Genital Injuries in Postmenopausal Women After Sexual Assault

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ABSTRACT. Physiological and anatomical changes that occur as a result of menopause alter sexual response and sexual function. These changes can result in genital injuries from both consensual sexual intercourse and sexual assault. The purpose of this article is to review the literature examining what is known about postmenopausal women and genital injuries. Only seven research studies were found that examine genital injuries in postmenopausal women after sexual assault. Of the comparative studies, a majority determined that postmenopausal women are more likely to sustain genital injuries after sexual assault than younger women. No literature was found that specifically investigates genital injuries incurred as a result of consensual sexual intercourse versus sexual assault in the postmenopausal population.

KEYWORDS. Sexual assault, rape, postmenopausal women, genital injuries, elder abuse, sexual dysfunction
INTRODUCTION

Sexual assault “involves a wide range of behaviors that involve unwanted sexual contact” (Girardin, Faugano, Seneski, Slaughter, & Whelan, 1997, p. 19). However, the definition of sexual assault varies from state to state. Sexual assault and rape are problems primarily for the female population, but some common societal myths need to be identified. Rape is a crime of violence, not of passion. It is a crime involving physical dominance and control and is not motivated by sexual desires (D’Amora, Brandhurst, & Wallace, 2006; Templeton, 2005). Women who dress “sexy” and “lead men on” do not get raped more than others and are not responsible for the circumstances of the rape. Victims are chosen for their vulnerability and accessibility without regard for physical appearance. All women are potential targets regardless of age (Tyra, 1993).

The term sexual assault is primarily a legal definition, not just a medical determination. The question of consent is resolved by the courts not by the nurse or physician examining the victim. It is the health care providers’ responsibility to obtain corroborative physical data and explain the findings and medical information in an understandable format to the court (Anderson, McClain, & Riviello, 2006; Slaughter, Brown, Crowley, & Peck, 1997).

According to the 2005 National Crime Victimization Survey, there were in that year 191,670 victims of rape, attempted rape, or sexual assault. Despite this overwhelming number, rape is still a crime that is vastly underreported to the police. It is estimated that only 41% of rapes and sexual assaults were reported to law enforcement in the past 5 years (Rape, Abuse & Incest National Network, 2007).

There is an increased recognition of elder abuse, including elder sexual abuse. It is being recognized as a public health issue with important nursing implications, especially for forensic nurses (Burgess & Clements, 2006; Miller & Clements, 2006). The population of the United States is aging and as a result, the number of potential victims is increasing (Schofield, 2006). “Although evidence exists that older adults are victims of sexual assault and rape, the scope of the problem and the prevalence and correlates of these crimes are unknown” (Burgess, Hanrahan, & Baker, 2005, p. 399). The prevalence is unknown because no investigative study has been done to examine the extent of the problem (Cooper & King, 2006).

The purpose of this article is to review the literature on postmenopausal women and the incidence of genital trauma, to evaluate the knowledge currently available, and to analyze the findings.
"REVIEW OF THE LITERATURE"

**Elder Sexual Abuse**

There are many factors identified in the elderly population that contribute to their increased rates of victimization. The same factors that contribute to an elderly person becoming an abuse victim also may negatively impact the prosecution of cases of sexual assault.

Dependence on others, alterations in mental status, and physical restrictions can prevent reporting (Anderson et al., 2006; Burgess & Clements, 2006). The effect of aging on cognitive faculties and medication-related issues may hinder assistance with regard to the investigation (Burgess & Clements, 2006). Forensic exams may be difficult to perform because of resistance by an elderly patient who is confused and cannot understand the exam process or because of physical limitations experienced by some older persons (i.e., leg contractures). In addition, medical professionals often do not know what types of injuries are indicators of abuse versus the natural effects of aging (LaMonica & Pagliaro, 2006; Schofield, 2006). Finally, genital findings from forensic evidentiary exams of elderly women have not been viewed collectively to determine the statistical significance of certain patterned injuries after sexual assault (Anderson et al., 2006).

Residents in long-term care facilities are especially vulnerable to abuse because they often suffer from dementia and are dependent on others for their care. Therefore, vulnerability and accessibility play more significant roles in determining victim selection by perpetrators.

In an attempt to determine classification-related findings, 112 media-reported elder sexual abuse cases from 16 states were studied. The most noteworthy discovery was that a majority of the offenders gained access to the victims in the context of health care, assisted living, or home health care settings (Morgenbesser, Burgess, Boersma, & Myruski, 2006). In 2005, A Perfect Cause, a nonprofit disability and rights advocacy program, released its second report, which documented 800 registered sex offenders living in nursing homes in 36 states. Bledsoe (2006) and fellow advocates affiliated with A Perfect Cause document that there are over 1,200 registered sex offenders, parolees, and convicted felons residing in long-term care facilities. It was startling that many of these offenders were placed there by state and county agencies without the information of the resident’s criminal background being known by the nursing home staff, other residents, or their families (Bledsoe, 2006).
Teaster and Roberto (2004) developed a profile on the sexual abuse of adults aged 60 and older over a 5-year period. They evaluated 82 cases investigated by Adult Protective Services (APS) units in Virginia. The authors concluded that a majority of the victims were women living in nursing homes with cognitive and functional limitations. The elderly women also had difficulties in orientation and did not have the capacity to participate in the investigation. The authors concluded that this enhanced their vulnerability and perhaps increased their susceptibility to being abused.

Burgess, Dowdell, and Prentky (2000) evaluated 20 nursing home residents referred to the first author for forensic sexual abuse investigation. A majority of the victims were older women who had primary diagnoses of dementia or Alzheimer’s disease and were confined to a bed or to a wheelchair. Burgess and colleagues found that many of the victims were unable to communicate clearly about the assault, which delayed reporting. In fact, in all of the cases someone other than the victim reported the assault.

The collection of physical and trace evidence is essential for successful prosecution of sexual assault. However, another study performed by Burgess and colleagues (2005) found that nursing home victims were less likely to have a rape kit used for evidence collection and that any potential evidence was destroyed before a forensic examination could take place. In a 20-year study evaluating 2,137 cases of elder death investigations, only about 10% of those victims had sexual assault exams performed. Therefore, it was not possible to correlate elder deaths that resulted in investigations with possible sexual assault (Collins & Presnell, 2006).

Additionally, the differences in the cultural views of younger women versus older women need to be further examined. A woman who grew up 50–60 years ago may well have differing views about sexuality and the definition of sexual assault as compared to today’s young woman. Older women may have more restrictive views on sexuality and are more likely to feel humiliation and self-blame related to sexual assault crimes (Burgess et al., 2005; LaMonica & Pagliaro, 2006). The victim may see her sexual victimization as a shame or disgrace, thus increasing her sense of helplessness. This can prevent the victim from seeking medical attention or psychological help, adding to the feeling of loss of control and power, an area in which many elderly women already view themselves as inadequate (Burgess et al., 2005; Tyra, 1993).

The literature validates the need for increased use of timely forensic sexual assault examinations. However, there is also a significant need to train
forensic examiners to recognize genital trauma in the postmenopausal population and to better understand how genital injuries are sustained in the older population. The following section will review physiological changes related to menopause that are relative to sexual assault findings.

**Physiological Changes Related to Menopause**

Menopause is defined by hormonal changes, specifically lower levels of circulating estrogen and testosterone. Estrogen is required for normal blood flow to the reproductive organs. It thickens and moistens the vaginal epithelium and makes the pelvis tissues more flexible for intercourse. A decrease in estrogen is directly associated with the symptoms women experience during and after menopause. Common physiological changes include: (a) diminished vaginal engorgement; (b) atrophy of the vaginal wall smooth muscle; and (c) lubrication inadequacy (Bachmann & Leiblum, 2004). As a result, women can experience dyspareunia (painful sexual intercourse) and postcoital bleeding (van Lunsen & Laan, 2004; Walsh & Berman, 2004).

The mucous membranes lining the vagina are thin, making it more fragile and subsequently more prone to trauma. Additionally, the labia and clitoris become smaller and the vagina narrows and shortens, making it more susceptible to injury (Brown, Streubert, & Burgess, 2004).

With increasing age also comes disease processes than can impact sexual arousal. Cardiovascular disease, diabetes mellitus, and other common disease processes also contribute to diminished blood flow, which can lead to symptoms of vaginal dryness. In addition, many prescription medications have been implicated in causing sexual dysfunction, namely antihypertensive medications, antidepressants, and antipsychotic medications (Walsh & Berman, 2004).

The widespread marketing of medications used to treat erectile dysfunction also is important to mention. While these medications may enhance and prolong some men’s ability to have and maintain erections (sometimes for hours), there have been no studies that explore how treating erectile dysfunction in men may be causing vaginal injury to women.

Age, in general, affects the body’s ability to respond to injury and this contributes to a slower rate of recovery from even minor injuries; therefore, causal relationships can be obscured (Hanrahan, Burgess, & Gerolamo, 2005). All of these factors can lead to the hypothesis that postmenopausal women are more apt to suffer injuries related to sexual intercourse, regardless of whether it is consensual.
Mechanism of Injury

It is important to recognize the mechanism of sexual assault and how injuries occur as a result of forced sexual contact. Multiple factors involving the sexually assaulted victims and perpetrators contribute to the occurrence of injury. It has been noted that the posterior fourchette, labia minora, hymen, and fossa navicularis are the most common sites of injury after penile penetration (Girardin et al., 1997; Slaughter et al., 1997).

Lack of pelvic tilt and partner assistance with insertion combined with forced intromission results in injury, especially at the posterior fourchette, labia minora, hymen, and fossa navicularis. Lack of increased lubrication causes abrasion or lacerations with the friction of the opposing forces at the labia minora and hymen because these parts are pulled inward with the penetrating object. Vaginal lacerations and ecchymosis result from the lack of lubrication of the penetrating force (Girardin et al., 1997, p. 23).

Injuries at these sites suggest a lack of physiological sexual response and the resulting lack of relaxation creates a less flexible surface. Consequently, the offending object causes more blunt force trauma that leads to bruising and swelling (Girardin et al., 1997). While earlier studies suggested that the presence of any genital trauma supported forced sex, more recent studies have found that genital trauma is common from consensual and nonconsensual penetration (Anderson et al., 2006).

METHODS

A literature review was performed utilizing the search engines PubMed and CINAHL and the major Internet search engine Google. The key terms used were: sexual assault and postmenopausal women, rape and genital injuries, elder abuse, and sexual dysfunction and older women. It was discovered early in the review that just a handful of studies specifically describing genital injuries and postmenopausal women actually existed, so the inclusion criteria was not limited to specific research designs or articles. Because of this, there was also no limitation imposed with regard to the year the article was published. However, a total of seven articles were reviewed. Of those, three were comparative descriptive designs, one was a descriptive study design, two were descriptive correlational designs, and one was a predictive research design (see Table 1).
<table>
<thead>
<tr>
<th>Study group</th>
<th>Comparison group(s)</th>
<th>Positive findings of genital trauma</th>
<th>Conclusions</th>
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<tbody>
<tr>
<td>(Postmenopausal women)</td>
<td>(Premenopausal women)</td>
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<td>Ramin et al. (1992): Records reviewed between 1986–1991</td>
<td>$N = 129$ (age 50+)</td>
<td>$N = 129$ (age 14–49)</td>
<td>43% (postmenopausal) 18% (premenopausal)</td>
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<td>Muram et al. (1992): Study performed between 1987–1990</td>
<td>$N = 53$ (age 55+)</td>
<td>$N = 53$ (age 18–45)</td>
<td>50.9% (postmenopausal) 13.2% (premenopausal)</td>
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<td>Slaughter et al. (1997): Study performed between 1985–1993</td>
<td>$N = 6$ (age 50+)</td>
<td>$N = 305$ (age 11–49)</td>
<td>94% (prevalence in all age groups)</td>
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<td>Palmer et al. (2004): Records reviewed between 1997–1999</td>
<td>$N = 6$ (age 50+)</td>
<td>$N = 144$ (age 14–49)</td>
<td>5.6 times more likely in group age 40 and older</td>
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<td>Burgess et al. (2005)</td>
<td>$N = 125$ (age 60+)</td>
<td>N/A</td>
<td>46% prevalence; 19% with more than three areas of trauma</td>
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<td>Hanrahan et al. (2005)</td>
<td>$N = 125$ (age 60+)</td>
<td>N/A</td>
<td>About 50% prevalence</td>
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<td>Sommers et al. (2006): Study performed between 1998–2002</td>
<td>$N = 40$ (age 50+)</td>
<td>$N = 80$ (n = 40) (age 40–49; perimenopausal) (n = 40) (age 40 or younger; premenopausal)</td>
<td>51% (postmenopausal) 32% (perimenopausal) 52% (premenopausal)</td>
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FINDINGS

Sexual Assault Studies Review

In their classic study, Ramin, Satin, Stone, and Wendel (1992) evaluated sexual assault in postmenopausal women utilizing a retrospective research design. Medical records of rape victims were reviewed from 1986 to 1991 and two groups were reviewed. In this study, 129 postmenopausal women age 50 and older were compared with 129 women aged 14–49. Genital trauma was more frequent in the postmenopausal group (43% versus 18%, respectively), which was statistically significant. Additionally, it was found that the genital injuries were more severe in the postmenopausal group. Nearly one in five had vaginal or perineal lacerations, with one in four severe enough to require surgical intervention. Ramin and colleagues concluded that postmenopausal women are more likely to sustain genital injuries compared to younger women.

Similarly, another classic study was performed at a sexual assault center in Memphis, Tennessee, which evaluated elderly victims of rape to determine the variables affected solely by the patient’s age. A total of 1,722 patients was seen at the facility between January 1987 and September 1990. Fifty-three women age 55 and older were recruited for the study group and 53 women age 18–45 were selected for the comparison group. After reviewing the medical records of both groups, there was a statistically significant difference in the incidence of genital injuries. Just over 50% of the women in the study group sustained genital injury. Furthermore, 27% had injuries severe enough to warrant surgical repair. Only 13.2% of the women in the comparison group sustained genital injuries and of those, only 6% required surgical intervention (Muram, Miller, & Cutler, 1992). This study’s results also support the idea that postmenopausal women have an increased susceptibility to genital injuries that are the result of sexual assault.

In another early study investigating the difference between genital injuries in sexual assault versus consensual sexual intercourse, Slaughter and colleagues (1997) found that the incidence of genital injury was significantly higher for those women reporting nonconsensual sex. While of historical importance, the design and methodology of the study did not produce generalizable findings. Physical examinations of 311 rape victims were performed by a Suspected Abuse Response Team (SART) between 1985 and 1993. Then, 75 women were examined for genital changes within 24 hours of consensual sexual intercourse. Only six of the
rape victims were postmenopausal and in the consensual group there were none. Age did not appear to be a factor in the observed pattern of injury.

More recently, a predictive research study completed in Australia analyzed 153 women who presented consecutively to a sexual assault assistance location between 1997 and 1999. Of these women, only 4% were over age 50. However, it was discovered that the risk factor for genital injury increased with increasing age. In fact, women age 40 or older had five times the odds of genital injury compared to the younger age group (Palmer, McNutty, D’Este, & Donovan, 2004).

Burgess and colleagues (2005) performed a retrospective correlational analysis of 125 cases of elder sexual abuse of women age 60–98 from 22 states. Their purpose was to identify certain forensic markers unique to older victims of sexual abuse. Of all of the cases, 46% had vaginal trauma and 19% had multiple sites (4–7) of genital injury. Using the same database, it was found that a third of the victims had other physical injuries (Hanrahan et al., 2005).

A study performed in 2006 evaluated data from three age groups: pre-menopausal women age 40 and younger, perimenopausal women age 40–49, and postmenopausal women age 50 and older (Sommers et al., 2006). The authors examined the types of injuries sustained in 120 cases of sexual assault, including genital injuries. The prevalence of genital injuries in the postmenopausal study group was just over 51%, which is in line with the other research studies reviewed. However, there was no association between injury and age, in that the study did not demonstrate increasing injury with increasing age. What was demonstrated was that White women were four times as likely to have genital injury compared to Black women; regardless of age, this is an important finding (Sommers et al., 2006).

Comparative Review

All of the described articles examining injuries secondary to sexual assault utilized descriptive study designs. Because of the social science being studied, researchers cannot use an experimental design to evaluate sexual injuries, especially those resulting from sexual assault. Therefore, the results and conclusions are only descriptive and exploratory in nature. In a majority of the studies, the women were evaluated at a sexual assault clinic. An assumption can be made that the health care professionals performing the exams had specialized training in this area. However, the differences in exam routines and how each injury was defined
by each separate health care provider could impact the final results and thus the comparisons within the studies themselves and to other similar investigations.

The articles spanned the years 1992–2006. The American Nurses’ Association formally recognized forensic nursing as a specialty in 1995 and 10 years later the premier issue of the *Journal of Forensic Nursing* was published. Although the science of forensics is not new, the idea of combining forensics and medicine is a relatively new frontier for nurses and physicians. As a result, only seven articles were found specifically examining the sexual injuries of postmenopausal women. No articles were found directly examining the difference in the injuries postmenopausal women sustained as a result of consensual sexual intercourse versus sexual assault.

Based on the articles reviewed, it is evident that genital injuries occur with more frequency and more severity in sexually assaulted women who are postmenopausal than in younger victims. This supports the hypothesis that postmenopausal women are more likely to sustain genital trauma secondary to the physiological and anatomical changes that occur as a result of menopause and general aging processes. The literature review supports the idea that many women sustain genital injuries as a result of forced sexual contact because of the mechanism of injury described previously.

The literature also supports the idea that postmenopausal women sustain genital injury as a result of forced sexual contact with more frequency and more severity than a younger cohort. However, only a small number of articles were found that actually examine this occurrence. It is clear that more research needs to be performed regarding postmenopausal women and sexual assault to create a better foundation for forensic nurses.

**DISCUSSION**

If older, postmenopausal women are more physiologically prone to genital injury in general, then there is a gap in evidence regarding genital injuries incurred during consensual sexual intercourse. This is especially important to the investigation of sexual assault injuries because it has been found that when physical injury is present, this increases the chance of a perpetrator being arrested (Templeton, 2005). Therefore, if older women sustain genital injury from consensual sexual intercourse, it
would be crucial to compare the location and severity of those injuries to injuries older women sustained as a result of sexual assault. This may help forensic sexual assault examiners develop a classification of genital trauma based on the degree and type of injury, establishing a more reliable basis for forensic analysis.

This age group often is viewed as asexual and ignored as possible victims of sexual assault. The public does not understand that rape is a distortion in human sexuality and today’s society does not generally recognize older women as possible victims of rape. Very little research has been performed and thus the gap in knowledge is clear. With the overall population becoming older, society can no longer afford to disregard cases of sexual assault against elderly women. Law enforcement officers, nurses, and physicians (among others) need a heightened awareness toward cases of elder sexual assault.

The societal myths previously described validate the many obstacles women must overcome for successful prosecution of a sexual assault predator. Often the victims themselves are blamed for the assault, and an already devastating experience can become unbearable. Many women believe the trauma of the rape will be exacerbated if they take legal action because of the unsympathetic social perception (Cooper & King, 2006; Groleau & Jackson, 2001).

Forensic examiners, who are increasingly nurses, also need to guide the interdisciplinary team to ensure that the intervention approaches are effective. Future research needs to take culture and ethnicity into consideration because they are strong determinants of responses to interpersonal violence. This may be especially true when studying the sexual assault of Native American elders (Miller & Clements, 2006).

Bledsoe’s (2006) advocacy work has brought to light the risks of sexual assault, murders, and physical assaults when former criminals are mixed in with elderly, vulnerable patients. More objective research is needed on how the health care industry and the long-term care industry can provide safe care to patients with criminal histories while also protecting other residents and staff from harm (English, 2007).

Finally, studies are needed on how to prevent elder sexual assault. Primary prevention includes educating the public about potential threats, secondary prevention includes encouraging reporting of the crime, and tertiary prevention includes providing a medicolegal assessment and coordination with law enforcement to facilitate the apprehension of the offender (Shellem, 2006).
REFERENCES


