

TECHNICAL NOTE

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Spermatozoa in the Anal Canal and Rectum and in the Oral Cavity of Female Rape Victims

I. Spermatozoa in the Anal Canal and Rectum of Female Rape Victims

The microscopic finding of spermatozoa in the anal canal and rectum of female rape victims, living or murdered, must be interpreted with extreme caution in deciding whether anal sodomy has occurred.

This decision in the living rape victim is based on history, physical findings, and the number of spermatozoa in the anal/rectal smears as compared to the vaginal smears. In the murdered victim, it must be based on the findings at the murder scene, the location and character of trauma found in the external examination of the body, and the comparison in the number of spermatozoa observed in smears from the vaginal cavity with those observed in smears obtained from the anal canal and rectum.

Recently we obtained anal/rectal smears in conjunction with the usual vaginal smears in ten consecutive living rape victims in which there was no history of attempted or accomplished anal sodomy. In three cases the perineum was cleansed with saline before the material was obtained from the anal canal and rectum. In three cases there was no attempt to avoid contact with the skin on the medial surface of the buttocks before swabs were inserted into the anal canal. In four other cases the buttocks were spread apart, the perineum wiped with gauze, and the swabs inserted into the canal with avoidance of all contact with surrounding skin.

The smears were obtained with sterile cotton-tipped applicators and the material smeared on glass slides and stained by the Papanicolaou technique. In all ten cases a few sperm heads were identified in the anal/rectal smears.

The authors are acutely aware of artifacts that resemble spermatozoa, especially in smears taken from the anal canal, rectum, and oral cavity. Such artifacts include bacteria, fungus, pollen, nuclear debris, and mucous threads. The identification of spermatozoa follows an "all or none" law. Examination of all oral, rectal, anal, and vaginal smears in rape victims are reported as positive or negative, and terms "suspicious" or "consistent with" are avoided.

In all ten cases the authors interpreted the presence of spermatozoa in the anal canal and rectum of the rape victims as contamination from the vaginal contents. In each case there were abundant spermatozoa in the vaginal smears but only occasional spermatozoa,

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usually without tails, observed in the anal/rectal smears. They occurred in the anal/rectal smears with a frequency of one spermatozoon for every five to ten high-power fields.

In our practice the rape victim is usually seen by the examining physician within 3 to 4 h after the attack. The victim usually has been advised by police or has gained previous knowledge from the media that she should not change clothing or bathe after the attack, until examined by a physician. The authors agree with these instructions because of the necessity of preserving all types of evidence. It is during the interval of time between the attack and the examination, when the victim is walking or running to seek help, being questioned by the police investigators, and being transported to the hospital, that the vaginal contents can contaminate the anal canal and rectum with a few spermatozoa.

Confirmation of anal sodomy in the living is based on history, the evidence of uncommon anal trauma, usually manifested by bruising or lineal lacerations with bleeding, and the finding of large numbers of spermatozoa in the anal/rectal smears. In our experience, if buggery has occurred and the victim has not defecated before the examination, spermatozoa are found in abundant numbers (two to four per high-power field) for up to 20 h after the attack [1].

In murder/rape victims, the problem is more difficult because of the obvious lack of history. However, it is easily understood, especially if the victim is lying on her back, how the vaginal contents can contaminate the anal canal and rectum following postmortem relaxation of the rectal sphincter.

Recently we found a few spermatozoa without tails in the anal/rectal smears of six murder/rape victims. The findings were considered contamination of the anus and rectum by vaginal content. These conclusions again were based on the lack of any rectal trauma along with large numbers of spermatozoa found in the vagina compared with the few sperm heads found in the anal/rectal smears.

Over the past 22 years the authors have examined a few living rape victims in which ejaculation occurred in both the vagina and anal canal. History, physical findings, and the number of spermatozoa in the vaginal smears and the anal/rectal smears helped the examiners reach a proper conclusion. Acid phosphatase determination, which has proven to be an essential part of the evidence obtained from the vaginal contents, has been of no value in the material from the anal canal and rectum. The results have been negative.

In a recent murder case the determination of anal sodomy was easily arrived at because there was a triangular laceration of the anal skin, with abundant sperm in the rectum but none present in the vaginal smears.

Conclusion

The finding of a few spermatozoa, usually without tails, in smears taken from the anal canal and rectum in the living or murder/rape victim does not necessarily indicate that anal sodomy has occurred. In most rape cases in which rectal sodomy has not been performed, there is some contamination of the anal canal and rectum by vaginal contents.

II. Spermatozoa in the Oral Cavity of Female Rape Victims

The contamination of the oral cavity with spermatozoa without the actual performance of fellatio occurs only under the most bizarre circumstances. In one rape case, two living victims were forced by three rapists to chew condoms after vaginal intercourse. This sadistic action resulted in contamination of the oral cavity with spermatozoa. Of interest was a homosexual murder in which the defense maintained that the sperm which were found in the trachea were the result of individuals other than the accused purposely contaminating the oral cavity with semen after death. No sperm were identified in the smears from the oral cavity. Our retort for the prosecution was that if such a procedure had oc-

curred we would easily have found sperm in smears from the oral cavity. It was only with utmost difficulty that we were able to identify sperm which had been aspirated into the trachea prior to death.

If there is a positive history of fellatio in a living rape victim, thorough swabbing of the mouth is undertaken. The slides are labeled "gums," "tongue," "pharynx," and "general" (meaning all recesses of the oral cavity), and stained by the usual Papanicolaou technique. The area of the gums has been a very productive site for recovery of sperm. We have been successful in identifying spermatozoa in oral smears up to 6 h after the attack, despite brushing teeth, using mouthwash, and drinking various fluids. Therefore, even though a few hours may have elapsed between the time of the attack and the examination, every effort should be made to corroborate the history of fellatio.

In the homicide victim, smears should be taken from the oral cavity, pyriform sinuses, pharynx, larynx, and esophagus. Sections of lung tissue have also demonstrated aspirated spermatozoa in bronchi and bronchioles. The yield of positive findings will be dependent on the preservation of the body. We have found that if the cells in the oral cavity and respiratory tract maintain their morphology the probability of identifying spermatozoa is reasonably good.

Conclusion

Artifactual contamination of the oral cavity by spermatozoa is an uncommon phenomenon and does not present the problems that confront us when we attempt to determine whether anal sodomy has occurred in a rape case.

Reference

- [1] Enos, W. F. and Beyer, J. C., "Treatment of Rape Victims," *Journal of Forensic Sciences*, Vol. 22, No. 1, Jan. 1977, pp. 3-4.

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