

Medicolegal Study of Alleged Rape Victim Cases in Mumbai Region

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ABSTRACT

Background: The sexual assault on women and female children is one of the most heinous crimes against mankind. Sexual violence is ubiquitous; it occurs in every culture, in all levels of society and in every country of the world. Sexual violence has a significant negative impact on the health of the population. The root causes of sexual and gender-based violence lie in a society's attitudes towards and practices of gender discrimination, which place women in a subordinate position in relation to men.

Methods: The prospective study was conducted in Mumbai region from 1st January 2011 to 31st December 2012 in which 152 cases of alleged rape victims which was booked under the section 376 of Indian Penal Code which was brought for medical examination. Strict confidentiality about their names was maintained.

Results: The most common age group comprised ages between 16-20 years in which total 63 (41.44%) cases were observed. Most of the victims i.e. 99 (65.13%) were unmarried. Most of the incidences took place at accused house, i.e. 69 (45.39%). In 142 (93.42%) cases the assailant was known to the victim. In 113 (74.34%) cases the time interval between the alleged incidence and examination was more than seven days. In 139 (91.44%) cases the hymen showed old tears at multiple positions. None of the report out of 66 reports from forensic science laboratory was found to be positive for spermatozoa.

Conclusion: Rape cases show a constantly rising pattern with a low conviction rate. There is no age safe from rape, maximum cases being in the age group 16-20 years as there are multiple physical, social and mental factors playing a role. Unmarried young women are at increased risk. Significant number of cases report late to the police/doctor. The delay results into loss of valuable biological trace material evidences.

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1. Introduction:

The statistics published by National Crime Records Bureau, Ministry of Home Affairs, Government of India, New Delhi in yearly statistics "Crime in India" (1) during last six years in relation with rape cases shows a constantly rising pattern with a low conviction rate. These cases are only the tip of iceberg. There are many unreported cases. Rape has been one of the many "Conscious Processes of Intimidation by which men keep women under a state of fear" (2).

Sexual violence is ubiquitous; it occurs in every culture, in all levels of society and in every country of the world. Over 40,000 serious sexual crimes (rape, sexual assault and sexual offences against children) were identified by the British Crime Survey 2009-10 (3). Data from many countries and local studies indicates that, in some parts of the world at least, one woman in every five has suffered an attempted or completed rape by an intimate partner during her lifetime. Furthermore, up to one-third of women describe their first sexual experience as being forced (4).

Sexual violence takes place within a variety of settings, including the home, the workplace, schools and the community. In many cases, it begins in childhood or adolescence⁵.

Sexual violence has a significant negative impact on the health of the population. The potential reproductive and sexual health consequences are numerous, unwanted pregnancy, sexually transmitted infections (STIs), human immunodeficiency virus infection/acquired immunodeficiency syndrome (HIV/AIDS) and increased risk for adoption of risky sexual behaviours (e.g. early and increased sexual involvement, and exposure to older and multiple partners). The mental health consequences of sexual violence can be just as serious and long lasting. Victims of child sexual abuse, for

example, are more likely to experience depression, substance abuse, post-traumatic stress disorder (PTSD) and suicide in later life than their non-abused counterparts (5).

The root causes of sexual and gender-based violence lie in a society's attitudes towards and practices of gender discrimination, which place women in a subordinate position in relation to men (6).

Forensic Medical examiner has a corroborating but important role in establishing the fact of rape. The half of this role is to provide the medical treatment and psychological support and the other half is medico-legal examination with sample preservation and quality documentation. The present study aims at observing important personal and social factors, injury pattern, results of forensic examination in these cases. The main purpose of this study was only to confirm that the findings are in agreement with the population distribution of India.

2. Materials and Methods:

The prospective study was conducted in Mumbai region from 1st January 2011 to 31st December 2012 in which 152 cases of alleged rape victims which were booked under the section 376 of Indian Penal Code which were brought for medical examination. Strict confidentiality about their names was maintained. Details pertaining to their age, religion, marital status, place of occurrence of alleged rape, type of assailant, number of assailants, history of intoxication, time interval between alleged rape and medical examination, age at menarche, abortion due to alleged rape, body injuries, state of hymen and forensic science laboratory reports were noted.

3. Results:

The most common age group comprised ages between 16-20 years in which total 63 (41.44%) cases were observed. The youngest case was of three years old girl and the oldest case was of 42 years woman.

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Table 1: Age wise distribution of the cases

Age group	No. of Cases	Percentage
0-5	2	1.31
6-10	6	3.94
11-15	30	19.73
16-20	63	41.44
21-25	27	17.76
26-30	13	8.55
31-35	4	2.63
36-40	6	3.94
41-45	1	0.65

Table 1a: Mean Age of the Victims

Study	Mean Age (in years)
Adams J <i>et al</i> ²¹	16.3
Santos JC <i>et al</i> ²⁵	17.5
Martin PS <i>et al</i> ²⁸	16.5
Kucuker H ³¹	13.8
Parveen H <i>et al</i> ³⁴	20.0
Present Study	19.5

Table 2: Religion wise distribution of cases

Religion	No. of Cases	Percentage
Hindu	95	62.5
Muslim	45	29.6
Christian	5	3.28
Buddhist	6	3.94
Sikh	1	0.65

It was observed that 95 (62.5%) victims were belonging to Hindu religion. Whereas the next common religion observed was Muslim with 45 (29.6%) victims.

It was observed that most of the victims i.e. 99 (65.13%) were unmarried. 32.89% were

Table 3: Marital Status of the victims

Marital Status	No. of Cases	Percentage
Married	50	32.89
Divorced	3	1.97
Unmarried	99	65.13

Table 4: Places of alleged incidence

Place of Alleged Incidence	No. of Cases	Percentage
At Various places	55	36.18
Victim's House	13	8.55
Accused House	69	45.39
Garden	1	0.65
Forest	3	1.97
Lodge	6	3.94
Workplace	3	1.97
Roadside	1	0.65
School Bus	1	0.65

Table 5: Type of Assailant involved in the alleged incidence

Type of Assailant	No. of Cases	Percentage
Friend	102	67.1
Neighbour	22	14.47
Father	4	2.63
Relative	7	4.6
Friend's husband	1	0.65
Manager/Employer	1	0.65
Co-worker	3	1.97
Ex-Husband	2	1.31
Stranger	10	6.57

married. Three (1.97%) of the victims were divorced.

We observed that most of the incidences

Table 5a: Age wise distribution with type of assailant

Age Group in years	Type of Assailant								
	Fri end	Neighbour	Father	Relative	Friend's Husband	Manager/ Employer	Co- worker	Ex- Husband	Stranger
0-10	0	8	0	0	0	0	0	0	0
11-20	67	8	4	5	1	0	2	1	5
21-30	29	4	0	1	0	1	0	1	4
31-40	6	1	0	1	0	0	0	0	0
41-50	0	1	0	0	0	0	0	0	0

Table 6: Number of Assailants involved in the alleged incidence

Number of Assailants	No. of Cases	Percentage
Single	140	92.1
Two or more	12	7.88

Table 7: History of Intoxication before the alleged incidence

H/o Intoxication	No. of Cases	Percentage
No	146	96.05
Voluntary	0	0.00
Forced	6	3.94

Table 8: Time interval between the alleged incidence and the medical examination

Time interval	No. of Cases	Percentage
Within 12 hrs	7	4.60
12-24 hrs	13	8.55
24-48 hrs	5	3.28
2-7 days	14	9.21
More than 7 days	113	74.34

Table 8a: Age with Time interval between the alleged incidence and the medical examination

Age grou	T					Total
	1	2	3	4	5	
0-10	3 (2)	4 (2.6)	0 (0)	1 (0.7)	0 (0)	8 (5.3)
11-20	3 (2)	8 (5.3)	4 (2.6)	9 (5.9)	69 (45.4)	93 (61.2)
21-30	1 (0.7)	1 (0.7)	0 (0)	3 (2)	35 (23)	40 (26.3)
31-40	0 (0)	0 (0)	0 (0)	1 (0.7)	9 (5.9)	10 (6.6)
41-50	0 (0)	0 (0)	1 (0.7)	0 (0)	0 (0)	1 (0.7)
Total	7 (4.6)	13 (8.6)	5 (3.3)	14 (9.2)	113 (74.3)	152 (100)

(Figures in parentheses are in percentages)
 1=Within 12 hrs; 2=12-24 hrs; 3=24-48 hrs; 4=2-7days; 5=More than 7 days

took place at accused house, i.e. 69

(45.39%). The place of incidence in 13 (8.55%) cases was victim's house. There was one case each in which the place was garden, roadside and school bus. There were three cases (1.97%) in which the incidence took place at workplace. Incidences which were of multiple act type were observed in 55 (36.18%) cases.

It was observed that in 142 (93.42%) cases the assailant was known to the victim. In 102 (67.1%) cases the assailant was friend and in 22 (14.47%) cases the assailant was neighbour of the victim. The worst thing observed was that in 4 (2.63%) cases the assailant was father of the victim. In three (1.97%) cases the co-worker was the assailant, in two cases the assailant was ex-husband and in one case employer was the assailant.

In 140 (92.1%) cases assailant was single. There were 12 (7.89%) cases in which the numbers of assailants involved were more than one. In one case the numbers of assailants were 8 times.

The study revealed that there were six (3.94%) cases in which there was history of forced intoxication in some or other form before the alleged incidence.

It was observed that in most of the cases i.e. 113 (74.34%) the time interval between the alleged incidence and examination was more than seven days. Time interval between alleged incidence and medical examination ranged from 8 hours to 4 years. In only seven (4.6%) cases the examination was done within 12 hrs of the alleged incidence. In 13 (8.55%) cases the examination was done between 13 to 24 hours after the incidence. Total 39 (25.65%) cases were examined up to 7 days after the alleged incidence.

Only five (3.28%) cases were brought for medical examination which had not taken bath, not changed their clothing and not defecated.

It was observed that most of the girls i.e. 69 (45.39%) attained the menarche at 12 years of age. The earliest age at which menarche was attained is 10 years and up to the age 15 years all the victims have attained the menarche. In nine cases there was no menarche attained.

In 21 (13.81%) cases there was pregnancy at the time of medical examination due to the alleged incidence. History of repeated sexual intercourse was present in all such cases.

In 14 (9.21%) cases there was history of abortion as a consequence to the alleged incidence. History of repeated sexual intercourse was present in all such cases.

In three (1.97%) cases there were signs of sexually transmitted infections detected during the gynaecological examination.

There were only three cases (1.97%) each which showed the injuries over face, neck, breast, chest, and other body areas like limbs and rest of the trunk, of which the ages of injuries were up to 5-7 days.

We observed that in maximum i.e. 139 (91.44%) cases the hymen showed old tears at multiple positions. In three (1.97%) cases the hymen showed recent tears and in ten (6.57%) cases the hymen was found to be intact. We also observed that in three (1.97%) cases there was contusion of labia majora and labia minora.

The FSL report of vaginal/cervical swabs and smears were received only in 66 out of 152 cases, though samples were sent in all cases. None of the report was found to be positive for spermatozoa.

4. Discussion:

We observed that the age of the victims ranged from 3 to 42 years. 41.44% cases were belonging to the age group 16-20 years. Similar findings were observed in different studies (7-16). The age of the victims ranged from, 4 to 60 years in the study conducted by Sarkar SC *et al* (8), 93 days to 86 years in the study conducted by Santos JC *et al* (17), and 4 to 40 years in the study conducted by Parveen H *et al* (15). So, it is concluded that no age is safe from rape because very young and even very elderly women are on the record. The victims of rape are most commonly from the age group 16 to 20 years.

As seen in present study, significant majority of victims permitted for sexual act though their ages were less than sixteen years. This shows lack of awareness and knowledge of legal issues related with rape, which posed a problem for both of them when it was with

Table 9: Factors following the alleged incidence, leading to Loss of Valuable Biological Trace Evidences

Factors responsible	No. of Cases	Percentage	
Bathed	Yes	147	96.71
	No	5	3.28
Changed Clothing	Yes	147	96.71
	No	5	3.28
Defecated	Yes	146	96.05
	No	5	3.28
Micturated	Yes	152	100.0
	No	0	0.00

Table 10: Age at Menarche in 143 victims

Age	No. of Cases	Percentage
10	1	0.69
11	10	6.99
12	69	48.25
13	37	25.87
14	16	11.18
15	10	6.99

Table 11: Pregnancy at the time of Medical examination due to the alleged incidence

Pregnancy at present	No. of Cases	Percentage
NO	131	86.18
YES	21	13.81

Table 12: History of abortion as a consequence to the alleged incidence

H/o abortion	No. of Cases	Percentage
NO	138	90.78
YES	14	9.21

consent. The role and impact of modernisation, social transition, movies and the electronic media showing sex related acts cannot be ignored in this context.

In India, as in many other countries, rape on children is common owing to the

Table 13: Signs of STIs present at the time of Medical Examination

S/o STIs	No. of Cases	Percentage
Absent	149	98.03
Present	3	1.97

Table 14: Distribution of general body injuries on the victim

Region	Face	Neck	Breast and chest	Rest of the body
Absent	149	149	149	149
Present	3	3	3	3

Table 15: State of the Hymen

State	No. of Cases		Percentage
	Married + Divorcee	Unmarried	
Intact	0	10	6.57
Recent tear	0	3	1.97
Old tear	53	86	91.44

Table 16: Reports of FSL for detection of spermatozoa

Result	Positive	Negative
Vaginal Swabs	0	32
Vaginal Smears	0	66

superstitious belief that, gonorrhoea and syphilis can be cured by sexual intercourse with a virgin. A younger girl, the greater is the possibility of her being a virgin. To these, many be added the cause of retaliation on the part of parents on account of previous enmity as a motive for rape on children, though observed in very few cases. The other reason for rape being common in children is the fact that children can be misguided and easily overpowered for performing sexual act (7).

We observed that 62.5% cases belonged to Hindu and 29.6% cases belonged to Muslim religion. Similar results were noted in the

study conducted by Sarkar SC *et al* (8) in which 75.55% cases were Hindu and 22.22% cases were Muslim. RoyChowdhury UB *et al* (13) noted 57% of the cases belonging to the Hindu religion.

In present study most of the incidences (45.39%) took place at the accused house. Incidences which were of multiple act type were observed at various places in 36.18% of cases, while in only 8.55% cases the incidences occurred in victim's house.

Our findings are not consistent with the findings of Amir M. (19) which observed 56% incidences at victim's house, Sarkar SC *et al* (8) which observed 41.1% incidences at victim's house, RoyChowdhury UB *et al* (13) which observed 22.5% incidences at victim's house and Changwa MC *et al* (14) which observed 36.2% incidences at victim's house.

In present study, in many cases the victim had voluntarily ran away to some other city, with the accused due to love affair and were caught by the police after some days, as the parents of the victim reported kidnapping of their daughter and subsequently in few cases, an offence of rape was registered.

We observed that in 93.42% cases the assailant was known to the victim. Among them 67.1% were friend, 14.47% were neighbour, 4.6% were relative, 2.63% were father, 1.97% were co-worker, 1.31% were ex-husband and 0.65% were employer. In only 6.57% cases the assailant was stranger. Similar findings were observed in the study conducted by Sarkar *et al* (8) in which there were known assailants in 81.2% cases. In the study by Islam *et al* (9) 88.2% victims knew assailant. Santos *et al* (17) noted that in 85% cases the assailant was from social and family circle of the victim. Martin *et al* (20) also observed that 62.2% victims were acquainted with assailant. Jain *et al* (12) observed that in 87.5% cases the assailant was known to the victim. RoyChowdhury *et al* (13) also observed that in 80% cases victim knew assailant. Changwa *et al* (14) noted in 68.2% cases assailant was known to victim. In a study by Kar *et al* (21) observed that 93.58% victims were acquainted with assailant. Berek (16) noted that 90.7% victims knew assailant.

In the present study we noted that assailant was friend in 67.1% cases. Sarkar *et al* (8) observed that assailant was acquainted/close friend in 74.9% cases. Islam *et al* (9) noted friend/boyfriend as assailant in 46.4% cases. Jain *et al* (12) observed that in 15.75% cases the assailant was friend of the victim.

In present study we observed that in 14.47% the assailant were neighbour. Neighbour as assailant was noted by Sarkar *et al* (8) in 1.8% cases, by Islam *et al* (9) in 13.7% cases and by Jain *et al* (12) in 46.75% cases.

In present study the assailant was stranger to victim in 6.57% cases. Assailant as stranger was observed by Sarkar *et al* (8) in 18.8% cases, by Islam *et al* (9) in 11.8% cases, Kar *et al* (21) in 5.1% cases, Barek (16) in 9.3% cases, Kucuker (22) in 61.9% cases and Parveen *et al* (15) in 40.86% cases.

So it can be concluded that the maximum threat to the victim is from known persons within her social circle. In such situation, owing to closeness or relationship of some or other kind, the victim can be easily misguided or convinced for sexual act with ulterior motive on part of accused.

In the present study we observed that in most of the cases (92.1%), only one assailant was involved. In 7.88% cases there was more than one assailant. Similar result was seen in the study conducted by Sarkar *et al* (8) in which, in 7.8% cases, two or more assailants involved.

In the study of Jain *et al* (12), it was noted that in 25% cases more than one assailant was involved. In the study published by Amir (19), 43% cases involved more than one assailant. Parveen *et al* (15) noted that in 31.3% cases the assailants were more than one. Barek (16) also noted similar finding in 45.65% cases. This shows that cases of many assailants are also becoming frequent (i.e. gang rape). These are the most heinous and horrible cases posing threat to the life of victim in many cases.

In present study there was history of forced intoxication in 3.94% cases. None of the victim was intoxicated voluntarily. In the studies conducted by Sarkar *et al* (8), Jain *et al* (12), RoyChowdhury *et al* (13), and Sukul *et al* (10) there were neither voluntary nor forced history of intoxication noted. Martin

et al (20) suspected Drug-facilitated assault in 2.9% of the cases. However there are many cases on record (Registered and unregistered) in which incidents of such type occurring in/while returning from pubs/discos are not uncommon.

We observed that in the present study 4.6% cases were brought for examination within 12 hours of the alleged incidence, 8.55% cases from 12 to 24 hours, 3.28% cases from 1 to 2 days and 9.21% cases from 2 to 7 days. Most of the cases (74.34%) were brought for medical examination after 7 days of the alleged incidence. 13.15% of cases were examined within 24 hours of the alleged incidence. Similar results were observed by Sarkar *et al* (8) in 10% cases, Lakew (23) in 14.2% cases and Parveen *et al* (15) in 15% cases.

Daru *et al* (24) observed that 49% cases were examined within 24 hours. Jain *et al* (12) noted that in 78% cases examination was done within first 24 hours. Changwa *et al* (14) observed that 96% victims were examined within 24 hours of the alleged incidence.

Medical examination within 72 hours of alleged incidence was performed in 3.41% cases in Barek (16) study, 23.08% cases in Kar *et al* (21) study, 61% cases in Santos *et al* (17) study, 74.6% cases in Kucuker (22) study. The time interval between the alleged incidence and medical examination was more than 7 days in 6.25% cases of Jain *et al* (12) study, 27% cases of Lakew (23) study, 28.42% cases of Barek (16) study, 35.8% cases of Sarkar *et al* (8) study, 48.39% cases of Parveen *et al* (15) study and 74.34% cases of present study.

The delay for medical examination can be attributed to the following reasons:

1. In many cases the victim had voluntarily ran away to some other city, with the accused due to love affair and were caught by the police after some days, as the parents of the victim reported kidnapping of their daughter.
2. Indecisiveness on the part of the victim, victim's parents or relatives to report the case to police.
3. Fear of offender.

4. Fear of guardian.
5. In few cases, where the perpetrator was father, the victim was helpless.
6. Lack of awareness of professional obligation on part of examining doctors to report matter to police, when evidence of sexual assault is found during general medical/surgical examination.

This makes it necessary that school/college girls, parents and even the health care providers must be educated in this regard.

Factors following the alleged incidence, leading to loss of valuable biological trace evidences:

We observed that only 3.28% cases were brought for medical examination before taking bath, defecation and changing the clothes, after the alleged incidence.

Jain *et al* (12) observed that 41% of cases had taken bath and changed their clothes prior to the medical examination. The victim had changed the cloth and washed their bodies before medical examination in 83% cases of Hassan *et al* (11) study. These factors led to loss of biological trace evidences that could have been collected from the victim and that could have played very important role in the trial of the cases.

The reasons for this were;

1. Late reporting of the cases.
2. Lack of knowledge and awareness about these biological trace evidences and their important role.
3. Non-availability of government guidelines directing heads of various institutions to display information material regarding action to be taken in such cases.

We observed that in 48.25% cases menarche was attained at the age of 12 years and in 25.87% cases at the age of 13 years. The earliest age at menarche was 10 year. RoyChowdhury *et al* (13) noted his study that 25% cases attained menarche at 12 years and 20% cases attained menarche at 13 years. The factor of menarche can be valuable in determining age and physical maturity of the victim.

In 13.81% cases we noted that there was pregnancy at the time of medical examination, as a result of the alleged

incidences which were repeated in course. Similar findings noted in the study done by Jain *et al* (12) in which 12.5% victims were pregnant at time of examination due to the alleged incidence. While Sukul *et al* (10) found that 16.09% of the cases became pregnant following the act and had aborted recently or were pregnant at the time of examination. Lakew (23), Kucuker (22) and Barek (16) noted pregnancy in 6.5%, 8.1% and 1.71% of cases respectively.

The reasons for pregnancy might be lack of use of condom by the assailant, lack of emergency contraceptives by the victim or repeated sexual intercourses. These cases are at risk for criminal abortion.

The observation of pregnancy in such cases can be of immense help in determining fatherhood at a later stage by DNA analysis, which can be strong evidence in such cases.

We noted that there was history of abortion in 9.21% cases due to repeated alleged incidences. Sukul *et al* (10) observed that 16.09% of the cases became pregnant following the act and had aborted recently or were pregnant at the time of examination. The reasons attributed are same as mentioned above. The DNA analysis of abortus can be valuable evidence if done at appropriate time.

In present study signs of STIs were noted in only 1.97% cases. RoyChowdhury *et al* (13) observed signs of STIs in 10% cases. The reasons could be lack of hygiene of the private parts or lack of use of condom by the perpetrator. The signs of STIs can be of great help in connecting the accused with crime in many such cases.

In present study only 1.91% cases sustained general body injuries which were of ages ranging from 12 hours to 5-7 days, mainly over face, neck and breast. Other parts involved were limbs and trunk.

The use of physical force was seen in 86% of cases of Amir M (19) study. Sarkar *et al* (8) found that 6.7% victims had extra-genital injuries, and 7.8% were having both genital and extra-genital injuries. Lakew (23) found extra-genital trauma was noted in 5.2% cases. Santos *et al* (17) noted traumatic lesions over the body in 28% of the cases. Hassan *et al* (11) found evidence of violence

in the form of injury over the body was seen in 15% of the victims. Jain *et al* (12) observed in 37.5% of cases, injuries and signs of struggle were present on the body of victim, and majority of them were seen on breast (55%), 25% were on cheeks and 77% of them were finger nail abrasions and bite marks. Kucuker (22) found 28.4% victims had body trauma. Manzoor *et al* (18) seen physical injuries in 39% cases.

Most common injuries noted in present study were scratch abrasions over neck, contusions over breast. In one case there were multiple superficial incised injuries. The reasons for absence of general body injuries in significant number of cases could be weak built, over powering, threats of some or other kind and off course consensual sexual act in few cases.

In present study we found that the hymen was intact in 6.57% cases. Hymen was recently torn in 1.97% cases. Hymen showed old tears in 91.44% of cases. Out of 99 unmarried cases, 86(56.57%) showed old tears of hymen.

Adams *et al* (25) found hymenal tear in 22% cases. Sarkar *et al* (8) noted tear of hymen in 88.5% cases. Lakew (23) observed recent hymen tear in 42.9% cases and healed tear in 32.9% of cases. Sukul *et al* (10) found old hymen tear in 86.2% of cases, while recent tear seen in 6.9% cases. RoyChowdhury *et al* (13) observed recent tear in 72.59% cases, old healed tear in 10% and intact hymen in 17.5% cases. Kar *et al* (21) found 28.2% victims with old hymen tear and 3.8% with recent tear of hymen. Parveen *et al* (15) noted fresh tear of hymen in 7.53% cases. This shows that findings of recent/old injuries to hymen were seen in majority of cases.

We observed fresh contusions of labia majora and labia minora in three (1.97%) cases. Parveen *et al* (15) found fresh local genital injuries in 7.53% cases. Jain *et al* (12) found fresh local genital injuries in 12.5% cases, while Hassan *et al* (11) found them in 18% cases.

In the present study, FSL report of vaginal/cervical swabs and smears were received only in 66 out of 152 cases, though samples were sent in all cases. None of the

report was found to be positive for spermatozoa.

Similar result was observed by Barek (16) in which none of the case showed positive FSL report for spermatozoa. Sarkar *et al* (8) found 5.5% cases in which the vaginal swabs/smears were positive for spermatozoa. Islam *et al* (9) noted positive reports for spermatozoa in 17.6% cases, while Parveen *et al* (15) and Daru *et al* (24) observed positive result for spermatozoa in 80.64% and 43% cases respectively.

The various factors leading to non-detection of spermatozoa are stated as below;

1. Delayed reporting of cases
2. Use of condom
3. Vasectomy, aspermia or disease of the vas deference in the accused
4. Delay in the analysis
5. Washing of the genitals
6. Sexual intercourse without ejaculation or
7. Sexual intercourse with ejaculation outside the genitalia
8. Cursory/casual/faulty sample collection/preservation.

There was no follow up by the victims, so to record and treat the psychological consequences of rape was not possible.

5. Conclusion:

There is a rising pattern of rape cases, prevalent in every culture, at all levels and in every country. There is no age safe from rape, maximum cases being in the age group 16-20 years as there are multiple physical, social and mental factors playing a role. Unmarried young women are at increased risk. The religion wise incidence of rape cases is in agreement with population distribution.

Maximum incidences take place in the house of accused. Maximum threat to the victim is from known persons within her social circle, friends being most common. Cases of gang rape are becoming frequent. Use of intoxicants is seen in few cases. Significant number of cases report late to the police/doctor.

The delay results into loss of valuable biological trace material evidences.

The physical consequences of rape like pregnancy and abortion occur in near about one quarter of cases in which there is repeated sexual intercourses.

Sexually transmitted infections are seen in very few cases.

Body injuries are absent in maximum cases because of overpowering, threats, weak built and consensual acts. Most common body injuries seen are scratch abrasions and contusions mostly on face, neck and breast.

Maximum cases showed old healed hymen tear. Mostly due to late reporting, the spermatozoa are undetectable in the collected swabs/smears.

There is no follow up by the victim to ascertain the psychological consequences after the rape.

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