

ORIGINAL ARTICLE

PREVALENCE AND PATTERN OF INJURY IN SEXUAL ASSAULT CASES PRESENTED AT KHYBER MEDICAL COLLEGE PESHAWAR

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Background: Actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. Nowadays sexual assault is considered a major public health issue all over the world, especially in developing countries. Sexual abuse is declared as a medical emergency. Sexual abuse cases are examined in Pakistan by medico-legal officers and their findings are presented to the court as evidence and medico-legal officers present to the court as witness. The objectives were to find out the prevalence of sexual assault cases presented to the forensic medicine department Khyber Medical College Peshawar and to find out the most prevalent pattern of genital and extragenital injury. To find out the association between sexual assault and its associated demographic factors such as age, gender, and drug history. **Methods:** This descriptive cross-sectional was conducted in the Department of Forensic Medicine and Toxicology from 1st January 2023 to 31st December 2023. All cases of any gender and age were included in the study and cases referred from other districts and with incomplete documentation were excluded. **Results:** In 90 subjects, the males were 35.6% (n=32), whereas females were 64.4% (n=54). Of the subjects, 72.2% (n=65) had attempts of sexual assault, out of which 43.3% (n=39) went through rape and 28.9% (n=26) went through sodomy. 17.8% (n=16) had associated genital injuries with the assault while 10.0% (n=9) had extragenital injuries. The concurrent poisoning seen was 2.2% (n=2) which was merely benzodiazepine in cases of sexual assault. **Conclusion:** Our data concluded that sexual assault was more prevalent in females than in males. Most of the individuals were from urban areas rather than rural areas. Of the subjects, rape was more prevalent than sodomy. The most common pattern of genital injury is anal tear while extragenital injuries vary from bruises to abrasions on various parts of the body. The most common drug used was benzodiazepines.

Keywords: Sexual assault; Rape; Sodomy; Laceration; Tears

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INTRODUCTION

Actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. Nowadays sexual assault is considered a major public health issue all over the world, especially in developing countries.¹ Sexual abuse is declared as a medical emergency.² Sexual abuse cases are examined in Pakistan by medico-legal officers and their findings are presented to the court as evidence and medico-legal officers present to the court as witness.³ The main problem or hurdle in medicolegal cases especially in sexual assault cases is the threat to the life concerned staff and his/her family.³ In any emergency first aid treatment is a basic right of any patient, similarly in sexual assault cases proper setup for such patients must be provided by the state as well as counseling centers for rehabilitation but unfortunately in Pakistan, there is no special setup for the support of the victims. In the USA, more than 0.6 M female gender are sexually assaulted each year.⁴ Reported sexual assault

cases are less than 20% of actual existing cases in the population due to various reasons.^{5,6} In sexual assault cases there is no age limit, the affected community may range from months (which means less than one year) to old age 80–90 years, most prone age is between 12–24 years in America and other countries.^{6,7}

Sexual abuse cases must be examined immediately because over time there is more chance of evidence getting contaminated.⁸ Despite the fact still in Portugal more than 60% of sexual assault victims are reported after 3 days while a smaller number of victims are reported in the first 24 hours of the event.⁷

In most cases, the victims can recognize their assailants according to studies conducted in different countries of the world including Africa, European countries, and Canada.^{9–11} In some cases of sexual assault more than one assailants are reported as in Ohio, USA.¹² Evidence in sexual assault cases includes clothes.⁸ Besides clothes as a piece of important evidence in sexual assault cases the findings on the body along with

local/genital area injuries are also very important and can't be neglected. It can help determine consensual or nonconsensual sexual acts, which is a very important legal aspect.

To obtain good results in injury examination application of a chemical named Toluidine blue to the affected areas will highlight the injuries.¹³ The most important evidence in sexual assault examination is swabs from both assailant and victim for semen and DNA analysis for identification of the individual involved in this event.¹⁴

Childhood is thought to be an important phase of development having high vulnerability to physical and psychosocial risks.^{15,16} Sexual abuse of a child is considered to be a violation of a child's basic rights, it is the outcome of a set of interrelated familial, social, psychological with economic factors which is one of the most critical matters on the international human rights agenda. It is also referred to be an activity for which the child is unprepared can't give consent and is under 18 years of age.¹⁷ Health researchers are increasingly focusing on violence & assault against women at all levels, i.e., local, national, and international levels, few of them have given their lifespan on such (i.e., violence experienced before, during, and after migration) in communities & demographics areas.

World Health Organization defines "sexual violence" as any coerced sexual act, involving: sexual act, any such attempt, commenting, or acts meant against a person's sexuality using coercion, by any person irrespective of his/her relationship to the victim, at any point, including home and work while anything involving physical contact comes in category of sexual assault.^{18,19}

This study will add new data for the pattern of injuries in sexual assault cases in Peshawar. Previously, no such study in this region was available. The data would be helpful for Forensic Experts, Public Health Experts, and Law Enforcement agencies to cover and cope with the evil of sexual assault. The data further can be used to aware the public aware of the maximum preventive measures to avoid major fatal injuries in the future. Additionally, laws and legislation can be amended based on the data.

Objectives of the study were to find out the prevalence of sexual assault cases presented to the forensic medicine department at Khyber Medical College Peshawar, the most prevalent pattern of genital and extragenital injury and to find out the association between sexual assault and its associated demographic factors such as age, gender, and drug history.

MATERIAL AND METHODS

Conducted in the Department of Forensic Medicine and Toxicology from January 1st, 2023, to December 31st, 2023, this descriptive cross-sectional study

included all living cases of any gender and age. Cases referred from other districts and those with incomplete documentation were excluded.

The data collection for this study adhered to ethical and institutional protocols, obtaining necessary approvals beforehand. Utilizing a pre-designed Proforma, demographic details and closed-ended questions about sexual assault cases were systematically gathered. This Proforma was meticulously structured to ensure consistency and relevance in data extraction. Subsequently, the collected data was meticulously recorded in Microsoft Excel for streamlined analysis.

The analysis of the data was conducted using SPSS v.25.0 software. Categorical variables were descriptively analyzed, presenting frequencies and percentages to provide a comprehensive understanding of the distribution within the dataset. Meanwhile, numerical variables underwent descriptive analysis, where mean and standard deviation were calculated to illustrate central tendencies and variability. The findings were organized and presented through tables and figures, facilitating clear interpretation and visualization of the results. Sexual assault is an act in which one intentionally sexually touches another person without that person's consent, or coerces or physically forces a person. Pattern of injury means type, site, shape, and dimensions of injury.

RESULTS

Of the total of 90 subjects, the males were 35.6% (n=32), whereas females were 64.4% (n=54). The mean age was 19.5±7.5 years ranging from 6 to 42 years. There 96.6% (n=86) were Afghans by caste and 4.4% (n=4) were Awans by caste. 81.1% (n=73) of the subjects were from urban areas, however, 18.9% (n=17) were from rural areas. The semen analysis was performed on these sexual assault cases of which 56.7% (n=51) had positive results, and 43.3% (n=39) had negative results. Of the subjects, 72.2% (n=65) had attempts of sexual assault, out of which 43.3% (n=39) went through rape and 28.9% (n=26) went through sodomy. 17.8% (n=16) had associated genital injuries with the assault while 10.0% (n=9) had extragenital injuries, described in table 1 and table 2 respectively. The concurrent poisoning seen was 2.2% (n=2) which was merely benzodiazepine in cases of sexual assault.

Table-1: Genital injuries associated with assault

Type of Injury	Frequency	Percentages
Anal tear (Laceration)	12	13.3
Bruises in anal canal	1	1.1
Swelling in perianal area	1	1.1
Vaginal tear (Laceration)	1	1.1
Abrasion	1	1.1

Table-2: Extra-genital injuries associated with assault

Type of Injury	Frequency	Percentages
Bruise on thigh and breast	2	2.2
Abrasion on neck	2	2.2
Bruise chest and breast	2	2.2
Bite mark on neck	1	1.1
Abrasions on pubis and breast	1	1.1
Face bruise	1	1.1

DISCUSSION

In the study, there was a higher percentage of females as victims of sexual assault, due to the fact of ignorance and illiteracy in this part of the world. However, male victims were also seen in the study. This is the reason the ages where persons hit puberty, they are unaware of the quirks of society and are hesitant to discuss their problems with their parents. The affectees ranged between 6 to 42 years consistent with a study in Pakistan²⁰ and another one in Bangladesh²¹, and with Western countries^{22,23}. People should be made aware of the alarming gestures and seek help to help themselves. The mean age in the study is almost consistent with studies.^{24,25}

In the data, more than 70% of the subjects had attempts of sexual assault without penetration and were associated with extra-genital injuries. Besides, the rest of the victims had gone through rape or sodomy. As no reliable method of documentation was used in the study, injuries are sorted by a commonly used mnemonic TEARS (T-tear, E-ecchymosis, A-abrasions, R-redness, S=swelling).^{26,27} About all of the injuries in the study come under this classification. Some injuries are categorized according to type and location.^{28,29} The TEARS injuries are mostly seen in victims where there is penetration as discussed in the study either in consensual or non-consensual attempts. Many of the extra-genital injuries were encountered in victims with attempts of assaults and concurrent poisoning. There was a small percentage of concurrent poisoning in the data that was benzodiazepines, which signifies the fact the luring the victim for sexual assault, where sedatives are easily available and used for this purpose.

CONCLUSION

Our data concluded that sexual assault was more prevalent in females than in males. Most of the individuals were from urban areas rather than rural areas. Of the subjects, rape was more prevalent than sodomy. The most common pattern of genital injury is anal tear while extragenital injuries vary from bruises to abrasions on various parts of the body. The most common drug used was benzodiazepines.

AUTHORS' CONTRIBUTION

FN: concept of idea, design, data collection, analysis. MW: Data collection, writing, analysis, discussion. IA: data analysis, review. AA: Result writing. SS: Discussion, review. OK: Concept, review.

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