AMERICAN COLLEGE OF EMERGENCY PHYSICIANS
SCIENTIFIC ASSEMBLY
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How to Convict a Rapist: Sexual Assault Response Teams

Sexual assault unfortunately is a common occurrence, and victims of this crime often present to the emergency department. The goal of emergency department personnel is to help the patient and to collect evidence to convict the perpetrator. The use of a designated sexual assault team in the management of this crime will be discussed. Various multidisciplinary team compositions will be described, along with a discussion of the advantages and disadvantages of each.

- Discuss the development and implementation of a sexual assault protocol, including the use of a designated sexual assault team.
- Describe the various team compositions.
- Discuss the advantages of sexual assault response team in the management of these victims, including the area of legal prosecution.

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FACULTY

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Adult Sexual Assault Examination and Sexual Assault Response Teams

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Course Description: This course will review the basic elements of a complete examination and forensic evidence collection for victims and suspected perpetrators Of sexual assault in adults. The latest treatment guidelines and national standards for examination will be presented as well as the current status of sexual assault nurse examiner programs.

Course Rationale: Emergency physicians are often called upon to perform sexual assault examinations without prior training. This can jeopardize valuable evidence and subject the victim to examination by a frightened and ill-prepared examiner. This course will provide the emergency physician with the tools needed to complete an examination that provides reassurance and comfort to the victim as well as proper forensic evidence collection.

Objectives:

1) Discuss and explain the required elements of forensic evidence collection.
2) Review the elements of a caring interaction between examiner and victim.
3) Discuss the pros and cons of testing for STDs during the initial exam.
4) List the pharmocologic treatment options and discuss the controversies in prevention of pregnancy, STDs, Hepatitis B, and HIV infection.
5) Describe the most frequent challenges to evidence collection during legal proceedings.
6) Explore the current state of sexual assault response teams (SART) in the country and the advantages of such programs.

Course Outline

I) Evidence collection
- A) History
  - 1) Record only what is necessary:
    - a) Do not complete an exhaustive and detailed history of all events.
    - b) Investigative details should be left up to law enforcement
    - c) Subtle discrepancies in a medical practitioner's history can sabotage a case in court.
  - 2) Obtain enough history to:
    - a) Complete state SA forms.
    - b) Direct a thorough medical exam
    - c) Collect appropriate specimens.

d) Treat the victim.

B) Physical examination

1) Conduct a head to toe examination of the body for injuries. All injuries must be documented and photographs taken if possible. Approximately 10 - 50% of victims will have bodily injuries that correlate significantly with successful procession (Rambow).

2) Wood's lamp -entire body is inspected and positive areas noted in chart, rubbed with sterile saline moistened swab, dried, and labeled.

3) Finger nail scrapings – if indicated by history collect debris with a toothpick or broken tongue depressor and include collection instrument bindled with debris.

4) Genital examination

a. Separation and traction

b. Importance of Colposcopy

1. First described by Teixeira in 1981 and has revolutionized the examination of the SA victim.
2. Provides magnification, excellent light source, and photodocumentation.
3. Clearly increases the rate of injury detection (from 6% to 53% in one study by Lenahan)
4. Provides effective documentation for court.
5. Can be reviewed by expert practitioners for court testimony without subjecting victim to re-exam.
6. There are no well done controlled trails of injury detection in SA victims versus control consensual cases to date.

c. The presence of 3 or more injuries may exclude consensual intercourse (Slaughter 97), however a normal exam is entirely consistent with a history of rape.

d. Most common injury sites: posterior fourchette, labia minora, hymen, and fossa navicularis.

5) Rectal examination

a. Carefully examine using coloposcopy and toluidine blue if possible.

b. Anoscopy when indicated by history.

6) Toluidine blue application

a. This nuclear stain adheres to areas of injury (subepithelial nucleated cells), but not to intact epithialized cells.

b. 1% aqueous solution of toluidine blue is applied to the perineum and excess dye is wiped off with a cotton ball moistened with lubricating jelly.

c. Linear areas, which retain the stain, are positive for injury. Folds of the area must be separated and carefully examined.

d. Should be applied before speculum exam to eliminate the possibility of iatrogenic injury. Previous concerns about dye

interference with DNA testing have been negated with recent studies. (Hochmeister)

e. Increases the injury detection rate from 16% to 40% and up to 70% in nulliparous women without the use of colposcopy (Lauber)

f. Not 100% specific for SA as injuries are also found with consensual intercourse, especially in adolescence, but all with injuries complained of painful intercourse in one study.(McCauley)

7) Specimen collection

a. Clothing

1. Patient should disrobe on paper or sheet that will be collected with the evidence.
2. Clothing worn during the attack should be described in the chart and placed in the collection packet.

b. Debris -should be collected and location recorded on chart.

c. Pubic hairs

1. Combing pubic hairs usually captures any perpetrator hairs and some of victim hairs.
2. Plucking of pubic hairs no longer recommended (Young et al). This can be painful and unnecessary in the majority of cases; it can be collected at a later date if needed for the investigation.
3. Hairs that are matted with potential evidentiary fluid should be cut and placed in kit.

d. External genital swabs

The presence of seminal fluid can be identified by the crime lab by identifying:

1. Spermatozoa
2. Seminal fluid components: p30 protein or acid phosphatase
3. May provide evidence of ABO blood type of perpetrator

e. Vaginal swabs

1. Sperm can be identified by crime lab in the majority of cases after penile-vaginal ejaculation (with normal semen) at 3 days and in 50% of cases at 4 days (Davies).
2. Wet mount examined for motile sperm (controversial due to lack of uniform training).

f. Vaginal pool

1. Normal saline is gently injected into the vagina then aspirated and sent to crime lab for identification of seminal fluid components.

2. Lab can concentrate the specimen and is better at detecting sperm than examiner wet mount.
3. Epithelia cells from perpetrator may also be identified.

g. Rectal swabs
1. Collect specimen for crime lab when indicated by history.
2. Examiners must routinely examine the rectum since many victims are reluctant to admit anal penetration.
3. Rectal penetration is an additional and separate crime to vaginal penetration and usually adds years to jail sentence.

h. Oral swabs -collect if indicated by history and less than 6 hours after sexual assault.

i. Wood's lamp positive swabs

j. Urine toxicology testing indicated in suspected "date rape drugs" and serum ETOH level may be indicated by individual scenario (i.e. patient unable to give consent to intercourse due to intoxication).

"Date Rape Drugs":

1. Flunitrazepam (Rohypnol ®) – benzodiazepine manufactured by Hoffmann – La Roche not available in U.S.A. but frequently purchased in Mexico. Can be detected in the urine up to 72 hours post ingestion.

2. Gamma hydroxy butyrate (GHB) -a federally banned CNS depressant not available for legal purchase in U.S.A but easily manufactured illegally by users. Can be detected in drinking material residue by crime labs as well in the victim's urine up to 4 hours post ingestion.

3. ElSohly, and independent lab, offers free urine testing for drugs of abuse in sexual assault cases (including the "date rape drugs"). The service is paid for by Hoffmann – La Roche Inc, causing some experts to question its validity. The number to call obtain this free testing is: I-800-608-6540.

k. Proper "Chain of Evidence" must be preserved for all specimens and photographs or video documentation.

II) Treatment

A) Pregnancy prevention

1) All victims of SA should be offered emergency contraception if they are not currently using a method of birth control that would prevent a pregnancy from the assault (e.g. routine hormonal contraception, an intrauterine device, or tubal ligation).

2) In February of 1997 the Food and Drug Administration published a list of effective emergency contraceptive regimes,

3) This involves the administration of 2 doses of oral contraceptive pills given within 72 hours of intercourse and spaced 12 hours apart (see table).

4) The Preven Kit, which what introduced last year, contains the contraceptive pills as well as antiemetic medicine. It is FDA approved specifically for the purpose of postcoital contraception and is more costly than traditional methods.
5) These regimes will prevent at least 75% of pregnancies that would have otherwise occurred.

B) STD prevention
1) Most common STDs transmitted during SA are Trichomoniasis, bacterial vaginosis, clamvdia. and gonorrhea.
2) Initial cultures recommended by CDC, but not helpful to victim when antibiotic prophylaxis is being given and presence of prior STDs may be used against her in court.
3) The use of IM Ceftriaxone is controversial because it is more expensive and more painful than oral regimes but conclusively provides protection against incubating syphilis. Oral regimes may be preferred if follow up serologic testing for syphilis can be assured.

Single Dose Oral Therapy for the Prevention of Gonorrhea (GC)

Cefixime	400mg
or	
Ofloxicin'	400mg
or	
Ciprofloxin[1](spell)	500mg

Single Dose Oral Therapy for the Prevention of Chlamydia

Azithromyacin	1000 mg

Single Dose Oral Therapy for the Prevention of Tricomonas and Bacterial Vaginosis

Metronidazole'	2000mg

Emergency Contraception Oral Therapy[1,2]

Ovral[3]	2 tablets within 72 hours and 2 tablets 12 hours later
or	
Lo/Ovral[3] or Nordette-21[3] or Levlen[4]	4 tablets within 72 hours and 4 tablets 12 hours later
or	
Triphasil-21[3] or Tri-Levlen [4](yellow tablets)	4 tablets within 72 hours and 4 tablets 12 hours later

[N]ot for use in pregnancy, In Pregnant penicillin allergic patients use Spectinomycin 2gm IM for prevention of GC
'Consider the use of an antiemetic to prevent vomiting
[3]Wyeth-Ayerst Laboratories
[4]Berlex Laboratories

C) Hepatitis B prevention – CDC treatment guidelines recommend hepatitis B vaccination only (without HBIG) at the time of exam followed by 2 more vaccines at l-2 months and 4-6 months.
D) HIV prevention

1) Risk from one episode of unprotected receptive vaginal intercourse with an infected individual is approximately 1/1000 and with unprotected receptive anal intercourse 8-32/1000. (Royce)
2) SA victims often sustain tissue injury due the violent nature of the act, which may increase the transmission rate of the virus.
3) Treatment of parenternal occupational exposure to infected body fluids has been proven effective in recent studies, but there is no proof that treatment of the SA victim prevents the transmission of the virus.
4) Victims of SA present for treatment much later than those who have occupational exposures and the chance of a perpetrator having HIV disease is much less than a source from occupational exposure.
5) However, 40% of SA victims fear contracting HIV post assault and should receive counseling and the option of taking anti-HIV medicines as they may be effective. (Gostin)
6) A large scale trial of AZT/3TC for 28 days post SA is now underway at the University of California in San Francisco and this regime seems to be a logical choice in balancing side effects and possible efficacy.
7) Approximately one third of states have legislation that allows for HIV testing of the alleged and/or convicted perpetrator without his consent.

E) Reassurance
1) Presence of an advocate from a crisis agency.
Emotional support provided by advocates has been shown to decrease the incidence of Rape-related Posttraumatic Stress Disorder (RR-PTSD) which affects up to 1/3 of victims.
It is critically important for the advocate and examiner to tell the victim that IT WAS NOT HER FAULT that she was raped, no matter what she was wearing or where she was.
2) Full explanation of process including the phrases
a) “You are in control of the exam at all times, if at any point you experience discomfort or need a break please let me know”.
b) “If you have’any questions about any part of the exam, please stop me and I will take time to explain it to you.”
c) “You may refuse any or all portions of the exam.”

F) Reporting to law enforcement
1) Some state legislation requires that law enforcement be notified when a victim of sexual assault presents for care. Other states leave this decision up to the victim. Practitioners must be aware of their own state laws regarding reporting.

G) Follow up

1) Repeat physical and genital exam recommended 2 weeks post assault for STD and pregnancy testing if prophylaxis not given.
2) Repeat serological testing for Hep B and syphilis at 2 months and HIV at 2, 4, and 6 months.
3) Follow up with counseling or crisis agency is necessary in most cases.
4) Notification of state compensation laws: All 50 states have laws that provide funds to victims to cover medical expenses, lost wages, and psychological services,
5) Unfortunately less than 1/3 of patients complete follow up exams. (Holmes)

III) Testifying in court

A) Frequently asked questions by defense attorneys.

1) How long after intercourse can sperm be found in the vagina?
   - Standard answer is 3 days, but can be found in cervix up to 2 weeks afterward.
2) If the perpetrator ejaculated why was sperm not found by the crime lab?
   - Oligospermia, withdrawal, or ejaculatory dysfunction (found in 34% of rapists).
3) How do you know that those are the underpants she was wearing?
   - Document a description of the clothing in your chart.
4) Couldn't those same injuries be found with consensual intercourse?
   - Literature not great for this question, but may use your experience or experience of a veteran examiner.
5) If she didn't want to have sex with him, how come she has no external injuries as evidence that she struggled?
   - Many victims are too frightened to struggle and this is not needed to establish rape. Only IO-50% of rape victims have external injuries.
6) How can it be rape if they are married?
   - Sexual assault by a spouse in considered a crime in all 50 states in 1999.

IV) Sexual assault response teams (SART)

A. In the past adult SA exams were performed exclusively by physicians. Since the early 1990's nurses or nurse practitioners are performing more and more of these exams. Called SANE (sexual assault nurse examiners), these nurses are the core of the SARTs.

B. Other members of the SARTs include Law Enforcement, victim advocates, prosecutors, and forensic laboratory personnel.

C. The exam is usually still performed in the Emergency Department, but may be done in a space near the ED or an affiliated clinic.

D. In order to establish these programs extra funding by government or charitable organization is needed, as most local police jurisdictions do not reimburse adequately for the evidentiary exam to support a program.
E. International Association of Forensic Nurses (IAFN) - most sexual assault examiners belong to this organizational group.
    1) The group has drafted standards of practice for sexual assault examiners' education and the exams themselves. ACEP and the American College of Gynecology are also drafting standards that should be available in the near future.
    2) IAFN National Office
    6900 Grove Road
    Thorofare, NJ 08086-9447
F. Advantages of these programs include:
    1. The practitioner performing the exam is specifically dedicated to treating the victim, not tending to multiple patients in a busy ED.
    2. The practitioner has usually completed more extensive training on SA examinations and evidence collection and as such may perform a more comprehensive exam.
    3. Many involved feel that designated practitioners consider the emotional needs of the victim more fully due to their extra time and training.
G. Guidelines for establishing SANE programs are available free of charge from the Office for Victims of Crime Resource Center at:
    I-800-627-6872

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