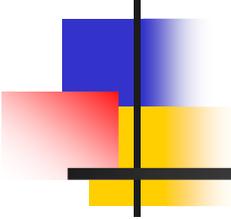


MEDICO-LEGAL

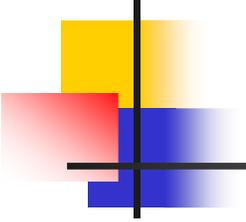


By

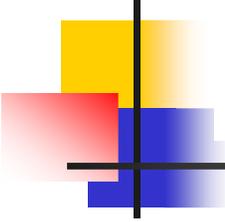
S.B.UPADHYAY

Director FSL U.P.

Objectives

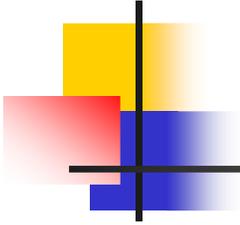


- To get acquainted to the injury related medico-legal sections of the Indian Penal code and Criminal Procedure Code
- To apply the above principles in contextualizing the cases

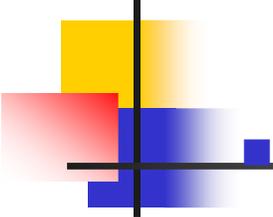


FORENSIC SCIENCE:

It is an application of natural sciences to legal context.

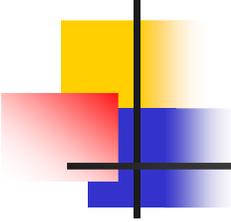


- Medico-legal pertaining to both medicine and law or to forensic medicine.
- Medico-legal includes Forensic Medicine, Forensic Science, DNA fingerprinting, Toxicology, Environmental hazards, Sexual Assault etc.



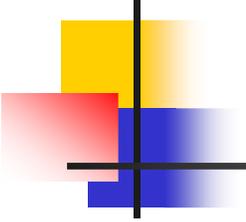
Injury

- any harm whatever illegally caused to any person in body, mind, reputation.
- The term Illegal is applicable to everything which is an offence or, prohibited by law.
It furnishes ground for legal action
- Examiner used Tears, Ecchymoses ,Abrasions
Redness and swelling.



Aggravated forms of Hurt

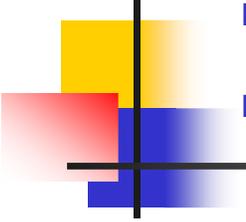
- By dangerous weapons
- To extort property or to constrain to do illegal act
- By means of poison to commit offence
- To extort confession
- To deter public servant from his duty

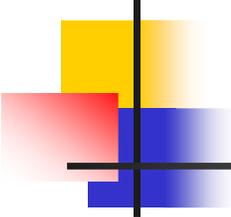


Homicide, Culpable Homicide

- Causing death by Human Agency
- Culpable Homicide Who ever causes death by doing an act with the intention of causing death, or with the intention of causing such bodily injury as is likely to cause death, or with the knowledge that he is likely by such an act to cause death, commits Culpable Homicide

Sexual violence includes

- 
- — sexual slavery;
 - — sexual harassment (including demands for sex in exchange for job promotion or advancement or higher school marks or grades)
 - — trafficking for purposes of forced prostitution;
 - — forced exposure to pornography;
 - — forced pregnancy;
 - — forced sterilization;
 - — forced abortion;
 - — forced marriage;
 - — female genital mutilation;
 - — virginity tests.

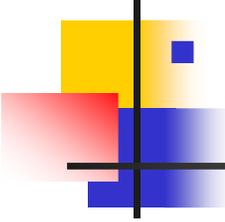


AUTOPSY

Medical examination of a deceased body. It is also called Postmortem Examination

Forensic Autopsy

Examination of a deceased person to determine cause of death.



- **Medico-legal Aspects Of Autopsy :**

- Medico-legal autopsy is performed, as part of the inquest procedure, when ordered by the investigating authority in Medico-legal deaths.

- The requesting authority is usually Police/ Magistrate

- **Aims and Objectives of Medico-Legal Autopsy:**

- To determine exact cause and manner of death.

- To establish identity of the deceased.

- To determine time since death.

- To collect trace evidence.

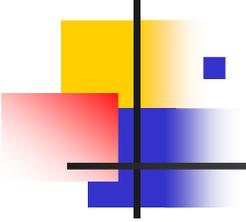
- Reconstruction of the crime scene

Documentary Pre-requisites :

- A letter from the IO asking the medical officer to carry out the ML autopsy A copy of the "Panchanama" carried out by the IO at the site of death. This document pictures the scene of death for the prosector. Dead Body Challan

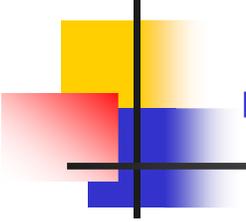
Physical facilities: :

- The same infrastructural facilities required for clinical autopsy are required for Medico-legal autopsy. Often ML postmortem has to be conducted in places where none or minimal facilities are available. On-site autopsies are common after exhumation for grossly decomposed dead bodies.
- Provision of natural lighting and exhaust ventilation is essential for autopsy room of a Forensic Medicine department.



Autopsy Procedure :

- The autopsy procedure is essentially the same as for clinical autopsy. All medico-legal autopsies are complete autopsies. Hence a thorough external and internal examination of all organs is carried out in all cases. Exceptions are the vertebral column and spinal cord.
- As soon as the autopsy is over, the cause of death is intimated to the investigating officer in a sealed envelope through the police constable who had come along with the body.

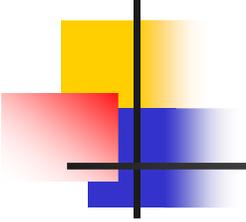


- **Battery:**

It is the assault brought to execution. It is the actual injury to a person

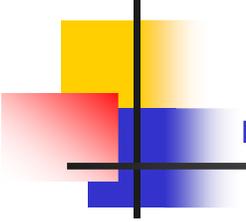
- **Simple Hurt:**

Which is neither extensive nor serious and heals without leaving a permanent scar.



Sexual violence: a global problem

- Sexual violence of women, men and children.
- Why are these guidelines needed?
- Sexual violence often seek medical assistance.
- Aims of the guidelines.
To improve professional health services for all individuals (women, men and children)



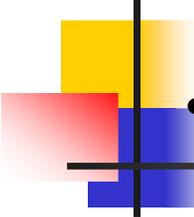
Sexual violence

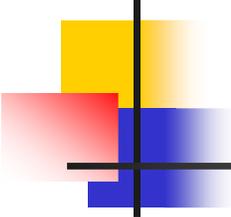
- can take many different forms; it is not limited to acts of non-consensual intercourse but includes a wide range of sexual behaviours, including attempts to obtain a sexual act, sexual harassment, trafficking for sexual exploitation and female genital mutilation.
- These guidelines, however, deal mainly with sexual assault (rape) and child sexual abuse.
- The vast majority of victims of sexual violence are female and most perpetrators are male.

Physical consequences

- Sexual assault suffer a range of physical injuries, genital and non-genital, or in extreme cases, death. Rape victims are at increased risk from:
 - — unwanted pregnancy;
 - — unsafe abortion;
 - — sexually transmitted infections (STIs), including HIV/AIDS;
 - — sexual dysfunction;
 - — infertility;
 - — pelvic pain and pelvic inflammatory disease;
 - — urinary tract infections.
- Genital injuries in women are most likely to be seen in the posterior fourchette, the labia minora, the hymen and/or the fossa navicularis. The most common types of genital injuries include:
 - — tears;
 - — ecchymosis (i.e. bruising);
 - — abrasions;
 - — redness and swelling..

Sexual violence

- 
- In most cases of sexual assault, the perpetrator is someone the victim knows, and perhaps knows well, such as a current or former intimate partner, or a relative.
 - Sexual assault is an aggressive act motivated by power and control.
 - Sexual violence has both **physical** and **psychological** effects on health and well-being, these can be short- and/or long-term. The health consequences of, and the responses to, sexual violence vary markedly between individuals and according to the nature of the abuse (e.g. frequency, severity, perpetrator).



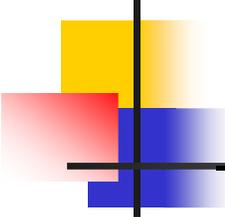
- **Provision of medical and forensic services to victims of sexual violence: equipment list**

- **FIXTURES**

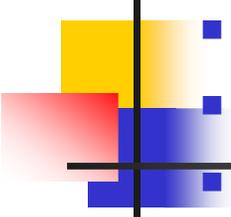
- **Examination couch**

- Desk, chairs and filing cabinet for victim, accompanying persons and health worker.
- Light source Ideally mobile.
- **Washing facilities and toilet** Facilities should be available for the victim to wash at the conclusion of the examination. There should also be a facility for the health worker to wash the hands before and after an examination. Facilities should include a shower, a hand basin and soap.
- **Refrigerator and cupboard** for the storage of specimens, preferably lockable.
- Telephone and Fax machine

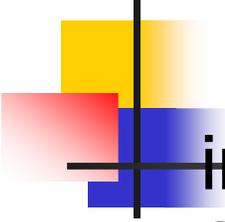
Men as victims of sexual violence

- 
- Men most commonly experience sexual violence
 - receptive anal intercourse;
 - forced masturbation of the perpetrator;
 - receptive oral sex;
 - forced masturbation of the victim.

Sexual violence against males is underreported, far more so than in the case of women, largely because of the reluctance of men to report acts of sexual violence to the police. This in turn is likely to be due to extreme embarrassment experienced by most males at being a victim of sexual violence. There are, however, certain settings where acts of sexual violence against males may be more prevalent, for example, in prisons and the armed forces.

- 
- Generally speaking, men have the same physical and psychological responses to sexual violence as women, including:
 - — fear
 - — depression
 - — suicidal ideation
 - — anger
 - — sexual and relationship problems.
 - Men also experience RTS(rape trauma syndrom) in much the same way as women. However, men are likely to be particularly concerned about:
 - — their masculinity
 - — their sexuality
 - — opinions of other people
 - (i.e. afraid that others will think they are homosexual)
 - — The fact that they were unable to prevent the rape.
 - These concerns about masculinity and sexuality may stem from the misconceptions that only
 - homosexual men are raped and that heterosexual men would never rape another heterosexual man.

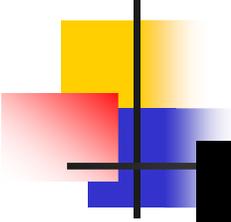
The ideal facility

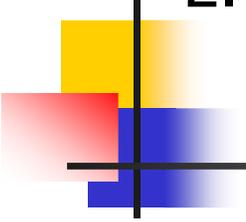


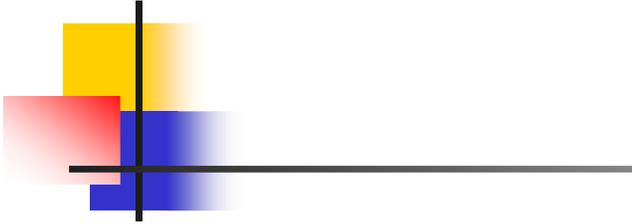
It is recognized that very few places will be in a position to provide and enjoy the perfect facility. However, in the event that a health worker was consulted about service provision for victims of sexual violence, they might refer to the need for “a private, discrete suite with ready access to an emergency department of a teaching hospital”, comprising:

- 1. An examination room, equipped with, and laid out, as follows:

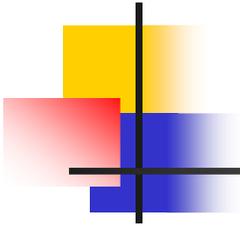
- — an examination couch positioned so that the health worker can approach the patient from the right-hand side; the couch must allow examination with the legs flopped apart (i.e. in the lithotomy position);
- — thermally neutral (i.e. not too cold or too hot);
- — auditory and visual privacy (particularly for undressing);
- — clean bed-linen and a gown for each patient;
- — lighting sufficient to perform a genito-anal examination;
- — hand-washing facilities (with soap and running water);
- — forensic supplies;
- — a table or desk for documenting and labelling specimens;
- — a lockable door to prevent entry during the examination;
- — a telephone.



- 
2. A separate room containing a table and chairs where a support person could talk with the patient, and facilities for offering patients refreshments and a change of clothing and also for children who may be attending as patients or accompanying an adult.
 3. Shower and toilet for the patient.
 4. A room for the police.
 5. A reception area that could also be used as a room for waiting family and friends.

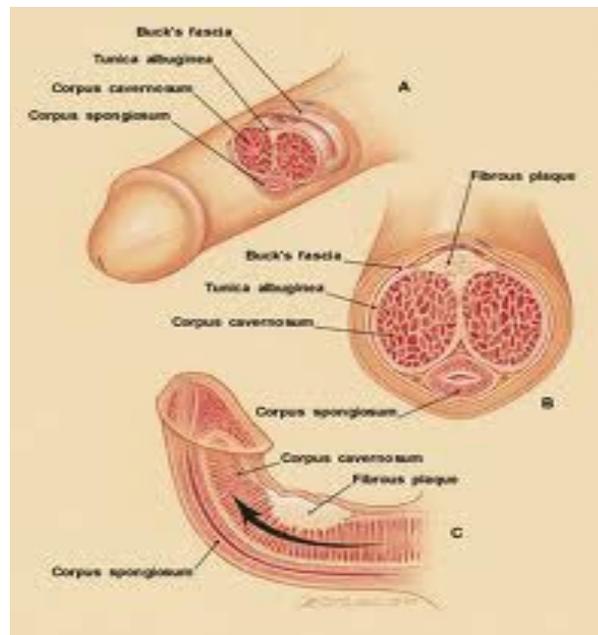


Taking a blind vaginal swab

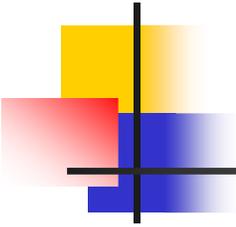


How to perform a swab of the mouth for spermatozoa

- Medico-legal examination of suspect section of 53A CrPC.
- Conduct a thorough examination of male genitalia (Penis) in order to record trauma and to obtain biological specimen for DNA analysis.
- Comb to obtain any loose pubic hair or foreign material (blood / semen) exchange.
- Penile swab of the external genitalia of suspect to collect blood / semen.
 - * Moisten the sterile swab in sterile water.
 - * Swab the external and internal surface of glans and air dry.
 - * Store in dry sterile glass/plastic vial.



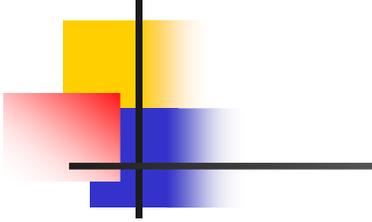
Penile Swab



Cleaning the penis



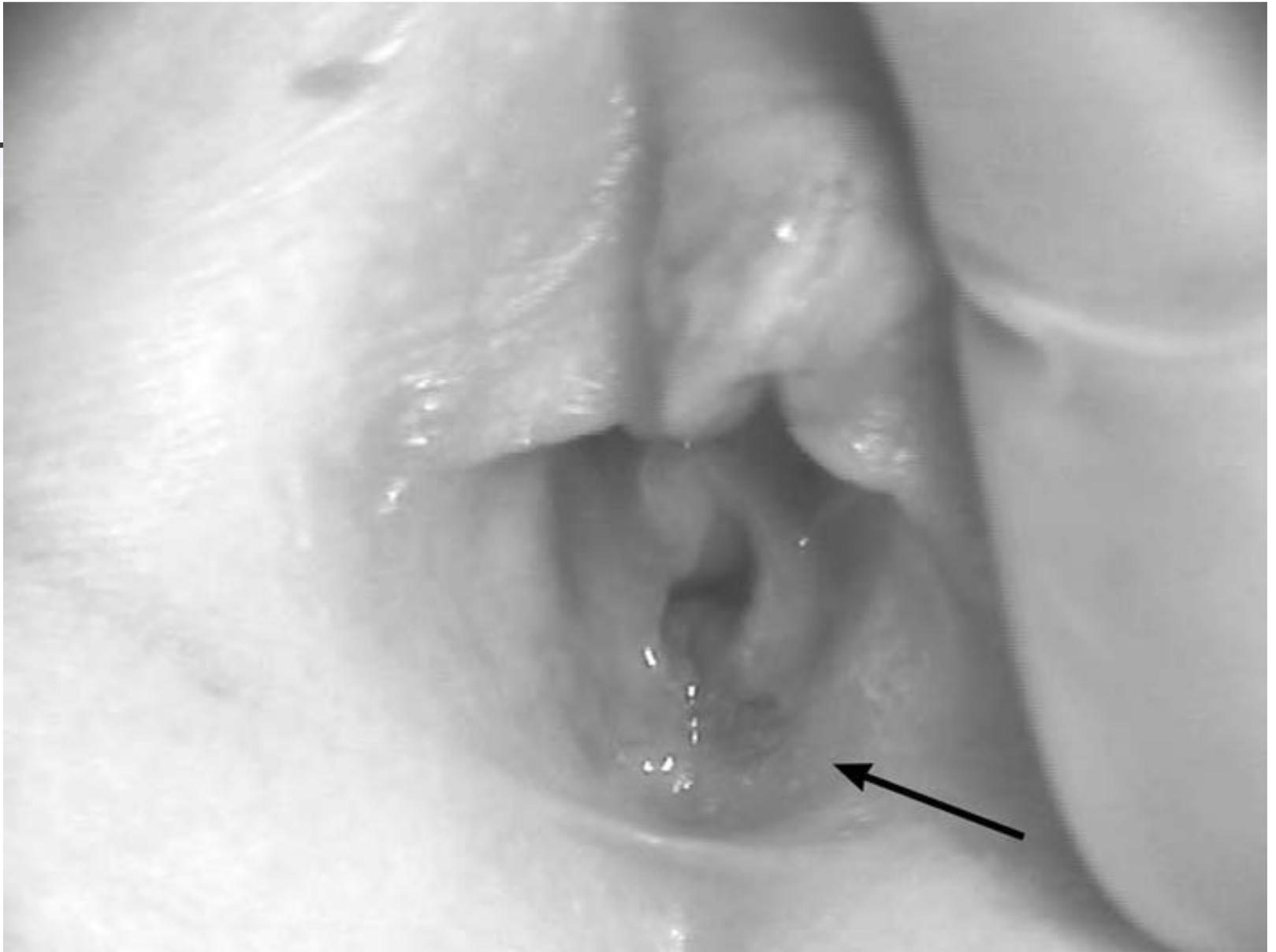
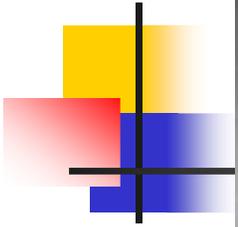
Thrush swab

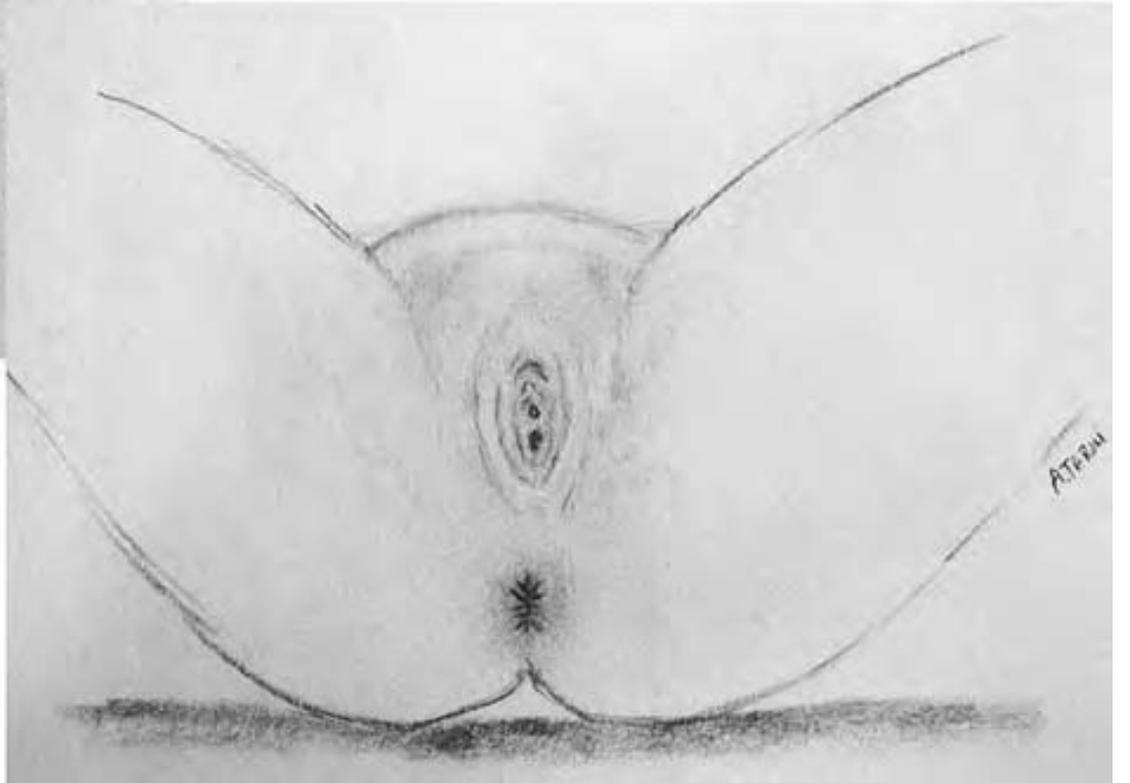
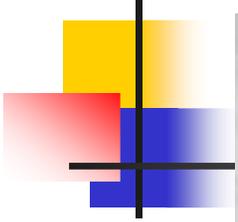


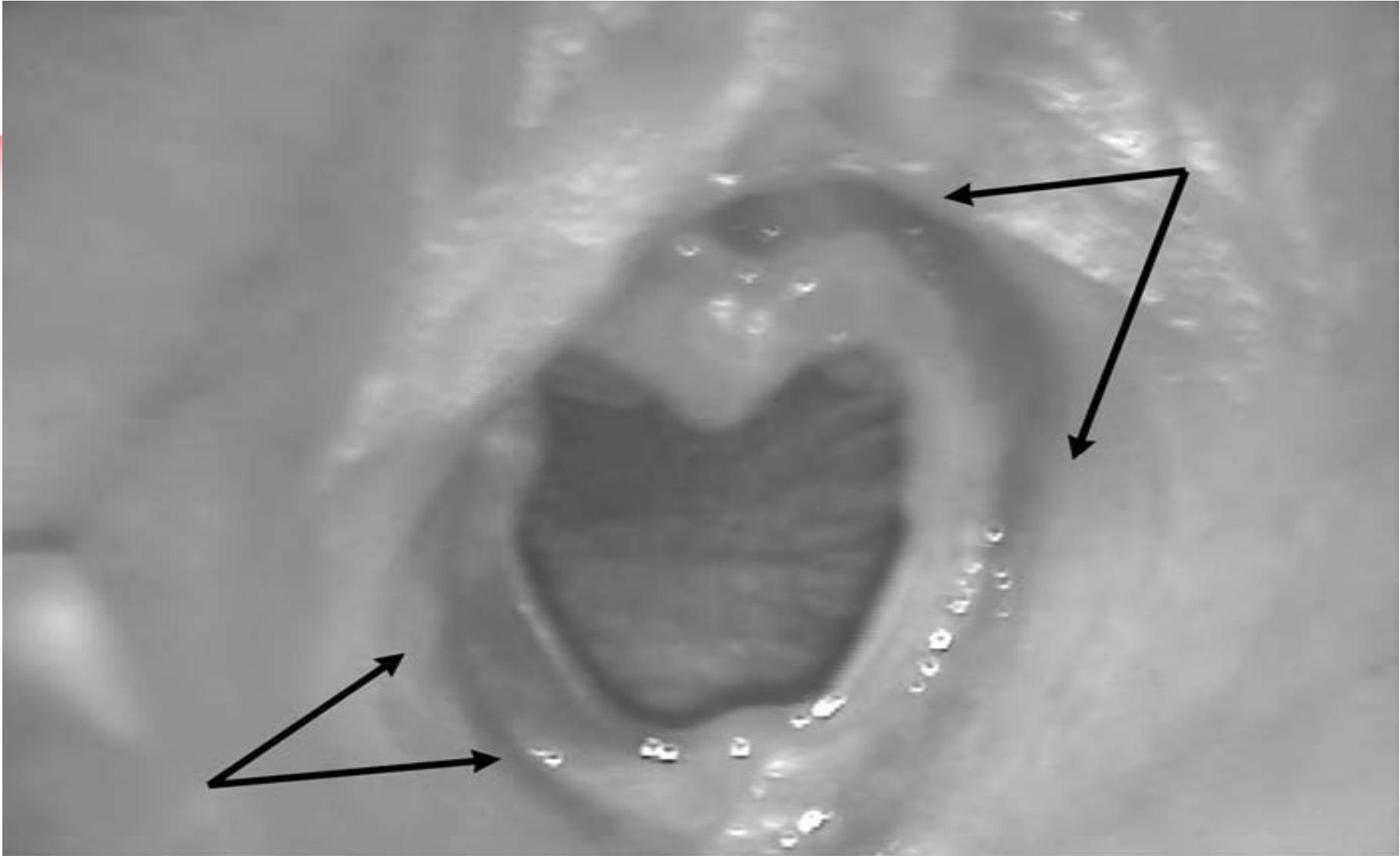
Deep Penile swab

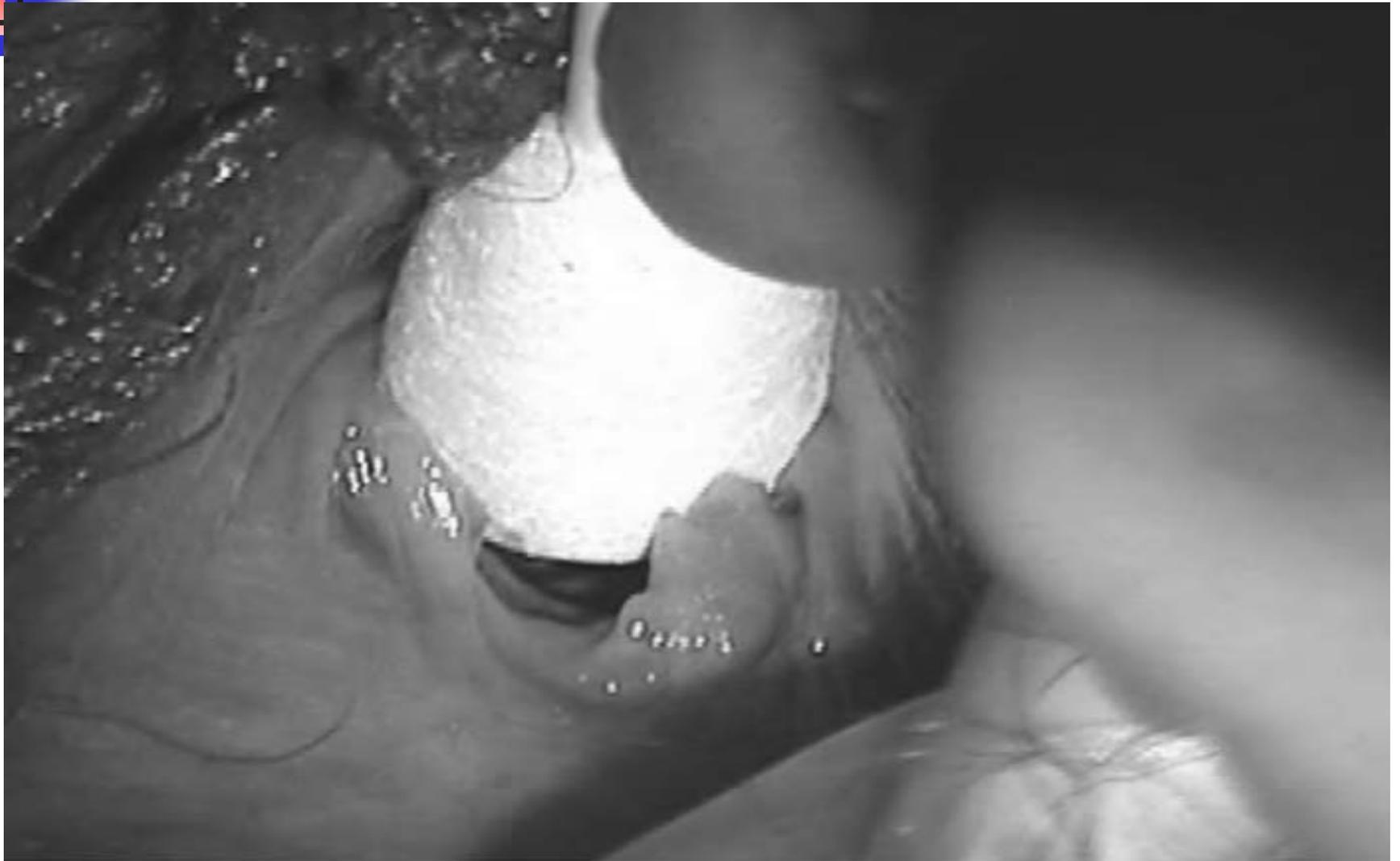
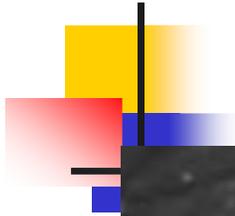
MAG INDEX: 5.7











Colposcopy

Types of colposcopy

	Yes	No
• Cervical	1	2
• Vaginal	1	2
• Vulvar	1	2
• Perianal Anal (anoscopy)	1	2

Anal Colposcopy

Done

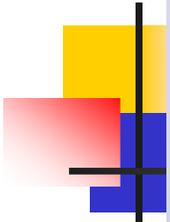
Not Done

Participant refused.....

Indication for anal colposcopy

	Yes	No
• Prior history of dysplasia	1	2
• Abnormal anal cytology	1	2
• Presence of visible perianal lesions.....	1	2
• Positive anal HPV detection test	1	2
• Research only	1	2
• Other	1	2

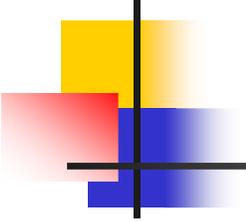
(Specify)



Colposcope

Uses of medico-legal evidence from sexual assault victims

Type	Collection	Purpose
Hair	Head and pubic hair combed or cut to examine for assailant's semen, saliva and hair, and fibres and debris May link victim to crime scene .	May Identify victim
Blood	Blood drawn for drug and alcohol analysis	May indicate consent
Urine	for drug and alcohol analysis	May indicate inability to consent
Semen/ Saliva	Skin swabbed for assailant's semen and Saliva May identify assailant . Mouth, vagina and anus swabbed for assailant's semen	May indicate recent sexual contact May indicate penetration
Extra -genital injury	Marks documented on the body such as bruises, lacerations and bite marks	May indicate use of force May indicate resistance. May indicate circumstances of assault
Ano- genital injury	Injuries documented to areas such as the labia, clitoris hymen Perineum and rectum	May indicate use of force May indicate penetration
Clothing	Worn at the time of the assault collected tears, assailant's semen, saliva, blood and hair, and fibers and soil.	May indicate use of force May identify assailant May link victim to crime scene
Foreign debris,	Foreign debris collected from pubic hair under fingernails, vagina. rectum and clothing	May link victim to crime scene May identify the crime scene
Fingernail	collected for traces of assailant's	May indicate resistance
Scrapings and hair, and fibres	skin, blood May identify assailant .	May link assailant to victim



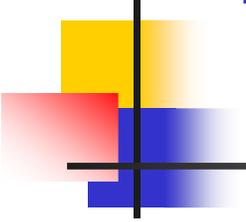
Sexual Assault

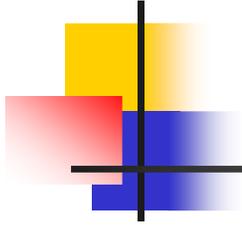
A.

- The examination performed in a designated exam room.
- The client must have choice of examination.
- After 72 hours the possibility of gathering viable evidence is doubtful, however, a report should be filed with law enforcement.
- A sexual assault nurse should be called to visit with the client
and find out what has taken place and whether some evidence
may still be available.

B.

- An appropriate sexual assault kit for the individual jurisdiction should be used.
- A consent form signed for the forensic exam and collection of evidence should be obtained.
 - a. If the client is a minor or ward of the state or has a legal guardian, the parent or designated guardian must sign for the kit to be collected.
 - b. This may vary with individual states.
- Once the kit's seal is broken and the examiner begins the exam, the chain of custody must be maintained. The kit and evidence should be in the examiner's possession at all times, it is *never to be left unattended*.
- Guidelines of the particular kit and your facility's policy and procedure should be followed.
- Anticipate other evidence not acknowledged in the kit.
- Such things as saliva, semen, blood, vomit, chewed food or gum, insects, jewelry, or fingerprints on areas of the client's body may contain forensic evidence.
- Collect and preserve the evidence.

- 
- c. Use sterile water and sterile cotton applicators to swab bite marks and where the client was kissed or licked, and substances that fluoresce with a black light should be swabbed.
 - d. Swabbing should be done with a rolling motion, not rubbing.
 - e. If you suspect evidence to be on a removable object such as hair barrettes, jewelry, belly rings, chewing gum, or the like, collect the item in its entirety. It can be placed in a sterile urine cup with holes pierced in the lid with a sterile needle or a clean white envelope.



-
- C. Do the following for the external exam:
 1. Perform a complete head-to-toe exam (looking for injuries such as abrasions, bruises, patterned injuries, lacerations, bite marks, intentional burns from objects such as cigarettes or other implements).

3. Photograph all external injuries on extremities, abdomen, back, and face with a camera.

How to maintain chain of custody of photos for future evidence in a court of law.

Measurements should be taken of each injury, using width and length, and then documented.

4. Fingernail scrapings and swabs and clippings are collected.

5. Saliva from under the tongue, between the cheek and gum, tongue, and roof of the mouth is taken.

6. Head hair samples are taken.

7. Regarding head hair combings:

a. Trace evidence is available in the combings.

b. Evidence is often found on the teeth of the comb used.

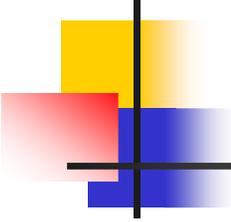
8. A blood sample is taken:

a. Via a vial

b. Or via finger poke, placing a drop of blood on a special filter paper provided in the kit

9. For pubic hair combing, remember to package the comb used.

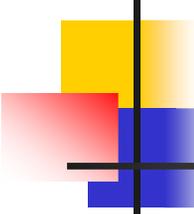
Penile Fracture

- 
- A penile fracture is an injury caused by the rupture of the *tunica albuginea*, which envelops the *corpus cavernosum penis*.
 - It is most often caused by a blunt trauma to an erect penis.
 - A popping or cracking sound, significant pain, immediate flaccidity, and skin hematoma of various sizes are commonly associated with the event. These symptoms are similar to a common bruising or contusion of the penis.
 - Penile fracture is due to erectile dysfunction, permanent penile curvature, damage to the urethra and pain during sexual intercourse.
 - Reason for penile fracture is intercourse (woman-on-top position) resulting in impact against the female pelvis bone or perineum and bending laterally are most common.

Penile Swab in sexual assault cases

- In Sexual assault cases the suspect mostly has anal, oral, vaginal intercourse.
- The swab tested for blood faeces, saliva, vaginal secretion, semen.
- Presence of Amylase indicates the presence of saliva indicates oral intercourse.
- Presence of glycogen rich epithelial cells indicates vaginal intercourse.

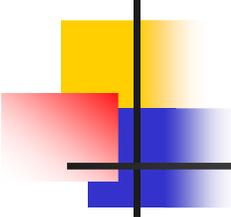
Types of condom trace evidence

- 
- **Condom is prepared by Synthetic Polyurethane, latex rubber Naturally occurring substances Lamb membranes.**
 - **Corn starch, potato starch, lycopodium, amorphous silica, talk, or other minerals are used to sticking itself.**
 - **Characterization of these particles can compared with brands of condom.**
 - **Lubricants may be petroleum jelly (wet and dry)
wet - Polyethylene glycol or gel.**
 - **Spermicide condoms may contains nonoxynol-9.**

The value condom trace evidence

- **Condom trace evidence help to prove corpus delicti and to provide evidence of penetration.**
- **Broken pieces of condom or slipped off the condom support the evidence.**

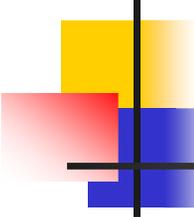
Guidelines For Evidence Collection

- 
- Use of powder free gloves
 - Packing of gloves separately for analysis.
 - ~~Collection of used condom and its wrapper.~~
 - FSL should use 3 swab , one for defense and 2 for analysis.
 - They should look for seminal fluid.
 - The condom packet may contains prints, lubricants, spermicide, particulate residue which should wipe by clean cotton swab and send for lab analysis.
 - Cotton swab must contain few drops of isopropyl alcohol which helps recover traces from external genitalia.
 - For control swab for FSL two unused air dry cotton swab used.
 - Wipe the penis from bottom to tip with cotton moisten with isopropyl alcohol.
 - Details on the condom packet may provide information about its color, shape, texture, odor taste and lubricants.

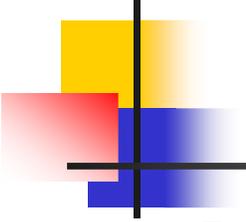
Forensic specimens

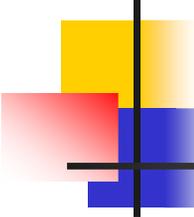
SITE	MATERIAL	EQUIPMENT	SAMPLING INSTRUCTIONS	
Anus (rectum)	Semen	Cotton swabs and microscopic slides	Use swab and slides to collect and plate material; lubricate instruments with water, not lubricant. Dry swab after collection.	
	Lubricant	Cotton swab		
Blood	Drugs DNA (victim)	Appropriate tube "	Collect 10 ml of venous blood. Collect 10 ml of blood.	
Clothing	Adherent foreign materials (semen, blood, hair, fibre)	Paper bags	Clothing should be placed in a paper bags . Collect paper sheet to drop cloth. Wet item should be bagged separately.	
Genitalia	Semen	Cotton swabs and microscope slide	Use separate swabs and slides to collect and plate material collected from the external genitalia, vaginal vault and cervix; lubricate speculum with water not lubricant or collect a blind vaginal swab.	
Hair	Comparison to hair found at scene	Sterile container	Cut approximately 20 hairs and place hair in sterile container.	
Mouth	Semen	Cotton swabs, sterile container	Swab multiple sites in mouth with one or more swabs (see Fig. 12). To obtain a (for oral washings) sample of oral washings, rinse mouth with or dental flossing 10 ml water and collect in sterile container.	
	DNA (victim)		Cotton swab	
Nails	Skin, blood, fibres, etc. (from assailant)	Sterile toothpick or similar or nail scissors/clippers	Use the toothpick to collect material from under the nails or the nail(s) can be cut and the clippings collected in a sterile container.	
Sanitary pads/ tampons	Foreign material (e.g. semen, blood, hair)	Sterile container	Collect if used during or after vaginal or oral penetration.	
Skin	Semen Saliva, blood Foreign material	Cotton swab Cotton swab Swab or tweezers	Swab sites where semen may be present. Dry swab after collection. Place material in sterile container	
Urine	Drugs	Sterile container	Collect 100 ml of urine.	2

GENERAL MEDICAL ITEMS

- 
- Tourniquet
 - Syringes, needles and sterile swabs
 - Blood tubes (various)
 - Speculums (various sizes)
 - Sterilizing equipment for sterilizing instruments (e.g. specula).
 - Proctoscope/anoscope
 - Examination gloves
 - Pregnancy testing kits
 - STI collection kits
 - Lubricant, sterile water normal
 - saline
 - Sharps container
 - Scales and height measure for examining children.

FORENSIC ITEMS

- 
- Swabs (cotton wool or similar) and containers for transporting swabs for collection of foreign material on victim (e.g. semen, blood, saliva). Do not use medium when collecting forensic specimens.
 - Microscope slides for plating of swabs.
 - Blood tubes, Blood is used for DNA or toxicological analysis.
 - Urine specimen containers for pregnancy and toxicological testing.
 - Sheets of paper (drop sheet) for patient to stand on whilst undressing for collection of loose, fine materials.
 - Paper bags for collection of clothing and any wet items.
 - Plastic specimen bags for collection or transport of other (dry) forensic items.
 - Tweezers, scissors, comb for collecting foreign debris on skin. Use scissors or comb to remove and collect material in hair.



- **TREATMENT ITEMS**

- **Analgesics** A range of simple analgesics may be useful.

- Emergency contraception

- Suture materials

-
- Tetanus and hepatitis

- prophylaxis/vaccination

- STI prophylaxis

- **LINEN**

- Sheets and blankets for examination couch.

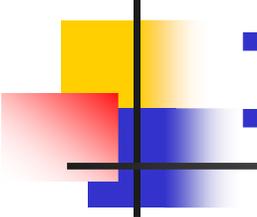
- Towels

- **Clothing** To replace any damaged or retained items of the victim's clothing.

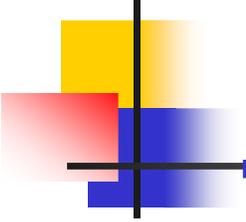
- **Patient gowns** To allow patient to fully undress for examination.

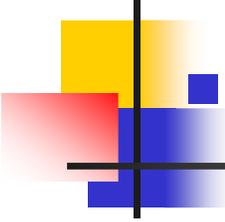
- Sanitary items (e.g. pads, tampons)

STATIONERY

- 
- **Examination record or proforma** For recording findings
 - **Labels** For attaching to various specimens.
 - **Consent form** This should be completed as required by local rules or protocols.
 - **Pathology/radiology referral forms** For referring patient for further investigation or tests.
 - **Information brochure** Ideally the patient should be provided with information about the service they have accessed, methods of contacting the treating practitioner if required and details of follow-up services. These brochures should supplement any verbal information that the victim has been provided with. In addition to reinforcing important information that the victim may forget, brochures may provide information to other potential service users.

SUNDRY ITEMS

- 
- **Camera and film** Photography is useful but not necessarily an essential tool for injury documentation. Police or hospitals may also be able to assist.
 - **Colposcope or magnifying lens** Useful for obtaining a magnified view of a wound.
 - **Microscope** May be used by the practitioner to check for the presence of spermatozoa, particularly if no laboratory facility is accessible.
 - **Swab dryer** Forensic swabs should be dried before being packaged. This can be done with the use of a dryer or the swabs can be air-dried so long as they are protected from foreign DNA.
 - **Measuring device** (e.g. ruler, For measuring the size of wounds.
tape measure, calipers Pens, pencils)
Computer and printer
 - **Sterilization equipment** For medical instruments.
 - **Children's drawing materials/toys** Useful to keep children occupied.

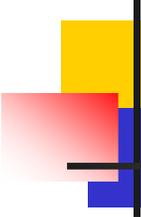


- Medico-Legal Significance of Bruise: A

bruise is called a "Contusion". This is seen as a bluish coloured area on the surface of the skin to begin with. This is due to the rupture of capillaries.

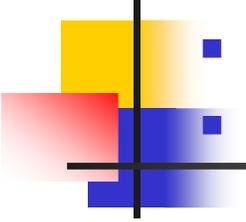
- Scientific Defence of Injuries (Abrasions):

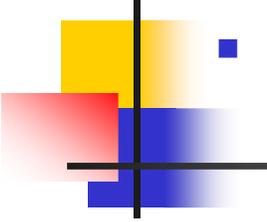
It is very common to find abrasions in different types of medico-legal cases say Assaults, Rape, Strangulation etc



Medico Legal Guidelines The Following Category of Cases Should be Made as M.L.C.

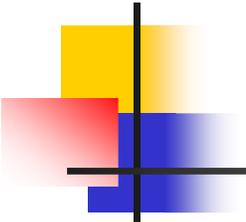
- **All injury cases, circumstances of which suggests commission of offence by someone.**
- **All burn injuries due to any cause.**
- **All vehicular, railway, aeroplane, ship, boat, factory, construction site or other unnatural accidents where there is likelihood of death or grievous hurt.**
- **Suspected or evident homicide, suicide including attempted.**
- **Suspected or evident poisoning.**
- **Suspected or evident sexual assaults.**
- **Suspected or evident criminal abortion.**
- **Unconscious cases where the cause is not natural or not clear.**
- **Cases brought dead with improper history creating suspicion of an offence.**

- 
- **Cases referred by Courts or otherwise for age estimation.**
 - **Dead on arrival cases, or patients who die shortly after being brought to the Casualty and before a definite diagnosis could be made.**
 - **Any other case not falling under the above mentioned category but has legal implications.**
 - **Patients dying suddenly after parenteral administration of a drug or medication.**
 - **Patient falling down or any mishap in the Hospital, sustaining injury in the Hospital.**
 - **Death on Operation table.**
 - **Unexplained death after surgery or Interventional procedure.**
 - **Unexplained ICU death.**

- 
- **Patient treated and then referred from a private hospital or other Government hospital with complications of surgery or delivery or bleeding, where the cause of death is unexplained.**
 - **Relatives of the patient assault the treating doctor or other staff of the hospital.**
 - **Relatives of the patient create a law and order problem in the hospital.**
 - **When an autopsy is contemplated, these guidelines are to be followed to decide whether a Pathological or Medicolegal (Forensic) autopsy is to be requested:**
 - **Pathological Autopsy is to be requested when death is due to unexplained disease process or in cases that are rare or in cases which have academic interest.**
 - **Medicolegal (Forensic) Autopsy is to be requested in the above mentioned 1 to 20 circumstances.**

FORENSIC SAMPLES

Health Worker's Copy



SAMPLES

- Clothing (bags) ■
- Drop sheet..... ■
- Sanitary pad/tampon ■

BODY EVIDENCE

- Oral swab and slide ■
- Foreign material on body ■
- Semen-like stains on body ■
- Semen-like material on head hair..... ■
- Semen-like material on pubic hair ■
- Combings of pubic hair ■
- Fingernail evidence ■
- Body swab (for saliva) (note site) ■
- Other (specify) ■

GENITO-ANAL EVIDENCE

- Foreign material ■
- High vaginal swab and slide..... ■
- Endocervical swab and slide ■
- Anal swab and slide..... ■
- Rectal swab and slide ■
- Other (specify) ■

COMPARISON SAMPLES

- Pubic hair ■
- Head hair ■
- Buccal swab for DNA ■
- Blood for alcohol and drugs (plain tube or fluoride/oxalate vial) ■
- Urine for drugs ■

OTHER

- Other samples (list) ■
- ■

TOTAL NO. OF SEALED BAGS ■

The samples listed were handed to:

Name: Rank/number:

Station/squad:

Date and time: ...

Signed:

SEXUAL VIOLENCE EXAMINATION RECORD NAME:

DATE OF EXAMINATION:

CONFIDENTIAL

FORENSIC SAMPLES

Laboratory Copy1

Date and time collected:hours on / /

SAMPLES

- Clothing (bags) ■
- Drop sheet..... ■
- Sanitary pad/tampon ■

BODY EVIDENCE

- Oral swab and slide ■
- Foreign material on body ■
- Semen-like stains on body ■
- Semen-like material on head hair..... ■
- Semen-like material on pubic hair ■
- Combings of pubic hair ■
- Fingernail evidence ■
- Body swab (for saliva) (note site) ■
- Other (specify) ■

GENITO-ANAL EVIDENCE

- Foreign material ■
- High vaginal swab and slide..... ■
- Endocervical swab and slide ■
- Anal swab and slide..... ■
- Rectal swab and slide ■
- Other (specify) ■

COMPARISON SAMPLES

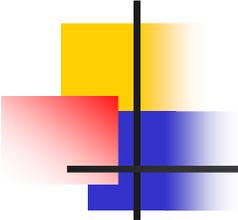
- Pubic hair ■
- Head hair ■
- Buccal swab for DNA ■
- Blood for alcohol and drugs (plain tube or fluoride/oxalate vial) ■
- Urine for drugs ■

OTHER

- Other samples (list) ■
- ■
- ■

HEALTH WORKER'S NAME:

This copy to be enclosed with specimens. These should be taken to the laboratory.



प्रपत्र डी0एन0ए0 परीक्षण-2/2/2011

विधि विज्ञान प्रयोगशाला, उत्तर प्रदेश, लखनऊ-226 006
टेलीफोन नं०/फैक्स-0522-2336232
ई-मेल :- dirfsl@up.nic.in
डीएनए परीक्षण हेतु
जैविक नमूनों का प्रमाणीकरण प्रपत्र

फोटोग्राफ
जीवित व्यक्ति का
डाक्टर द्वारा
प्रमाणित

- (A) नमूने के स्रोत का विवरण:
1. नाम (स्पष्ट अक्षरों में).....
 2. पिता/संरक्षक का नाम.....
 3. लिंग..... 4. आयु..... वर्ष..... माह.....
 5. पूरा पता.....
6. चिकित्सा/स्वास्थ्य विवरण
सामान्य..... रोग/दीर्घकालिक रोग
7. रक्त आधान यदि कोई हुआ हो- विगत तीन माह में: यदि हाँ तो दिनांक
8. अंग प्रत्यारोपण, यदि कोई हो तो दिनांक-.....
- (B) अभियोग परीक्षण हेतु ज्ञात संग्रहित नमूना
अभियोग सं०..... दिनांक..... थाना..... धारा.....
- (C) डी0एन0ए0 परीक्षण का उद्देश्य.....
- (D) जैविक नमूने के स्रोत/दाता द्वारा घोषणा:
मैं..... एतद्वारा घोषणा करता/करती हूँ कि परीक्षण हेतु संग्रहित/संकलित
जैविक नमूना (नमूने)..... मेरी सहमति एवं संज्ञान में लिया गया है तथा उपरोक्त सूचनायें सत्य
हैं।
- हस्ताक्षर
- निशान अँगूठा बाया निशान अँगूठा दाहिना नाम
- दिनांक..... दिनांक.....
- (E) (1) ज्ञात जैविक नमूने:
❖ (2) प्रदर्श-
(I) तरल रक्त (II) रक्त के धब्बे/
रक्त रंजित प्रदर्श (III) मुख स्वाब
- (IV) समूल बाल (V) वीर्य (VI) योनि स्वाब
- जड़ सहित
- (VII) एनल स्वाब (VIII) कटे नाखून (IX) हड्डिड्यो
- (X) शरीर द्वारा स्रावित (XI) दौत/
अन्य स्राव के धब्बे इनेमल पल्प

(XII) ऊतक (XIII) अन्य

(XIII) व्यक्तिगत प्रयोग की जाने वाली सामग्री-

(i) कंघा (ii) अंतःवस्त्र (iii) लिपिस्टिक

(iv) चश्मा (v) रुमाल (vi) कलाई घड़ी

(vii) नाक एवं कान के आभूषण (viii) मोबाइल फोन

(ix) कन्डोम

(F) जैविक नमूने का विवरण:

- (1) रक्त परिरक्षण की मात्रा.....
 - (2) परिरक्षण में प्रयुक्त रसायन.....
 - (3) संकलन/परिरक्षण का दिनांक.....
 - (4) नमूना मोहर/सील की छाप.....
- (लाख की मुद्रा को सैलोटैप से कवर किया जाये।)

चिकित्सक

हस्ताक्षर.....

नाम.....

पदनाम.....

रबर स्टैम्प.....

दिनांक.....

(G) विवेचनाधिकारी/गवाह का विवरण

जैविक नमूनों का संकलन/संग्रहण दो गवाहों की उपस्थिति में किया जाना अधिमान्य है।

विवेचनाधिकारी

हस्ताक्षर.....

नाम.....

पदनाम.....

पता.....

दिनांक.....

गवाह 1:

सम्मानित नागरिक

हस्ताक्षर.....

नाम.....

पदनाम.....

पता.....

दिनांक.....

गवाह 2:

सम्मानित नागरिक

हस्ताक्षर.....

नाम.....

पदनाम.....

पता.....

दिनांक.....

मात्र कार्यालय प्रयोगार्थ:-

अभियोग सं०.....

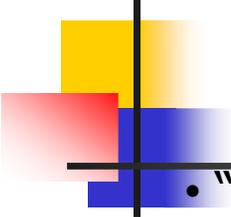
डीएनए परीक्षण.....

वि०वि०प्र० उ०प्र०, लखनऊ अभियोग प्राप्ति का दिनांक.....

प्रदर्श संख्या.....

❖ सीआरपीसी 1973 के सेक्शन- 53, 53 ए, 164 एवं 164 ए में उल्लिखित वर्ष 2005 में संशोधित दिनांक 23.06.2006 से प्रभावी है।

False Rape Allegations

- 
- “deliberate lie by the alleged victim accusing a man of a rape that did not occur. It may also be a fantasy report that the female believes is true.”
 - Three conditions used to classify cases as false allegations.
 1. Victim recants complaint.
 2. Victim fails polygraph.
 3. Investigation reveals allegation to be false.
 - False allegation is a sexual assault has occurred against one’s person, or the person of another. ie assault may be in the form of touching or penetration, or having been forced to touch or penetrate another in a sexual manner.

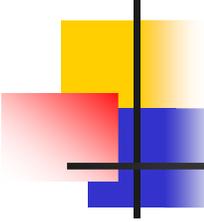
False rape allegation may cause

- **Imprisonment of an Innocent Person**
- **Impact on Legitimate Victims of Rape**
- **Emotional Problems in Need of Attention**
- **Problems Confronting the Investigator**

Classification of Unfounded Rape Cases

such as refusal to prosecute,

Sex-Stress Situations



- Sex-stress situations are cases in which a male and female initially agreed to have sexual relations but then something “went wrong.” Usually, the problem involves a third party who became aware of the situation and defined it as rape or convinced the female to say it was rape and she saw it as a way out of some dilemma.

- Two main types of sex-stress cases are (1) mutual agreement and (2) financial gain. In a typical mutual agreement case, both parties agree to have sex but then one person wishes to deny the act or becomes repulsed by her behavior.

- **Delusional Rape Allegation**

- **Who Makes a False Allegation?**

- **Motives for False Rape Allegations**

 - Attention/Sympathy

 - Anger/Revenge

 - Alibi

Collateral Materials in Sexual Crimes

- To understanding the significance of materials seized from violent sexual offenders

Forensic Evidence

- Defined as physical or trace evidence that can be scientifically matched with a known individual or item. Such evidence includes fingerprints, footprints, body fluids, hairs, and fibers. Forensic evidence, if properly obtained and examined, can be powerful and reliable evidence in any type of crime.

Circumstantial Evidence

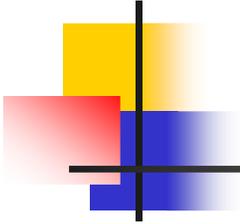
Defined as facts or circumstances that tend to implicate a person or persons in a crime.

Eyewitness Evidence

Include one or more individuals claiming to have witnessed the crime during its commission or to have seen the suspect in the vicinity of the crime.

Direct Evidence

May be defined as tangible items that directly implicate an individual in a crime. Materials include items used in the crime (e.g., handcuffs, gloves, mask) or items taken from a victim or scene of a crime.



Types of Collateral Materials

- **Erotica**

Defined as any material that serves a sexual purpose for a particular person. For example, the average person is not sexually aroused by a length of rope, but for a person with a fetish for rope, such materials can be extremely stimulating. Material suspected of being erotica must be viewed and evaluated in the context in which it is found.

Physical Evidence in Sexual Assault Investigations

- Evidence, including body fluids, hairs, and fibers deposited on various surfaces and objects.
- Forensic evidence must be properly documented, collected, packaged, preserved, and secured by personnel knowledgeable in these procedures.

The Nature of Physical Evidence

The general principles, terms, and concepts that allow us to have a common understanding of what is important with regard to evidence and its collection, packaging, preservation, and presentation in court

Several evidences in sexual assault cases, should be dealt with as follows:

1. Identification of evidence
2. General types of evidence
 - A. Class characteristic evidence
 - B. Individual characteristic evidence
 1. From persons
 2. From things
 3. Evidence resulting from transfer- ways in which evidence may be distributed prior to collection.
 - A. Direct
 - B. Indirect
 4. Evidence environment—understanding the variety of evidence and the relationships between the different evidence types within the scene
 5. Evidence/crime scene contamination—addition to or deletion of a portion of the evidence
 - A. Nature of the evidence environment
 - B. Personnel
 - C. Careless and/or inadvertent alteration of the scene
 - D. Packaging of the evidence
 - E. Laboratory environment
 6. Degradation of evidence—the effect of a hostile environment
 - A. Heat
 - B. Humidity
 - C. Ultraviolet (UV) light

The Identification of Evidence

• Identification often takes on additional significance in the forensic laboratory. Different disciplines of study apply a unique meaning to the identification of the evidence, depending on its nature, its chemical form, the quantity, its condition, its source, and other considerations.

• Identifications may be based on appearance, color, physical properties (such as crystal structure), or chemical properties (such as composition) determined by analysis.

General Types of Evidence

- **Class Characteristic Evidence**
- **Individual Characteristic Evidence**
- **Evidence Resulting from Transfer**
- **Direct Transfer**
- **Indirect Transfer**
- **The Evidence Environment**
- **Evidence/Crime Scene Contamination**
- **The Nature of the Evidence Environment**
- **The Personnel**
- **Careless and/or Inadvertent Alteration at the Scene**
- **The Packaging of Evidence**
- **The Laboratory Environment**
- **Degradation of Evidence**
- **Considerations Relating to the Victim, Suspect, and Assault Scene**

Sexual Assault Evidence Collection Kits

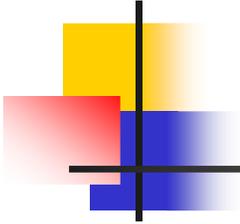
- The role of physical evidence in sexual assault crimes is to associate the victim, the suspect, and if possible, the crime scene. However, it should be recognized that a primary (and critical) role of the evidence is to show that sexual contact did, in fact, take place. It should also be understood that the science of forensic examinations is one of comparisons between known and unknown samples. For example, DNA from the semen on the victim's clothing
 - might be compared with DNA from the blood of both the victim and the suspect, identifying
 - the suspect as the semen donor. Pubic hairs found in the victim's panties might be
 - compared with the known pubic hairs of the victim and those of the suspect—ultimately,
 - with the same result. Such comparisons are common and the normal course of business in
 - a forensic laboratory. Accordingly, it is evident that the examination of the victim and, if
 - possible, the suspect for significant evidence and known samples is critical to the investigation.
- A tool for achieving this objective is the sexual assault evidence collection kit.

Physical Evidence in Sexual Assault Investigations

The Nature of Physical Evidence

Evidence in sexual assault cases should be dealt with

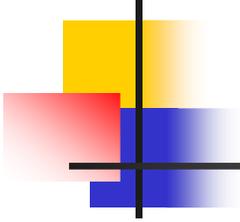
1. Identification of evidence—the ways in which evidence may be identified
2. General types of evidence
 - A. Class characteristic evidence—belonging to a general class of items
 - B. Individual characteristic evidence—having its own unique character
 1. From persons
 2. From things
 3. Evidence resulting from transfer—ways in which evidence may be distributed prior to collection.
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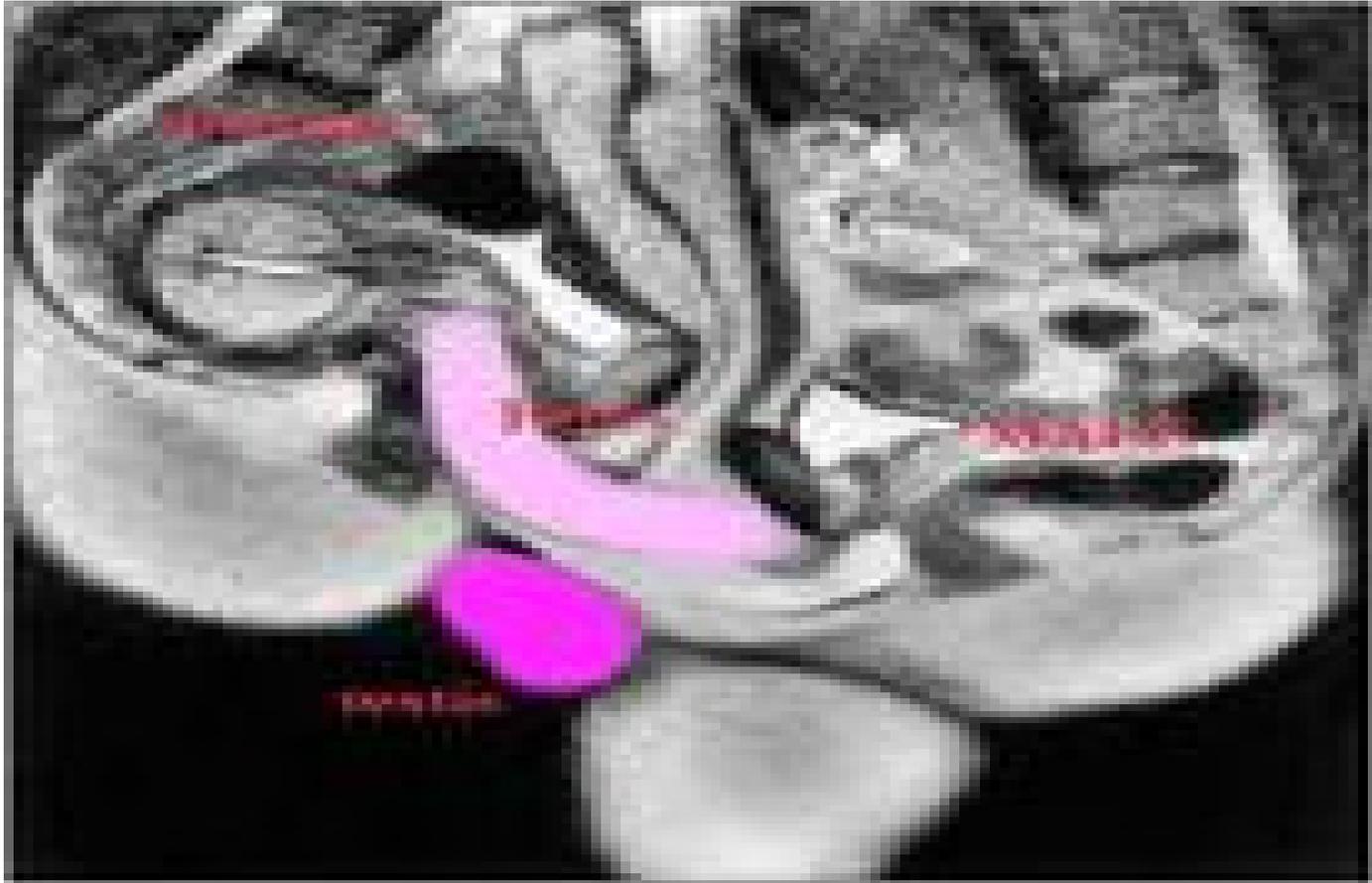
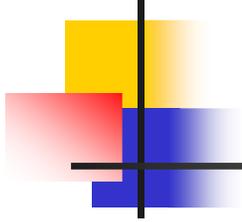


The Identification of Evidence

General Types of Evidence

Class Characteristic Evidence





Plea seeks norms for exam of sex assault victims

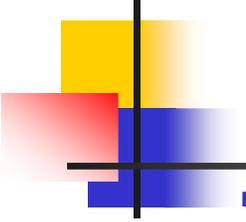
NAGPUR: Claiming that many hardcore criminals get acquitted for lack of evidence due to incorrect reports by the medical officers, two medicos have moved high court to formulate proper guidelines for conducting forensic examination of sexually assaulted victims.

The petitioners also prayed to HC to give direction to Union and state government to create training centres for doctors and nurses for special forensic medical examination of sexually assaulted victims as well as the accused, as per WHO guidelines and survey committee report.

A division bench comprising justices AP Lavande and Pramod Kode on Monday issued notices to union and state ministries of health and family welfare as well as law and judiciary returnable in four weeks. Anil Kilor, AS and Swapnil Pathak were counsels for the petitioner.

Petitioner Dr Ranjana Pardhi while citing reports of Dr Indrajit Khandekar pointed out the doctors and nurses lacked experience in performing medical examination of sexually assaulted victims. There is no uniformity in reporting the findings of such cases. Moreover, there is neither any guideline nor any protocol for conducting medical examination of such victims.

Citing statistics of National Crime Report Bureau, the petitioners stated that rape and sexual assault cases have increased in India in last many years and therefore eminent authors of medical jurisprudence have recommended a proper procedure to record medical examination. They also stressed on age determination test, as many a time a victim is a minor or part of trafficking.



Drug Facilitated Sexual Assault

- Anticholinergics
- Antihistamines
- Barbiturates
- Benzodiazepines
- Chloral hydrates
- Dextromethorphan
- Ethanol
- Gamma-hydroxybutyrates
- Ketamines
- Marijuana
- Nonbenzodiazepines sedatives- hypnotics
- Opioids
- Oxymetazpline

Proposed Classification of Anogenital findings in children

Normal (Class 1)

- Periurethral bands Intravaginal ridges or columns
- Increased erythema in the sulcus
- Hymenal tags , mounds or bumps
- Elongated hymenal orifice in an obese child
- Ample posterior hymenal rim (1-2 mm wide)
- Estrogen changes (thickened redundant hymen)
- Diastasis ani/smooth area of 6 or 12 o clock in perianal area
- Anal tag / thickened fold in midline

Non specific Findings (Class 2)

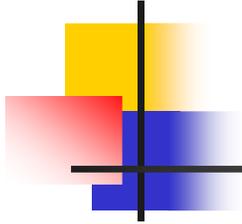
- Erythema of vestibule or perianal tissues
- Increased vascularity of vestibule or hymen
- Labial adhesions
- Rolled hymenal edges in the knee – chest position
- Narrow hymenal rim, but at least 1 mm wide
- Vaginal discharge
- Anal fissures
- Flattened and folds
- Thickened and folds
- Anal gapping with stool present
- Venous congestion of perianal tissues, delayed in exam
- Fecal soiling

Suspicious for abuse (Class 3)

- Enlarged hymenal opening – greater than two SDs from non abused study
- Immediate anal dilatation of atleast 15 mm with stool not visible or palpable in rectal vault
- Immediate extensive venous congestion of perianal tissues
- Distorted , irregular anal folds
- Posterior , hymenal rim less than 1 mm in all views
- Condyloma acuminata in a child
- Acute abrasions or lacerations in the vestibule or in the labia (Not involving the hymen) , or perianal lacerations

Suggestive of Abuse/ Penetration (Class 4)

- Combination of two or more suspicious anal findings or two or more suspicious genital findings
- Scar or fresh laceration of the posterior fourchette with sparing of the hyman
- Scar in peri-anal space area (must take history in to consideration



- **Clear evidence of penetrating injury (Class 5)**

- Areas with an absence of hymenal tissue, (below the 3 O clock to 9 O clock line with patient supine) which is confirmed in the knee chest position .
- Hymenal transections or lacerations
- Perianal laceration extending beyond (deep to) the external anal sphincter
- Laceration of posterior fourchette , extending to involve in hymen
- Scar of posterior fourchette associated with a loss of hymenal tissue between 5 and 7 O clock

Assessment of likely hood of sexual abuse

Class 1 No evidence of abuse

- Normal exam, no history , no behavioral changes , no witnessed abuse
- Non specific findings with another known etiology , and no history or behavioral changes
- Child considered at risk for sexual abuse , but gives no history and has non specific behavior changes

Class 2 Possible abuse

- Class 1,2 or 3 findings in combination with significant behavioral changes ,especially sexualized behaviors, but child unable to give history of abuse
- Presence of condyloma or herpes 1 (genital) in the absence of a history of abuse and with otherwise normal exam
- Child has made statement , but not detailed or consistent
- Class 3 findings with no discloser of abuse

Class 3 Probable abuse

- Child gives a clear, consistent, detailed description of molestation, with or without other findings present.
- Class 4 or 5 finding in a child, with or without a history of abuse, in the absence of any convincing history of accidental penetrating injury.
- Culture – proven infection with chlamydia trachomatis (child over 2 years of age) in a prepubertal child. Also culture proven herpes type 2 infection in a child, or documented Trichomonas infection.

Class 4 Definite evidence of abuse or sexual contact

- Finding of sperm or seminal fluid in or on a Child's body
- Witnessed episode of sexual molestation. This also applies to cases where pornographic photographs or video tapes are acquired as evidence.
- Non accidental, blunt penetrating injury to the vaginal or anal orifice.
- Positive, confirmed cultures for Neisseria Gonorrhoeae in a prepubertal child, or serologic confirmation of acquired syphilis.

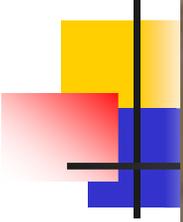




Fig 1. Colposcopic photograph taken at 10 × magnification, patient supine, using labial traction. A 4-year-old girl with sexualized behaviors stated that her 14-year-old brother "hurt my vagina." Brother pled guilty to child molest. Photo shows normal annular hymen, no evidence of injury.



Fig 2. Colposcopic photograph taken at 10 × magnification, patient supine, using labial traction. A 9-year-old female stated that her 13-year-old cousin "poked his pee pee in my pee pee. It hurt a lot." Cousin pled guilty. Photo shows narrow rim of hymen posteriorly, which measured less than 1 mm at the 7 o'clock position. This was rated as a suspicious finding.



Fig 3. Colposcopic photograph taken at 10 × magnification, patient supine, using labial traction. A 10-year-old female gave a history that her grandfather “touched my front private with his private.” She described pain, but no blood. The grandfather pled guilty to child molest. Photo shows enlarged orifice for age, with horizontal opening of 11 millimeters using traction, which is greater than two standard deviations above the mean for age and method. Also, hymen measured less than 1 mm in width between 5 and 7 o’clock. Combination of two or more suspicious genital findings makes this suggestive of abuse/penetration.



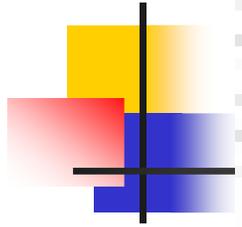
Fig 4. Colposcopic photograph taken at 16 × magnification, patient supine, using labial separation. This 8-month-old female infant was examined within 12 hours of being found with a large amount of blood in the diaper. The photo was taken approximately 36 hours after the injury. A 21-year-old male babysitter pled guilty to one count of digital penetration. This photo shows a healing laceration of the posterior fourchette which angles from 6 to 5 o’clock, a complete hymenal transection at 6 o’clock, and yellowish granulation tissue in the fossa, partially covering the hymenal transection. These findings are clear evidence of a penetrating injury, Class 5.

■ **Probability of Abnormal* Genital Findings in Girls**

S No.	Time since incident**	n	Blood found or reported	
1	Less than 72 hours	19	.90	.72
2	4 to 14 days	28	.79	.52
3	15 days to 5 months	59	.61	.32
4	More than 6 months	29	.40	.16

* Class 4 or 5 genital findings

** Time known in 135 cases



Handwritten text in a cursive script, possibly reading "MAY 1950" or similar, enclosed within a large, irregular, hand-drawn outline.