepubescent Victims of Sexual Assault

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After attending this presentation, attendees will become familiar with the types of evidence collected from sexually assaulted victims under the age of thirteen. In addition, attendees will be exposed to the most valuable types of evidence that yield positive DNA results linking a suspect to the crime as well as where this type of evidence can be found. Attendees will learn about how a child's developmental stage and activities following the assault impacts the amount of recoverable evidence found.

This presentation will impact the forensic science community by creating new guidelines and protocols for health care professionals, law enforcement personnel, and research personnel regarding collection of evidence from juvenile sexual assault victims. It will create an understanding of the differences between adult and juvenile sexual assault victims as well as highlight the major differences between sex kit protocols for both adults and children.

National data for 2006 show that among an estimated 905,000 child maltreatment victims, nearly nine percent were sexually abused with just over half of sexually abused children being under twelve years of age (U.S. Department of Health and Human Services). National figures for child maltreatment include only children reported to Children's Protective Services agencies, and therefore likely underestimate actual numbers of child sexual abuse victims.

The "72 hour" rule for evidence collection from sexual assault victims has been recommended by the American Academy of Pediatrics (AAP) and is supported by laboratory research and studies of adult victims. However, minimal research has been performed to support this rule regarding prepubescent and juvenile sexual assault victims. Research has shown that evidence collection kits obtained from both children and adult victims after twenty four hours following a sexual assault yields minimal to no evidence when using non-DNA methods of analysis. Some reasons proposed for such a low yield of evidence in children likely include the lack of genital development, such as the lack of mucus and folds in prepubescent tissues, the smaller size of vaginal and anal canals when compared to adults, and the nature of violence being decreased in some child sexual assaults compared to adult assaults.

The goal of this research is to create a database regarding child assault cases analyzed by the Houston Police Department crime laboratory from January 1, 2007 to December 31, 2008. One goal of the study is to determine what pieces of evidence collected from sexually assaulted children are the most valuable in identifying a suspect or perpetrator using DNA-based methods of analysis. Several factors are thought to influence the value of evidence collected from victims of sexual assault.

The first factor is the effect of post-assault activities performed by the victim, such as bathing, washing, wiping, eating and drinking, urinating and defecating, vomiting, and brushing teeth or using mouthwash. It is expected that the amount of evidence that will yield a positive DNA result decreases as post-assault activities increase. The reason for this is because activities such as bathing, washing and wiping, and urinating and defecating potentially remove any evidence left on the body and in the genital cavities following an assault.

A second factor is where the evidence is found, such as the vaginal cavity, the anus, the mouth, or bedding and clothing. It is expected that evidence found on undergarments, clothing, and bedding might yield more positive DNA results when compared to swabs from the vaginal cavity or anus because of the developmental stage of children less than thirteen years of age. For example, evidence is less likely to remain in the vaginal cavity because of the lack of mucus and folds in prepubescent children.

A third factor is the difference in evidentiary value from older versus younger children and how genital development can influence the value of recovered evidence. It is expected that older children will provide evidence that will test positive for DNA at a higher rate than younger children because of the stage of genital development.

The ultimate goal of this research is to provide a database that can serve as the foundation of a protocol or set of guidelines for health care professionals, law enforcement personnel, and laboratory researchers. This database will be consulted and utilized to determine what kind of evidence is the most valuable when dealing with sexual assault victims less than thirteen years of age. In addition, the database will outline the best place to find such evidence and whether or not it is useful to conduct a rape kit examination on a child rather than simply collecting bedding and clothing, where positive DNA evidence is likely most prominent.



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