E56 University Groper: How One Suspect Was Identified Using Touch DNA Findings — A Successful Case Study

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After attending this presentation, attendees will: (1) better understand the benefits of strengthening relationships between forensic nurses, medical evidence collectors, and forensic scientists; (2) realize the importance of DNA evidence collection in stranger-groping assault cases; and, (3) explore changes in evidence collection practice based on more sensitive DNA analysis methods.

This presentation will impact the forensic science community by reinforcing the importance of collaboration between forensic nurses, medical examiners, and forensic scientists in the development of best practice guidelines in sexual assault cases with the advent of more sensitive DNA analysis methods.

This presentation focuses on exploring the benefits of a symbiotic working relationship between forensic nurses/medical evidence collectors with those processing the biological evidence, forensic scientists, to achieve optimal results in DNA findings in sexual assault cases. Additionally, this presentation provides suggestions for evidence collection practice changes based upon the development of more sensitive DNA testing methods and introduces a new evidence collection form developed to capture touch DNA documentation in stranger-groping cases. A case study will be presented on the successful identification of a serial groper from touch DNA analysis findings. An overview of the Short Tandem Repeat (STR) and Y-chromosomal Short Tandem Repeat (Y-STR) DNA results found in this case will be provided as justification for the policy changes and the touch DNA form development.

The successful identification of the suspect in this case study occurred because of a strong collaborative relationship between forensic nurses/medical evidence collectors and forensic scientists. The forensic scientists and forensic nurses in this community meet together frequently to discuss best practice guidelines as is recommended for the benefit of both professions.[1,2] During one of these meetings in 2011, a forensic scientist provided education on more sensitive DNA analysis methods, which would impact the testing of touched evidence. Following this meeting, a forensic nurse collected DNA evidence swabs on a stranger-groping case based upon information gleaned from the forensic scientist. Both STR and Y-STR DNA of the suspect were developed from the collected swabs leading to his guilty plea and incarceration.

A newly developed form, Stranger Touch DNA Documentation, was created following the results from this case as a guide in collecting clothing or other items touched by a stranger during an assault. Hard copies of this state form will be provided to attendees during the presentation. This form directs the evidence collector to list the clothing items touched by the suspect, how and where the touch occurred, and to draw the areas of touch on body diagrams. Groping or assault victims are to carefully remove the clothing avoiding the area of touch. The clothing items are then to be folded with the area of touch placed inward, and the items sealed in a paper bag. Additionally, any external stain body swabs are designated on the sexual assault examination form as possibly containing biological fluids or epithelial cells to provide additional information for forensic scientists, helpful in choosing between STR or Y-STR DNA analysis methods. Multiple presentations to law enforcement agencies and forensic nurses/medical examiners were completed across Utah on the use of this form and the importance of obtaining DNA evidence in stranger-groping or assault cases.

In conclusion, presentation of this case study will encourage collaboration between forensic nurses/medical evidence collectors and forensic scientists, and provide grounds for evidence collection practice changes in sexual assault cases due to more enhanced DNA analysis methods.

Reference(s):

1. Burg A., Kahn R., Welch D. DNA testing of sexual assault evidence: The laboratory perspective. *Journal of Forensic Nursing*, 2011, 7(3), 145-152.
2. Corum V., Carroll J. Forensic analysts perspectives: Sexual assault kits under the microscope. *Journal of Forensic Nursing*, 2014,10(1), 50-57.

Collaboration, Touch DNA, Documentation