Forensic Medical Evidence in Sexual Assaults

Jason Payne-James LLM MSc FRCS FFSSoc FFFLM DFM

What is needed from healthcare professionals?

Examination in Cases of Sexual Assault

- Health and legislative problems for every society
- Clinical assessment of complainants (victims) and suspects (assailants)
  - choice (of examiner - gender)
  - doctors (and/or healthcare professionals with specific experience and knowledge)
- Medical ethics
  - consent & confidentiality
- Knowledge base
  - medical conditions/pathology/disease
  - medical care
  - forensic/legal issues
  - retrieval of evidence
  - preservation of evidence
  - presentation of evidence (documentation – role in court)
- Principles of forensic analysis

Key Stages in Examination in Cases of Sexual Assault

- Presentation
  - complainant/victim
  - suspect/defendant
- Information
- Examiner
- Location (eg SARC/police station/hospital)
- Technique
- Documentation
- Interpretation of findings
  - normal/abnormal
  - presence or absence of evidence-base (published literature)
- Statement writing
- Live evidence
  - professional
  - expert

Examination in Cases of Sexual Assault

- 'Victim' examinations
- 'Suspect' examinations
- Doctor (or other)
  - prior knowledge
  - ? first account
  - statement
  - ABE interview
- Range of skills (competence)
  - SARCs/Havens
  - doctors (seniority)
    - forensic
    - non-forensic
  - nurses
- Training
  - Initial - mentoring
  - update

Knowledge Base

- Anatomy, development, physiology
- Awareness of range and frequency of normal sexual practices
- Assorted activities – social, cultural, religious, ethnic, sexual orientation
- Reasons for examination
- Reasons for sampling
- Methods of sampling

Rogers D, Newton M. Sexual Assault Examination. In: Stark MM (ed). Clinical Forensic Medicine. 2nd Edition. A Physician's Guide. Humana Press, 2005

Nadesan K. Evidential sample collection. In: Payne-James JJ, Byard R, Corey T, Henderson C (eds). Encyclopedia of Forensic & Legal Medicine. Elsevier, 2005

Girardin B, Faugno DK, Howitt . Adult sexual assault: practical management. In: Payne-James JJ, Busuttil A, Smock W (eds). Forensic Medicine: Clinical & Pathological Aspects. Greenwich Medical Media, 2003

Payne-James JJ. Sexually Motivated Assault. In: Wiley Encyclopedia of Forensic Science. Jamieson A, Moenssens A (eds). John Wiley & Sons Ltd, Chichester UK, 2009

Key Considerations - Medical Examination Victim and Suspect

- Immediate medical care
- Timing of the examination
- Location of the examination
- Introduction
- Consent
- Details of the allegation (accounts)
- Medical & sexual history*
- Drug and alcohol history*
- Nature of the examination
  - general (including, development, height and weight)
  - anogenital examination
- Ownership and handling of notes and photodocumentation

Key Considerations - Forensic Analysis

Medical Evidence - general information

- How was the injury sustained
- Weapon or weapons used (is it still available)
- When was the injury sustained
- Has injury been treated
- Pre-existing illnesses (eg skin disease, bleeding diathesis)
- Regular physical activity (eg contact sports)
- Regular medication (eg anticoagulants, steroids)
- Handedness of victim and suspect
- Use of drugs and alcohol
- Clothing worn

Payne-James JJ, Crane J, Hinchliffe J. Injury assessment, documentation and interpretation. In: Stark MM (ed). Clinical Forensic Medicine. A Physician's Guide. 2005 Humana Press

Medical Evidence - injury characteristics

- Location
- Pain, tenderness, stiffness
- Type (eg bruise, cut, abrasion)
- Size (use metric values)
- Shape, colour
- Orientation
- Age
- Causation
- Time
- Transientness (of injury) ? reassessment

Payne-James JJ, Crane J, Hinchliffe J. Injury assessment, documentation and interpretation. In: Stark MM (ed). Clinical Forensic Medicine. A Physician's Guide. 2005 Humana Press

Medical Evidence - injury classification

- Wheals & erythema (reddening)
- Bruises (contusion, ecchymosis)
  - haematoma
  - petechiae
- Abrasions (grazes)
  - scratches
  - scuff/brush abrasions
  - point abrasion
- Lacerations
- Incisions
  - slash
  - chop
- Stab wounds
- Bites (forensic odontologist)

Payne-James JJ, Crane J, Hinchliffe J. Injury assessment, documentation and interpretation. In: Stark MM (ed). Clinical Forensic Medicine. A Physician's Guide. 2005 Humana Press

Vale GL, Noguchi TT. Anatomical distribution of human bite marks in a series of 67 cases J Forensic Sci Soc 28 61-69

Methods & Site of Sampling

- Assailant and complainant
- All parts of body where contact may have occurred:
  - licked
  - kissed
  - sucked
  - bitten
  - ejaculation
  - penetration
  - (visual marks of injury)
- Miscellaneous
  - eyes, contact lens
  - toilet tissue
  - faeces

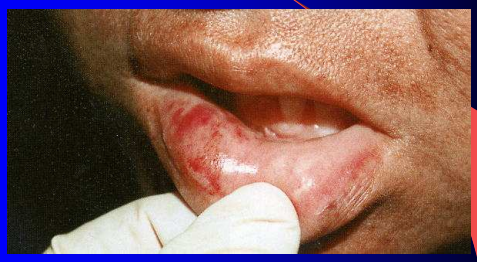
Medical Evidence - mouth, lips, oral cavity

- Assorted injuries
- Sexual acts – consensual
  - fellatio – penis placed in mouth, sexual stimulation by sucking, ± ejaculation
    - 55% Evans BA, Bond RA, Macrae KD. Sexual behaviour in women attending a GU medicine clinic. Genitourin Med 64 43-48 1998
  - cunnilingus – female genitalia licked, sucked or rubbed by lips or tongue
    - 66-72% Johnson AM, Wadsworth J, Wellings K, Field J. Heterosexual practices. In: Sexual attitudes and lifestyles. Blackwell Scientific Publications 1994
  - anilingus – anus is licked, sucked or rubbed by lips or tongue
    - (15%?) Bolling DR. Prevalence, goals and complications of heterosexual anal intercourse in a gynecologic population. J Reprod Med 19 121-124 1977

Medical Evidence - mouth, lips, oral cavity

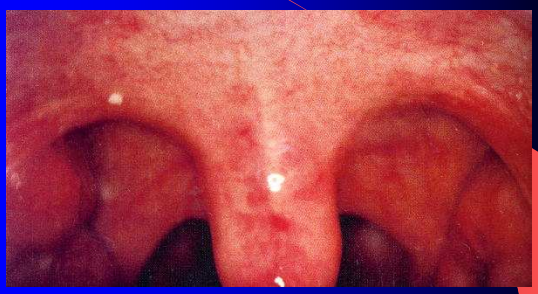
- Sexual acts – non-consensual
  - fellatio – penis placed in mouth, sexual stimulation by sucking, ± ejaculation
    - Often in association with other acts
    - n=1507 17% F 14% M performed fellatio, 31% M were subject to fellatio Keating SM, Higgs DF. Oral sex – further information from sexual assault cases. J Forensic Sci Soc 32 327-331 1992
  - cunnilingus – female genitalia licked, sucked or rubbed by lips or tongue
    - 3-9% Keating SM. Oral sex – a review of its prevalence and proof. J Forensic Sci Soc 28 341-355 1988
  - anilingus – anus is licked, sucked or rubbed by lips or tongue
    - No data available

Medical Evidence - mouth, lips, oral cavity



Medical Evidence - mouth, lips, oral cavity

Medical Evidence - mouth, lips, oral cavity



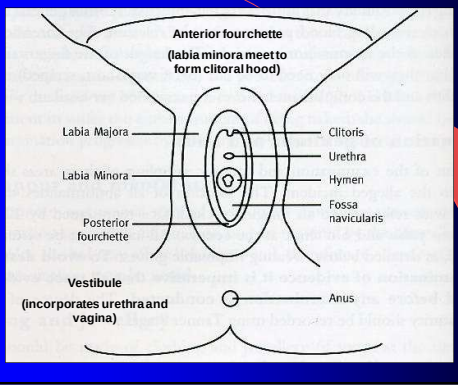
Medical Evidence - female genitalia

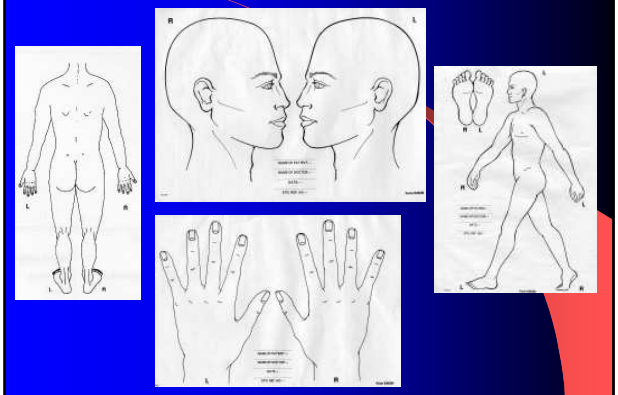
- Injuries to external genitalia
  - Lacerations (tears)
  - Abrasions
  - Bruises
- Posterior fourchette, labia majora, minora

Medical Evidence - documentation

- Written
- Body diagrams
- Photography
  - print
  - digital
- DVD
- Storage
- Disclosure and review

Medical Evidence - female genitalia





Evidence-base?

- Consensual
- Non-consensual
- Adult
- Adolescent
- Child
- Chronic
- Acute
- Wound healing

Localization of genitoanal injury in 80 women exposed to sexual assault

	Number	(%)
Hymen	14	(17.5)
Labia majora	3	(3.8)
Labia minora	8	(10.0)
Vestibule	7	(21.3)
Posterior fourchette	39	(48.8)
Perineum	6	(7.5)
Anal/perianal	18	(22.5)
Vagina	4	(5.0)
Single site trauma	54	(67.5)
Multiple site trauma	26	(32.5)

Hilden M, Schei B, Sidenius K. Genitoanal injury in adult female victims of sexual assault. Forensic Science International 2005 154 200-205

Consensual Sexual Contact – Anogenital Injuries

- Adolescents (13 – 17 y) reporting consensual sexual intercourse (CSI) n = 51
- Controls = victims of alleged sexual assault or non-consensual sexual intercourse (NCSI) matched to cases by age and prior sexual intercourse experience.
- Genital trauma was documented using colposcopy with nuclear staining and digital photography.
- 49% (25/51) of CSI subjects reported no prior sexual intercourse experience.
- CSI and NCSI frequency of genital injuries (73% vs. 85%, p = 0.069).
- Mean anogenital injuries in CSI = 1.9 ± 1.5 - Mean anogenital injuries in NCSI subjects = 2.6 ± 2.0 (p >0.02),
- 'Anogenital trauma was documented in 73% of adolescent females after consensual sexual intercourse versus 85% of victims of sexual assault. The localized pattern and severity of anogenital injuries were significantly different when compared with victims of sexual assault….. the presence of anogenital trauma suggests that penetration has occurred and implies nothing about consent.'.

Jones J, Rossman. Anogenital Injuries in Adolescents after Consensual Sexual Intercourse. Academic Emergency Medicine 2003; 10:1378–1383

Adolescent Sexual Assault

- N = 214
- Age 14-19y (mean 16.3)
- 'hymenal tears uncommon, even in self-described virginal girls' – irrespective of mode of penetration
- 'virginal girls' – 19% had hymenal tears

Adams J et al. Adolescent sexual assault: documentation of acute injuries using photocolposcopy. J Pediatr & Adol Gynec 2001 14 175-80

Anal injuries

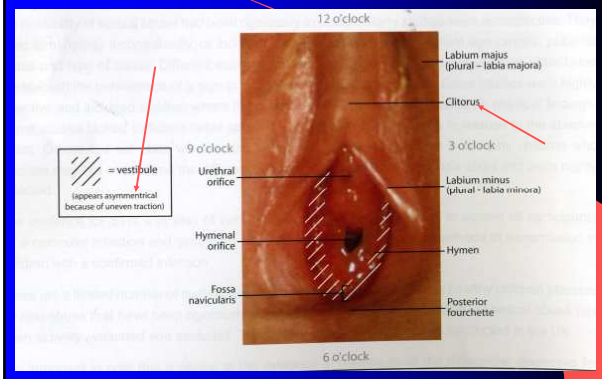
- Assess:
  - anus
  - perianal area
  - anal canal
  - anal sphincter
  - rectum
- Anal fissures
- Anal tears
- Anal lacerations
- Anal bruising
- Rectal tears
- Rectal lacerations
- Rectal bruising
- Anal/perianal and gastrointestinal disease

Royal College of Paediatrics and Child Health

The Physical Signs of Child Sexual Abuse

An evidence-based review and guidance for best practice

March 2008



Evidence Statement

Genital abrasions have been reported in prepubertal girls with a history of vaginal penetration (one study). In the one study of prepubertal girls selected for non-abuse, abrasions have not been reported.

In pubertal girls, (one study) suggests that genital abrasions are seen in a proportion of girls who allege penile penetration and are examined within 72 hours after the abuse. Further evidence is needed to determine the significance of this.

Issues for clinical practice

- *Early examinations are more likely to detect abrasions.*
- *If this clinical sign is of concern then the child should be re-examined to assist with diagnosis.*
- *There are many other possible causes of abrasions, which should be considered in the differential diagnosis (see 4.5.1).*
- *When abrasions are found on the genitalia, sexual abuse should always be considered.*

New Data

- Retrospective review - n= 234
- 14 to 29 years
- Genital injury was described by injury prevalence, frequency, and anatomical locations of injuries.
- Genital injury prevalence was 62.8%.
- Younger age was not significantly associated with the presence or absence of genital injury.
- Younger age was significantly associated with an increased number of genital injuries overall and to the thighs, labia minora, periurethral area, fossa navicularis, and vagina

J Obstet Gynecol Neonatal Nurs. 2008 May-Jun;37(3):282-9. Relationship of genital injuries and age in adolescent and young adult rape survivors

Extra-genital injuries

- Consensual
- Restraint
- Assault
- 'Rough and tumble'
- 'Horseplay'

Bruising

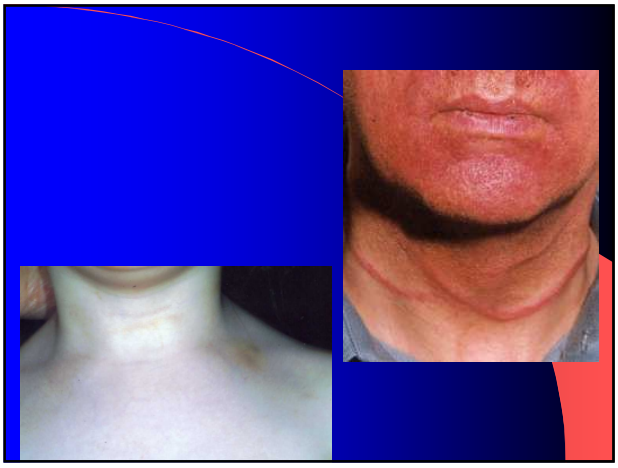
- Direct force
  - ? kick
  - ? sexual
  - ? number of impacts
  - ? how old

Bruising

- Direct force
  - ? kick
  - ? sexual
  - ? number of impacts
  - ? how old

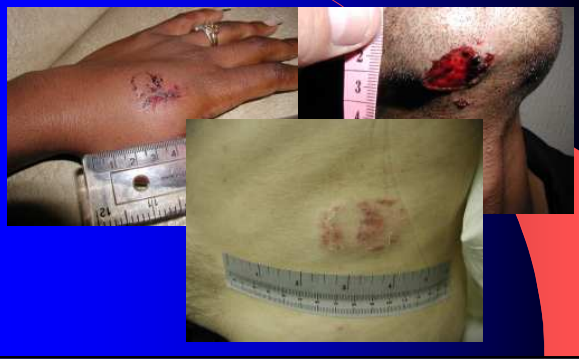
Blunt force

- Patterned



Bites

- Use odontologist when source of bite unknown



Other Issues

- Doctors (and other healthcare professionals) assume police officers in case will know which samples are required or why they are being requested - and vice-versa
- Effects of alcohol
- Effects of drug
- False complaints do occur
- Doctors must remain non-judgemental with regard to:
  - A) examination
  - B) interpretation
- In court other accounts may be given
- Professional vs expert witnesses

Other Issues

Rape cases: police admit failing victims

Senior Met officer blames scepticism and inertia for low conviction rate

The Guardian – 4th March 2008

Problems Related to Medical Examination

- British culture of alcohol and drugs?
- Inexperience:
  - Inadequate examination
  - Incompetent examination
  - Inadequate support – senior staff – medical - police
  - Inadequate understanding of significance of
    - Genital injuries
    - General injuries
- Overstating conclusions
- Bias
- Making assumptions and ignoring the fact that there are other accounts of events
  - 'is consistent with the allegations (and…..??)'
- Experts
- Juries

Warning

"As everybody who has anything to do with the law knows, the path of law is strewn with examples of open and shut cases which, somehow, were not;

of unanswerable charges which, in the event, were completely answered;

of inexplicable conduct which was fully explained;

of fixed and unalterable determinations that, by discussion, suffered a change."

Megarry J in John v Rees [1970] Ch 345, 402

Advice

"Justice 'according to law' demands proper evidence. By that we mean not merely evidence which might be true and to a considerable extent probably is true, but, as the learned trial judge put it, "evidence which is so convincing in truth and manifestly reliable that it reaches the standard of proof beyond reasonable doubt."

Court of Appeal in *R. v Steenson and others* [1986] NIJB17 – Lord Lowry LCJ

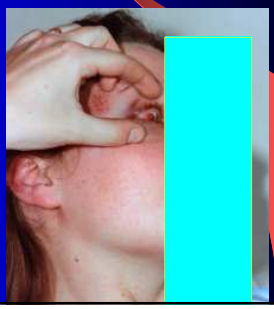
And quoted by Weir J in R v Sean Hoey

Have an open mind

- approached from behind and a cord placed around her neck until unconscious
- felt being strangled with a rigid object round her neck but not fully to the back of her neck
- passed out after being pulled backwards by the item around her neck
- felt sore in her vagina
- .tried to put her finger through the wire/rope but it was sharp and rigid

Have an open mind

- threw me onto the bed
- straddled me
- punched me on the left side of the head
- he's right handed
- tried to strangle me
- raped me



Problems?

BMJ 2005 331 594 (17 September)

News roundup

Pathologist faces GMC hearing over altered autopsy report
London Owen Dyer

A Home Office pathologist has admitted to the General Medical Council that he altered the autopsy report of a patient who died during surgery before the surgeon stood trial for her manslaughter.

Kenneth Shorrock's initial report appeared to exonerate the surgeon, Hurais Ramis Syed, of blame, but at the trial he submitted a second report in which that conclusion was missing. He is contesting the GMC's charge of serious professional misconduct. He acknowledges that he produced two different reports but denies that he had "no sufficient reason" to change his view.

Hanging doctors out to dry

The press pillories professionals who make mistakes in child protection. **Rebecca Coombes** says that a new course should improve doctors' competence and confidence

BMJ VOLUME 332 21 JANUARY 2006 bmj.com

In 2004, a survey by the college of 4000 members found that nearly 14% had been subject to complaints related to child protection. Of these, 29% said that it had affected their willingness to become involved in potential child protection work (www.rcpch.ac.uk/publications/recent_publications/Latest%20news/CP%20report.pdf).

The cases include that of Roy Meadow, who was struck off the medical register by the General Medical Council last year for asserting that the chances of a cot death happening in a family were one in 73 million (*BMJ* 2005;331:177), and that of David Southall, who was banned from child protection work for three years (*BMJ* 2004;329:366).

Patricia Hamilton, president elect of the Royal College of Paediatrics and Child Health, said, "Morale and confidence are low. Clearly this kind of high profile work is exceptional and not the sort of thing most paediatricians would see in their career. And despite feeling depressed about these issues, there has been an overwhelming willingness to participate in this training. We were oversubscribed for the pilot course." ☐
Rebecca Coombes *London*

I am a Registered General Nurse (RGN). I qualified in 1989 and have worked in continuous employment until 2005 in the Emergency Unit [redacted]. There I gained ENB997/8 Teaching and Assessing and have been qualified as a provider of Advanced Life Support (ALS). I was also nominated as Instructor Potential for ALS. I have undertaken the Metropolitan Police two day Rape Examination Study Day in conjunction with the Sapphire Project. I have been employed by [redacted] since April 2005. I received a full induction and have ongoing training from the Forensic Medical Examiners thus meeting the NMC (Nursing and Midwifery Council) and PREP (Post Registration Education Portfolio) requirements.

I have undergone full training and now work independently as a Forensic Nurse Practitioner (FNP). I receive full support from the FME (Forensic Medical Examiner) on Duty. I am happy to attend court as a professional witness of fact to describe my findings. I am not qualified to give a forensic opinion. A forensic physician should be called for opinion on evidence in relation to my forensic findings.

Conclusions

- What do I need from a healthcare professional….??
- Must have:
  - appropriately skilled and knowledgeable examiner
  - well-documented positive and negative findings
  - proper review (expert) of all evidence to anticipate problems
  - adequate time
  - balanced view and conclusions
- Must avoid:
  - inadequate examinations
  - overstated or partisan conclusions