

# Medicolegal Examination of Sexual Assault Survivors

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## ABSTRACT

**Objective:** To identify the reasons of discrimination in medico-legal assessment and reports of sexual assault survivor.

**Study Design:** Retrospective study.

**Place and Duration of Study:** This study was conducted at the Study Department of Forensic Medicine, Nishtar Medical College (NMU) Multan, Pakistan during January 2020 to March 2020.

**Materials and Methods:** Record of 133 cases of sexual assault reported during a period of two years from January 2017 to January 2019 to the medico-legal section of Forensic Medicine Department of Nishtar Medical University, Multan were examined in detail and transferred to a designed Performa. Statistical analysis was done using SPSS version 20.

**Results:** Of the total 133 cases, 73.6% were examined more than 72 hours after the incidence while only 4.5% examined in first 24 hours. Majority (64.6%) belonging to the age of 11-20 years were reported to be victimized in this heinous crime. Most common type of injury was tear / laceration involving (80.4%) cases including both fresh (18%) and healed (62.4%). Abrasion and bruising of labia minora in 13(9.7%) and bruise of vagina was present in 7(5.2%) of the total cases. Medical reports and laboratory findings were consistent in (43.6%) cases whereas; 73(54.8%) cases showed discrepancy between the medical reports and laboratory data.

**Conclusion:** Sexual assault is more common in younger females. Late presentation for examination is one of the root causes of discrepancy between medico-legal assessment and reports of Forensic Science Laboratory. There is need to educate the young people regarding sexual assault and training of forensic examiners to evaluate such cases properly with meticulous collection of evidence so that justice can prevail.

**Key Words:** Medicolegal Examination, Sexual Assault Survivors

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## INTRODUCTION

Sexual assault is becoming a worldwide rampant, affecting close to a billion women throughout the world. It is an offense which is frequently encountered by healthcare professionals and forensic scientists as the World Health Organization highlights<sup>1,2</sup>. The major hazards in evidence collection from a sexual assault survivor are deferrals in their medical examination, and

improper collection and packaging of evidentiary material. These perils compromise the probative biological evidence. Task of Forensic experts regarding collection of trace evidence and furnishing opinion in the light of reports of Forensic Science Agencies is of immense importance<sup>3</sup>.

Although injury can provide evidence of penetration but cannot determine consent. Biological evidence like semen, sperm or saliva may provide evidence of contact or sexual penetration. Usually the legal representatives involved in sexual assault cases will mostly rely on the probative value of injury and biological evidence depending on case characteristics, whether it be proving sexual contact or corroborating a physical struggle<sup>4</sup>. The most vulnerable age bracket for sexual assault is 10 to 17 years of age; the risk being higher as compared to adults. Due lack of awareness, majority of victims could not reach the healthcare facility for medical advice as well as medicolegal certification<sup>5</sup>. Careful examination of clothes / linen is very important for collection of evidentiary material subject to the condition that survivor didn't take shower or change her clothes. Associated injuries on different parts of the body of victim in addition to those found in genital areas are also helpful during examination & provides clue about sexual act being forceful or with consent.<sup>6,7</sup>

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Collection of evidence in a sexual assault survivor necessitates a multidisciplinary approach which ensures a quality communication between police, medical examiners, laboratory professionals at Forensic Science Laboratory & judiciary<sup>8</sup>. Standard protocol for medicolegal examination of victims and collection of evidentiary material should be adopted to ensure that adequate evidence has been saved.

## MATERIALS AND METHODS

Data collected by examining the record of sexual assault cases maintained by initial medicolegal examiners at Nishtar Hospital Multan and reports of Punjab Forensic Science Agency (PFSA) were also incorporated.

### Inclusion criteria:

- Cases of sexual assault reported for examination from January 2017 to January 2019
- The age group 7-50 years.
- Survivors of sexual activity against their consent.

### Exclusion criteria:

- Age below 7 years and more than 50 years.
- Survivors with no vaginal penetration.
- Those having sexual intercourse with consent.

## RESULTS

Of the total 168 cases of sexual assault, 133 survivors fulfilling the mentioned criteria were included in study. The age range of victims was 7-50 years, with the (SD) of 18 (7.4). Majority (64.6%) belonged to the age group of 11-20 years whereas, a huge number (73.6%) were examined about 72 hours after the incidence. Genital injury was absent in 6(4.5%) cases and present in 127(95.4%) cases.

**Table: 1** Age Group of Survivor showing cases with percentage.

Age group of Survivor (years)	No of cases	Percentage %
7-10	7	5.2
11-20	86	64.6
21-30	27	20.3
31-40	11	8.2
41-50	02	1.5

**Table No. 2:** Detail of cases with regard to Time between incidence and examination

Time between incidence and examination	No of cases	Percentage %
Within 24 hrs	6	4.5
24-48 hrs	10	7.5
48-72 hrs	19	14.2
More than 72 hrs	98	73.6

Only 6(4.5%) cases were examined within first 24 hours while 98(73.6%) cases presented more than 72 hours after the incidence as depicted in Table-2.

**Table No.3:** Site of injury with type of genital injuries.

Site of injury	Type of genital injuries	No of cases		Percentage %
Hymen Posterior fourchette	Laceration / Tear	No tear	6	4.5%
		Fresh tear	24	18%
		Healed tear	83	62.4%
Labia (minora)	Abrasion & Bruise	13		9.7%
Vagina (posterior wall)	Abrasion & Bruise	7		5.2%

Among total 133 cases, 113 presented with laceration of hymen and/or posterior fourchette. Out of these 113 survivors, 24(18%) presented with fresh tear/laceration, 83(62.4%) with healed tear and 4.5% with absolutely no tear. Abrasion and bruising of labia minora and inter-labial area were present in 13(9.7%) cases and bruise of vagina was present in 7(5.2%) cases only.

**Table No. 4:** Medical report with laboratory findings.

Medical report	Laboratory findings	No of cases	Percentage %
Positive for penetration	Spermatozoa present	58	43.6%
Positive for penetration	Spermatozoa present	69	51.8%
Negative for penetration	Spermatozoa present	4	3%
Negative for penetration	Spermatozoa present	2	1.5%

Out of 133 cases, findings were consistent in (43.6%) cases only where the penetration was proved on medical examination and Spermatozoa was also found (43.6%) in the samples as per reports of Punjab forensic science agency (PFSA). On the other hand, no correlation in 69 cases (51.8%) where penetration was proved on examination but no sperm was found in the samples collected from the survivor. Another 1.5% cases are negative for both penetration and Spermatozoa in the given samples.

## DISCUSSION

The initial medico-legal examination and reports of Forensic Science Agency proved occurrence of sexual act in 58(43.6%) women. Most of the time, victims were brought by police officials & examination done on

the request of police. As per records of two years data only 13 cases reported for medicolegal examination at their own while information of the incidence alongwith certificate were provided by the examining medicolegal officer. Sexual assault being problem of all socioeconomic classes; has been under-reported, undervalued and uncorroborated throughout the world. Forensic specialist plays vital role in investigating sexual offences because their statement can either make or break the case. Although collection of trace evidences is no more challenging, but due to non-availability of trained technical staff may lead to the loss of opportunity to collect appropriate samples. It is documented in research that the victims of sexual crimes are not given proper medical care & support while their examination. Such complaints are common against healthcare providers in Europe<sup>9,10</sup>. The victims belonging to the age of 11-20 years were found to be involved in 64.6% of the cases. These findings are in line with those of Ingemann & Acierno et al<sup>11,12</sup>. Only 6(4.5%) of the victims reported for a medical examination in first 24 hours and about 73.6% reported after a passage of 72 hours. The findings are similar to the study conducted in Bangladesh by Islam MN et al<sup>13</sup> where only 23.7% were examined within 72 hours while a local study conducted by Rehman H et al<sup>14</sup> at Sahiwal reported that 25% of the victims were examined more than 72 hrs after the incidence. Victims and their family may be guided further regarding significance of earlier medicolegal examination required to convict the accused<sup>15,16</sup>.

Tears & laceration were common injuries involving (80.4%) including both fresh (18%) and healed (62.4%) tears, consistent with findings of Zilkens et al<sup>17</sup>. Recent studies have shown the involvement of young adolescent to be victims of sexual assaults<sup>18</sup>. The misdetection and recording of injuries can be cofactor in creating discrimination between medico-legal assessment and reports of Forensic Science Laboratory. The most common injured genital area was hymen and posterior fourchette. These findings are consistent with Suttipapit et al<sup>19</sup>. Detection of minute genital injuries are difficult but other techniques such as colposcopy as well as ultraviolet light will be beneficial for their detection<sup>20-22</sup>.

Out of 133 cases, the findings of 58(43.6%) cases were in line while 73(54.8%) were inconsistent. There can be multiple reasons of this discrimination between medico-legal assessment and reports of the sexual assault survivor. Sometimes, either the forensic consultant records the evidences very briefly or history of survivor is not taken properly. Delayed collection of swabs & not mentioning this fact can be one of the reasons along with late reporting of the survivor i.e. after 72 hours. DNA contamination during collection of biological material is another reason which necessitates focusing to the examination & cleaning steps, to identify the site

of contamination<sup>23</sup>. Observing standard measures during handling the specimens will be more fruitful<sup>24</sup>.

## CONCLUSION

It is mandatory for healthcare professionals to provide support to the victims of sexual assault to help the law enforcing agencies while investigating the crimes of sexual<sup>25</sup>. People should be educated for the benefits of early reporting for the purpose of medicolegal evidence in order to assist the law enforcing agencies & convicting the accused. A concrete effort regarding correct medicolegal certification in collaboration with all stakeholders will be beneficial in decreasing the discrepancies in medico-legal assessment and reporting of sexual assault survivors.

### Author's Contribution:

Concept & Design of Study: Filza Ali  
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