Journal of Forensic and Legal Medicine 34 (2015) 173–178

Contents lists available at ScienceDirect

Journal of Forensic and Legal Medicine

journal homepage: www.elsevier.com/locate/jflm

Review

The (in)significance of genital injury in rape and sexual assault

Graeme Walker

NHS Highland Forensic Medical Service, c/o Medical Room, Burnett Road Police Station, Inverness IV1 1RL, Scotland, United Kingdom

ARTICLE INFO

Article history:
Received 27 April 2015
Received in revised form
8 June 2015
Accepted 9 June 2015
Available online 18 June 2015

Keywords:
Rape
Sexual assault
Genital injury

ABSTRACT

The forensic significance of genital injury following rape and sexual assault has been the subject of considerable academic and research interest, in terms of the contribution it may provide to the body of evidence in criminal proceedings. This essay takes a critical look at such research, in the context of modern understandings of what actually constitutes rape and sexual assault. Written from the author's perspective as a forensic physician practising in Scotland, it illustrates the fascinating interface between medical evidence and the legal system.

1. Introduction

As can be inferred from my slightly controversial title, I intend to argue that there is danger in placing too much emphasis on the forensic significance of genital injury. All research in this area has been plagued with multiple uncontrollable variables which make reliable conclusions virtually impossible. In the course of this essay, it will become clear that just about the only conclusion which can be made with confidence is that both consenting and non-consenting sexual contact may or may not result in genital injury. The question of consent remains for the jury to decide.

In conventional medical practice, bodily injuries are assessed, diagnosed, documented and treated according to medical needs of the individual concerned. The clinician's priority is to attend to the injured person as their patient, to investigate the extent of any injuries and to provide appropriate treatment and advice for optimal healing, prevention of infection and recovery. In the context of rape and sexual assault, the above principles are as applicable as ever, but there is also generally considered to be an important forensic significance to injuries which may have been sustained, no matter how severe they may be in medical terms.

Prior to embarking on my review of the literature relating to the forensic (in)significance of genital injuries in post-pubertal complainants of rape and sexual assault, I would like to make brief comment on three closely related topics, in order to put the subsequent review into context:

1.1. Significance of non-genital injuries

It is worth noting that the presence or absence of non-genital injuries, even if they appear trivial, may be equally important in corroborating (or refuting) the complainer's history of events. For example, oral or anal injuries may occur in consequence of oral or anal rape respectively; non-genital bruises, abrasions or lacerations may be the result of attempts to restrain the victim or may be part of an associated physical assault. Bite marks, with petechial bruising caused by suction ('love bites'), may have been inflicted with a sexual motive. Similar forensic questions may be asked about non-genital injuries as for genital injuries in terms of the nature of any contact that may have occurred, but a detailed review of the literature relating to the significance of non-genital injuries in sexual assault is out-with the scope of this essay.

1.2. Genital injuries in pre-pubertal victims of sexual abuse

Another closely-related topic which is not covered in this essay concerns the significance of genital injuries in pre-pubertal children where there is an allegation or suspicion of sexual abuse. The question of consent is never an issue here (except in some situations if the victim has attained the age of 13 years), so the basic forensic question to be asked is whether sexual contact occurred or not, and if so, with whom did it occur? A common difference when compared with post-pubertal victims is that in the majority of cases, pre-pubertal child sexual abuse only comes to light some time after the incident, so acute injuries will normally have healed prior to the examination, with or without residual evidence.

E-mail address: graemewalker@nhs.net.

http://dx.doi.org/10.1016/j.jflm.2015.06.007
1752-928X/

Evidence of injury to the non-oestrogenised hymen, anal injury and evidence of sexually transmitted infection are of particular significance in the clinical evaluation of child sexual abuse.[1]

1.3. Medical significance of genital injuries

It must not be forgotten that genital injuries may have medical significance, not only due to primary trauma but also in relation to an associated increase in the risk of acquiring infection either during, or subsequent to, the assault. Severe primary genital trauma in association with rape is fortunately not a frequent occurrence, but if there is a possibility, for example, of deep tissue or organ damage, or active bleeding, it would be essential to prioritise medical needs over the collection of forensic evidence. The presence of injury should be incorporated into the risk assessment for blood borne viruses and can influence decisions about whether to recommend post-exposure prophylaxis against HIV and Hepatitis B.

2. Forensic significance of genital injuries in rape and sexual assault

A careful and thorough examination for the presence of genital injury is considered to be an important component in the clinical evaluation of a victim of sexual assault.[2] There are both medical and forensic reasons for this, as already outlined. I will now discuss the basis on which genital injuries have been considered to have forensic significance, then review some research studies with a focus on their implications for the forensic physician and the legal process. I will suggest that it is necessary for the forensic physician to apply caution to avoid over-interpretation of examination findings when asked to give an expert opinion.

2.1. Historical theories, legal definitions and popular beliefs

It appears that there was once a view that female genital injury could be treated not only as evidence of sexual contact, but also as a proxy for lack of consent.[3] This was based upon a theory that a woman's natural, consensual sexual response – including vaginal lengthening, increased lubrication and changes in muscular tension – protected her from genital injury[4]; whereas the use of force, accompanied by the absence of these normal physiologic arousal processes during sexual assault, made injury inevitable.

The word *rape* is originally derived from the Latin verb *rapere*: to seize or take by force,[5] and until relatively recent history, most definitions of rape have referred to an act of forced vaginal intercourse perpetrated through actual – or threat of – physical violence, associated with a presumption of resistance on the part of the victim. Gladly, many modern legal definitions have now replaced the 'use of force' with a 'lack of consent' as rape's defining feature; consent being defined in the relevant Scottish legislation[6] as 'free agreement', which requires active participation. This change is recognised by the legal profession as having facilitated a seismic change in how the crime of rape is conceptualised and prosecuted,[7] and it is hoped that societal attitudes will also adapt to incorporate a basic awareness that the use of force is not a necessary precondition for intercourse to take place without consent, and that physical resistance is not a universal response by victims of rape.[8] The popular image of rape as a violent event in which injury is necessarily incurred is promoted by the fact that these are the typical types of rape which make the news headlines,[9] and it is felt that some victims who do not sustain injury may sadly be less inclined to report the crime due to a perception that they may not be believed when they can see no physical evidence to support what happened.

Folk beliefs surrounding the likelihood of injury on first intercourse deserve special mention. Hymenal lacerations, with accompanied bleeding, during first consensual intercourse have long held a particular sociological and religious significance in many cultures throughout the world, because this has been considered to constitute 'proof' of prior virginal status. It is now clear, however, that hymenal injury during first intercourse is far from inevitable and that between 40% and 80% of women do not bleed on initial coitus.[10] Hence, variables concerning both the agreement, or not, to have sexual intercourse and prior sexual experience are vast oversimplifications of the likelihood of sustaining genital injury.

2.2. Three forensic questions

In sexual assault cases that have been reported to the police, the extent of documented genital (and non-genital) injury has been shown to be positively associated with both the decision to file charges and the likelihood of conviction.[11,12] It is possible that the presence of genital injury is being successfully used as corroborative evidence to increase the chances of successful prosecution[13]; if this is the case, then proper justice should require robust evidence for the validity of its role in this context. Another possible explanation is that the relationship between genital injury and reporting/conviction is a spurious one, based on complicated confounding factors.

From a judge's point of view,[14] there are three basic forensic questions in sexual assault: 1) Did sexual contact occur? 2) If sexual contact occurred, with whom did it occur? and 3) Was the sexual contact consensual or non-consensual? I will now discuss the significance of genital injuries in relation to these three questions before going on to address further issues and implications for practice. If genital injuries are indeed forensically significant in post-pubertal complainants of rape and sexual assault, then their presence, absence, pattern or severity should be able to assist in answering one or more of these questions.

2.2.1. Did sexual contact occur?

Genital injury, by definition, implies some kind of trauma which has occurred as a consequence of physical contact. If an abnormality is seen on examination, the first forensic priority is to make an assessment as to whether it is likely represent a true injury or whether it could have an alternative aetiology, e.g. infection, inflammation, bleeding disorder, skin condition, neoplasia etc. Presuming that alternative aetiologies have been ruled out, it seems that it could reasonably be stated that the finding of any genital injury provides evidence that some form of contact has occurred. Concluding that an abnormality actually represents an 'injury', however, is not an entirely straightforward matter!

Many of the genital 'injuries' which are found and documented in the course of forensic medical examinations are extremely small, heal quickly, and sometimes are only possible to detect with the use of visual aids such as magnification, colposcopy and/or toluidine blue dye; as would be expected, higher rates of detection of genital injury have generally been associated with the use of one or more of these adjuncts. Firstly, it would be interesting to know with what prevalence such injuries might be found in subjects who had neither been recently sexually assaulted nor had engaged in recent consensual sex, where the examiners are blinded as to the sexual history.

It might be postulated that microscopic injuries could occur from ordinary wiping, insertion of tampons, sporting activity or other day-to-day personal routines, or that minor epithelial changes of unknown significance could be mistaken for injury. Only one study was found which sheds some light on this issue[15]