D55 A Proposed Taxonomy for Postmortem Genital Examinations With Colposcopy

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After attending this presentation, attendees will understand appropriate taxonomy that will allow us to better describe and document: the appearance of the anogenital tissues at various postmortem intervals; accurately and consistently describe anogenital tissue trauma; and more reliably compare rape-homicide trauma to the types of injury seen in living rape victims.

This presentation will impact the forensic community and/or humanity by demonstrating the development of appropriate taxonomy which will facilitate an ordered arrangement of terms, to more accurately describe the clinical findings of the postmortem genital examination. A methodical and systematic approach to documentation will hopefully: Improve the (diagnostic) acumen of the forensic examiner; provide a theoretical and practical framework for documentation of these examinations; avoid ambiguity in interpretation; and help promote consistency and reliability among examiners.

Finally, the development of appropriate taxonomy will facilitate closer cooperation between Sexual Assault Response Teams and other members of the forensic community. This will enhance both antemortem and postmortem criminal investigations, leading to improved services for victims and detection of offenders.

Baseline studies of genital anatomy and the nature of postmortem tissue changes are being conducted (Crowley & Peterson). These will allow eventual comparison to injuries noted in rape/homicide victims. A sequential methodology & evidentiary protocol has been previously described (AAFS/Crowley, 1998, 2003).

Fraser et al. (1999), modified a 1966 World Health Organization classification system, and cited "conditions or changes in the appearance" of the vagina and cervix after colposcopic examination of the vagina and cervix in healthy sexually active females. While it is helpful for the Forensic Examiner to be cognizant of classification systems used to describe findings in living subjects, taxonomy germane to the postmortem genital examination should incorporate salient terms, such as TEARS, that will be consistent and universally acceptable in the forensic community.

In a review of studies of injury patterns of women resulting from sexual assault, Sommers et al (2001) noted that "standardized classification systems to organize severity and location of injury need to be developed and tested."

Slaughter, Brown, Crowley, & Peck (1997), found that the typical pattern of injury and types of genital trauma in female rape victims consisted of tears, ecchymoses, abrasions, redness, and swelling (TEARS), all characteristic of blunt force trauma. When compared to a group of women that engaged in consensual sexual activity, there was considerable disparity in the frequency of genital trauma. As noted in this study, the development of taxonomy can help "establish a more reliable basis for forensic analysis."

During the assessment of the nature and pattern of wounds and injuries in living tissues, the astute examiner considers various gynecological conditions and factors that may influence the appearance of findings. Normal anatomical variations, nonspecific findings such as tags and adhesions, various gynecological conditions, and postmenopausal changes to the genital anatomy are part of the differential evaluation. Similarly, several factors are pivotal to a thorough postmortem genital examination. The same 11 anatomic structures in the female that are the most frequent sites of trauma in living rape victims must be equally scrutinized in postmortem cases. These include the labia majora, labia minora, peri-urethral area, posterior fourchette, fossa navicularis, hymen, perineum, vagina, cervix, anus, and rectum. Death adds its own framework to the scenario. Factors such as lividity, rigor, postmortem interval, postmortem skin slip, mucosal autolysis, and normal postmortem dilatation (vs. antemortem prolapse of the vagina, urethra, cervix, and/or rectum) will affect the appearance of the tissues. When performing the autopsy, the Forensic Pathologist is well-familiar with these postmortem factors. However, the mucous membranes and skin of the genital area have traditionally received less specific scrutiny. Certainly the attention to detail of the anogenital sites have only recently been studied (Crowley/AAFS, 2000, 2001, 2002, 2003). The utilization of colposcopy further augments the precision of evaluation.

As these cases are examined and photographed, salient information must be collected and documented. As discussed in previous presentations, conventional terminology to describe genital trauma, i.e., sharp vs. blunt trauma, is recommended to provide consistency with the rest of the autopsy. Study of determinants such as multiple vs. single sites of injury, multiple types of injuries, and frequency of location may help us to better understand and classify the degree or severity of trauma.

The taxonomy will be further refined throughout the course of clinical evaluation of a normative, core group of baseline cases, representative of various causes of death, i.e., natural, accidental, suicide, and homicide

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(Crowley and Peterson).

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