Letters to the Editor

Treatment of Rape Victims

Sir:

Our opinions concerning the role of the forensic pathologist in the examination of alleged rape victims are based on over 20 years of experience. We feel these opinions are factual, but, in most instances, they are impractical. Most medical examiner systems do not have the personnel, finances, or time to examine routinely all alleged rape victims. However, the facts clearly indicate that when compared with other specialists, such as gynecologists or emergency room physicians, the forensic pathologist is better qualified to examine rape victims. His training and experience uniquely qualify him to fulfill the dual role the physician must play in this complicated medicolegal problem [*1*].

As a physician, he must institute the required emergency treatment. For example, when we are called to examine an alleged rape victim, after inquiring whether the victim is physically injured (and usually she is not), we attempt to establish an atmosphere of sympathy, support, and assurance for the patient. We frequently state that under these circumstances she can consider herself fortunate that she was not seriously injured or even killed. Forensic pathologists are familiar with the rape-murder cases in which the victim is killed during the sexual attack. The response of the victim to these opening statements is always favorable.

Treatment for minor injury is instituted, and if serious trauma is present the appropriate specialist is called. Serious trauma, in the majority of rape cases, is a rare phenomenon. Recently we reviewed 200 consecutive alleged rape cases, and only three required hospitalization. However, of the 18 cases we have examined so far this year (1976), two required hospitalization because of severe blunt trauma about the head and face. Prophylactic treatment for the prevention of venereal disease and pregnancy, if indicated, is routinely given.

Finally, the patient is instructed as to the availability of psychologic counseling, which can be obtained from the "rape crisis" groups. Recently, counselors from these groups have been present at the time of examination. We feel that this is an excellent idea. They render valuable psychologic support to the victim during this stressful time. When the rape crisis groups first became active, they manifested some degree of hostility toward police and medical personnel, but their attitude has changed because of their experience in the emergency room or police headquarters in dealing with alleged rape victims. They have come to realize that not all is "black and white." False reports are made.

The second phase of this problem is obtaining and properly handling evidence which is to be used to prove or disprove the allegation. The forensic pathologist's expertise overshadows all other specialists in this phase of the examination. His medical history, physical examination, and required laboratory tests are legally oriented. For example, in the documentation of trauma he can recognize pattern injury, the difference between recent and old trauma, and sometimes can recognize self-inflicted injuries based on the character and distribution of the wounds. Furthermore, all medical and physical evidence obtained at the time of examination must be complete and properly handled so the legal case is not lost on insufficient or mishandled evidence. The forensic pathologist's daily experiences make him uniquely qualified in this aspect of the problem.

Based on a proper history, specimens are obtained from the vagina as well as the oral and anal cavities, if indicated. We know, based on approximately 2000 examinations,

that in 80 to 90% of "true" rape cases fellatio, buggery, and cunnilingus are requested, attempted, and sometimes accomplished. Thorough swabbing of the oral cavity is done if a history of fellatio is obtained. Positive Pap smears for sperm have been identified up to 6 h after the attack, despite the use of a toothbrush, mouthwash, and drinking of a variety of fluids. To obtain this irrefutable evidence takes a great deal of patience and perseverance on the part of the microscopist.

Positive rectal smears are more easily obtained because of obvious anatomic and physiologic factors. Careful cleansing of the perineum is done prior to obtaining rectal smears in order to avoid contamination from vaginal contents. We have been successful in identifying sperm in the rectum of the living up to 20 h after the attack.

The identification and description of sperm obtained from the vagina is no problem to the forensic pathologist. He is aware, however, that sperm or remnants of sperm can be identified in the living for up to three days after intercourse.

The acid phosphatase determination and interpretation are of paramount importance in alleged rape cases, especially in light of the number of vasectomies done in recent years. Here, again, the forensic pathologist is more qualified in processing and interpreting the laboratory results. In our laboratory, we have standardized the test so that the acid phosphatase determination is helpful in most instances in estimating the time interval between the alleged attack and the examination; for example:

Time, h	Approximate Values
1	100 Bodansky units
2 to 3	30 to 50 B. U.
6	10 B. U.
12	5 B. U.
24	0 B. U.

The collection and processing of hairs, fibers, foreign body material, and secretions for typing are also better handled by the forensic pathologist because of his training and daily experience.

Finally, if a court appearance is required, the forensic pathologist is as well qualified, or more qualified, than other specialists to handle the stress of the courtroom. Because of his frequent courtroom appearances, he is immune to the craftiness and belligerence of the defense attorney. The case is not lost because he manifests uncertainty under the attack of the defense. He calmly and coolly recites his evidence based on sound medical findings. For example, in 1974 in Fairfax County, Va., we examined approximately 90 rape cases, and 43 cases were tried and 42 convictions were obtained.

In summary, it would be ideal for all alleged rape victims to be examined by a forensic pathologist. However, finances, manpower, and time make this an impossible goal in most jurisdictions.

Reference

[1] Enos, W. F., Beyer, J. C., and Mann, G. T., "The Medical Examination of Cases of Rape," *Journal of Forensic Sciences,* Vol. 17, No. 1, Jan. 1972, pp. 50–56.

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Unusual Form of Child Abuse

Sir:

We wish to report an unusual form of child abuse which may be termed a case of "metabolic" homicide.

The patient was brought to a hospital emergency room in northern Wisconsin with a problem of headache followed by unresponsiveness and seizures. The physicians decided that more sophisticated facilities were needed and they transferred him to a larger hospital 45 miles (72 km) away. He had four more grand mal seizures while in transit.

The patient was a 6-year-old male under the third percentile for height and weight. The initial clinical observations showed a markedly dehydrated, comatose child. Initial laboratory measurements included serum sodium, 183; potassium, 4.0; chloride, 99; CO_2, 30; pH, 7.07; osmolality, serum 396 and urine 518; glucose, 670; and hematocrit, 37. Antiseizure medications were given and rehydration was started with appropriate caution. The next morning, while being examined by the pediatric staff, he had a respiratory arrest.

At about this point, the mother (separated from the family for three years and living in another city) arrived and the three siblings (ages 12, 11, and 10) of the patient began to relate a history. The live-in babysitter, who was in charge of the children while their long-distance truck-driving father was working, had found that the child had begged or stolen other children's lunches at school. She decided to make him vomit as a method of punishment; she gave him large doses of sodium bicarbonate. One of the siblings testified at a preliminary hearing that three glasses, about 1½ to 2 in. (38 to 51 mm) in diameter, were filled with powdered sodium bicarbonate to about 1½ to 2 in. in height. This was stirred up with some vinegar and given to the child; he was forced to drink it and was told he would be hit with a belt if he didn't. The child also received some dishwashing liquid soap, and one sibling testified that some red pepper was also given. One sibling further testified that in an attempt to induce vomiting the babysitter put her foot on the child's stomach. Later in the afternoon some vomiting did occur and the child had an episode of diarrhea while seated in a cold bath. In the early evening, a severe headache appeared and this was followed by coma and seizures. After the mother received this information, the appropriate authorities were notified.

Subsequently, lab data showed a gradual fall of sodium to about 160; potassium fluctuations between 1.9 and 6.5; a gradual rise of chloride to 134; an abrupt rise of CO_2 to 54 and then a gradual decline to about 15; an elevation of pH to 7.63 to 7.80 for three days and then a return to normal; upon treatment, a decline of glucose to normal levels; a decline of serum osmolality to about 330; and one urine osmolality of 303.

For six days flat-line EEG criteria for brain death were demonstrated and permission was obtained from both parents to stop the respirator. Subsequently, the child was pronounced dead and transported to University Hospital in Madison for autopsy under the auspices of the Wisconsin State Crime Laboratory. At autopsy, findings included some fading skin bruises; a mild degree of acute pancreatitis; marked cerebral edema; scattered subarachnoid hemorrhages; and striking, large, stellate, roughly symmetrical, cerebellar hemorrhages which radiated from the white matter into the interfoliar substance.

The babysitter was originally charged with homicide, second degree. She subsequently pleaded guilty to a reduced charge of negligent contribution to the death of a minor (947.15, Wisconsin Statutes revised).

The accidental killing of a child by hypernatremia and dehydration is well documented, especially in those cases in which infants have been given high salt loads (sodium

chloride) and in those in which salt has been used as an emetic in older children. We believe that this case of punishment using sodium bicarbonate is unusual and wish to report it as a less than usual modality of child abuse.

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