

Sexually assaulted victims are getting younger

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ABSTRACT

INTRODUCTION: From the clinical forensic examination reports produced by the Department of Forensic Medicine, Department of Forensic Medicine, Faculty of Health Sciences, University of Copenhagen, Denmark, in 2007 concerning rape, attempted rape and sexual assault (RAS), circumstances were extracted and analysed focussing on age, relationship, lesions, violence, location and alcohol intoxication.

MATERIAL AND METHODS: A total of 184 girls and women over the age of 12 years were included in this retrospective study.

RESULTS: The median age of the victims was 20 years (range 12-89 years). 75.5% were under 30 years of age. 53% knew the perpetrator. More than one perpetrator was reported in 11%. 46% of the assaulted victims had a total number of 1-5 observed lesions and these were observed in all types of perpetrator relationship. Eight victims with more than 20 lesions were assaulted by a stranger or an acquaintance (first contact) (ACQ). 50% of the victims who had lesions were assaulted by a stranger or an ACQ. 55% of assaults occurred in private homes. A total of 107 had their blood alcohol concentration (BAC) measured. In all, 133 victims were assessed by the examining doctor to be unaffected by alcohol, eight of these had a BAC exceeding 1.0 per thousand. There was no correlation between the BAC and number of lesions. Two victims had a positive pregnancy test and were pregnant before the RAS.

CONCLUSION: In Denmark, RAS victims' age continues to decrease. RAS by a stranger or an ACQ involves a higher risk of lesions and the possibility of many lesions. More than half of those exposed to manual strangulation or other kinds of violence against the neck were assaulted by a stranger or an ACQ. Half of the women knew the perpetrator and the perpetrator was an ACQ in 26% of the cases.

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Several research papers about rape, attempted rape and sexual assault (RAS) report information about the perpetrators and crime scenes, perpetrator-victim relationship, as well as the impact of alcohol and drugs [1-3]. Here, we present data on the abovementioned circumstances, as registered in the clinical forensic examination reports concerning RAS for the year 2007 from the Department of Forensic Medicine, University of Copenhagen, Denmark. Our focus is on the victims' age, perpet-

rator-victim relationship, lesions and violence, location of RAS, and alcohol intoxication. An analysis of these reports has not been published since 1997 [3].

MATERIAL AND METHODS

Our institute performs clinical forensic examinations of sexually assaulted victims at the request of the investigating police authorities for the eastern part of Denmark, including Bornholm (catchment population of 2.4 million). These examinations are performed mainly at the "Centre for Sexually Assaulted" (CSA) at Copenhagen University Hospital. Thus, 96% of the victims in this study were examined at the CSA.

We identified 197 cases of RAS in our case database. Of these cases, nine examinations were incomplete, and four cases concerned men, one of whom had undergone a sex change operation. These thirteen cases were excluded, which left 184 examined females over the age of 12 years for this study. The male victims are presented in a separate study [4]. Girls below 12 years of age are also examined by a forensic pathologist, but in a paediatric setting, and these girls are not included in this study.

Our study was retrospective and it was based on data extracted from the clinical forensic examination reports performed by the examining forensic pathologist. These reports include a case summary from the police and from the victim about what happened and the results of a physical examination of the victim. Our focus was on the reported information concerning the victim, the victim's description of the assault and the perpetrator(s), including their relationship, as well as the time and location of the RAS, consumption of alcohol and drugs, illness, medication, use of contraception, time of last voluntary intercourse and whether or not the assault was the first sexual intercourse. We also included one observed parameter, namely the examiner's estimate about how influenced by alcohol or medication the victim seemed to be. It should be noted that this is purely the examiner's casual observation and estimate. In addition, para-clinical information was included from the microscopic examination of the rectal and vaginal swab for sperm cells indicating that ejaculation had taken place. Lastly, the pregnancy test result and the results of alcohol, medicine and drug blood analysis were included.

Categories from a previous study were used to de-

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TABLE 1

Information provided by the victims about their relationship to the perpetrator in numbers and percentages, by the defined perpetrator category and compared with the total number of observed body- and genito-anal lesions.

	Perpetrator relationship, n						Total
	stranger	acquaintance: first contact	friend	partner/ ex-partner	family	no information	
<i>Total number of observed lesions</i>							
0	6	8	4	6	3	12	39
1-5	18	24	14	10	1	18	85
6-10	6	9	1	4	1	7	28
11-15	2	5	1	2	0	4	14
16-20	0	0	0	2	0	1	3
> 20	6	2	0	1	0	6	15
Total, n (%)	38 (21)	48 (26)	20 (11)	25 (13)	5 (3)	48 (26)	184 (100)

TABLE 2

Information provided by the victims about the location of the assault, numbers and percentages, by the defined location category: private home (victim's home, perpetrator's home or another private location); public place (e.g. restaurant, street, disco, park) and other (e.g. car, taxi).

	Private	Public place	Other, e.g. car, taxi	No information	Total
n	102	57	19	6	184
%	55	31	10	3	100

scribe the relationship between the victim and the perpetrator (Table 1) and the location of the assault (Table 2) [1].

More concise forensic pathological findings such as observed lesions, localisation, type, severity, number of lesions, and observed genito-anal lesions, as well as details on the violence and sexual assault, as reported by the victims, were analysed in a separate study [5].

Trial registration: not relevant.

RESULTS

The overall median age of the victims was 20 years (range 12-89 years), and a total of 139 (75.5%) victims were under 30 years of age and seven (3.8%) were over the age of 50 years. Fifteen (8%) victims reported that the RAS was their first sexual intercourse.

Perpetrator(s): Information about perpetrator(s) given by the victim was registered in 168 cases. Of these, 32 cases (19%) included unclear or no information about their relationship to the perpetrator, while 136 cases (81%) included specific information concerning their relationship. Half of all the victims (98/184) knew the perpetrator beforehand (Table 1). In eighteen cases (11%) (18/168), more than one perpetrator was reported.

Violence and lesions: The majority of the victims

(145/184) had lesions (Table 1). The relationships between victims and perpetrator(s) were compared with the total body and genito-anal number of lesions observed at the examination (Table 1). Almost half (85/184) of the victims had up to five lesions and this frequency was the same across the various types of relationship. However, half of the persons assaulted who had more than 20 lesions (8/15) were assaulted by a stranger or a first contact acquaintance (ACQ) (Table 1).

Sixteen victims reported that they had been exposed to manual strangulation or other kinds of violence against the neck. One of them had lesions on the neck as well as petechial haemorrhage, nine had neither and six had only lesions on the neck. In five cases, the perpetrators were strangers and four were first ACQs. In four cases, the perpetrator was well known: a friend, a partner/ex-partner or a family member. Finally, in the last three cases, we had no information about the perpetrator.

Location of the assault: More than half (55%) of the RAS occurred in private homes (Table 2). One victim reported that the RAS occurred both in a car and in a private home.

Alcohol: The investigating police authorities decided that 107 victims should have their blood alcohol concentration (BAC) measured at the examination. A little more than half of the tested persons (59/107) had alcohol in their blood, and one fifth had a BAC of more than 1.0 per thousand (Table 3). One third (19/59) of the individuals had medicine and drugs in their blood as well. However, not all victims (29/107) who had a blood test taken for BAC had an analysis screening for medicine and drugs.

At the examination, the examining doctor made an estimate as to how influenced by alcohol or medication the victim was. Nearly three fourths of the victims (133/184) were assessed to be unaffected, one fifth was assessed as being slightly affected, four moderately affected and three were severely affected. Two of the severely affected had their BAC measured to be 0.7 and 1.61 per thousand, whereas the last individual was not tested for BAC. In the group assessed as being unaffected, eight (6%) victims had a BAC of more than 1.0 per thousand and one individual had a BAC of 1.7 per thousand.

We observed no correlation between these estimations and the number of perpetrators, relationship or observed lesions, apart from the fact that the three victims who were estimated as being severely affected all had both body and genito-anal lesions.

Table 3 and Table 4 show correlations between measured BAC and the total number of observed lesions, and between the measured BAC and the number of observed genito-anal lesions, respectively. About half

of the victims in every BAC concentration group had up to five lesions. Even though there were few individuals in the category with more than 20 lesions, nine out of ten of these victims had alcohol in their blood (Table 3). Table 4 shows that half of those who had their BAC measured (50/107) had no genito-anal lesions and had a BAC below 1.0 per thousand. Relatively, more victims who had genito-anal lesions (71%; 15/21) also had a BAC of more than 1.0 per thousand than (42%, 36/86) victims with genito-anal lesions who had a BAC below 1.0 per thousand (Table 4).

Other parameters: In 152 (83%) cases, an acute microscopic examination of vaginal swabs was performed to look for sperm cells. In one fifth of cases, sperm cells were found.

Two victims, who were 19 and 35 years old, and who were both examined within 24 hours after the assault, had a positive pregnancy test, but were pregnant before the RAS.

DISCUSSION

This study documents the continuing decrease in the age of RAS victim in Denmark. In 1990-1994, the median victim age was 28 years [6]; in 1997 the median age was found to be 25 years [3]; and in a 5-year-period from 1999 to 2004, the median age was 21 years [2]. Our study, which was based on 2007 data, showed a median victim age of 20 years. The age-group of below 30-year-old persons was found to account for a considerable proportion of the entire group of victims in other studies [7, 8], and 75.5% of the victims in this study belonged to this age-group. In a Norwegian study [9], the authors discussed sexual assault among adolescents and pointed to a correlation between sexual assault and an earlier sexual debut. The age of sexual debut has been decreasing in Norway [9], but this trend is not seen in Denmark [10]. The study suggests that sexual assault can be prevented through a later and non-alcoholic sexual debut.

The frequency of cases comprising two or more perpetrators seems to have stabilised over the past decades. At the end of the 1990s, the number of cases with more than one perpetrator was 6% [6], although it was 10% in the beginning of the 1980s. Data from 2000 to 2002 [11] mirrored our data with 11%, however; a more recent study from New Orleans, Louisiana, in 2009 [8] recorded 18.1% of cases with two or more perpetrators. It is unclear how other studies define the number of perpetrators, which causes confusion when comparing studies. In our study, only perpetrators who came into sexual contact with the victim and not those who assisted the attacker in other ways were included.

The CSA at Copenhagen University Hospital was contacted by 301 victims who had been exposed to RAS within the past 14-day period [12]. Of these, 177 were

TABLE 3

The 107 victims who had their blood alcohol concentration measured, categorised by blood alcohol concentration intervals and compared with the total number of observed body- and genito-anal lesions. The values are number of examined.

	Blood alcohol concentration, ‰					Total
	0	0.01-0.49	0.50-0.99	1.00-1.49	≥ 1.50	
<i>Total number of observed lesions</i>						
0	11	3	5	0	0	19
1-5	25	7	11	6	4	53
6-10	7	2	3	0	3	15
11-15	4	1	1	3	1	10
16-20	0	0	0	0	0	0
> 20	1	4	1	3	1	10
Total, n (%)	48 (45)	17 (16)	21 (20)	12 (11)	9 (8)	107 (100)

TABLE 4

Total number of genito-anal lesions compared with the measured blood alcohol concentration in the 107 girls and women who had their blood alcohol concentration analysed. The values are number of examined.

	Blood alcohol concentration, ‰					Total
	0	0.01-0.49	0.50-0.99	1.00-1.49	≥ 1.50	
<i>Total number of genito-anal lesions</i>						
0	26	8	16	3	3	56
1-5	22	7	4	8	6	47
6-10	0	2	1	1	0	4
Total	48	17	21	12	9	107

examined by a forensic doctor. A large share (40%) of the victims chose not to report the RAS to the police. In a similar report from Aarhus, Denmark, a third of the cases were not reported to the police [2]. These numbers indicate that there is a need for a place where people exposed to RAS can be examined and to receive treatment and support regardless of police involvement [3, 13].

In the present study, 53% of the 184 victims knew their perpetrator, and in half of these cases the victim stated that the perpetrator was an ACQ, mirroring previous studies [1, 3] where 25% and 39%, respectively, were "acquaintances made within 24 hours". It seems reasonable to consider if RAS is more likely to occur between individuals who are strangers or ACQ or if the data are inflated because other relationship groups are underreported. Many women who have been assaulted by a friend, partner/ex-partner or family member might not report the assault due to their own feeling of guilt or their awareness of the difficulty in substantiating their case [14].

Palmer et al [7] showed that both non-genital and genital lesions occurred less often when the victim knew her perpetrator. Conversely, Möller et al [15] showed

Sexual assault and alcohol.



that sexual assault committed by intimate partners are likely to involve more physical violence and result in injuries just as often as assault committed by strangers. In our study, we saw no differences between the perpetrators' relationship with the victim when we looked at victims with less than six lesions, but half of all victims examined with any lesions had informed that the perpetrator was a stranger or an ACQ. The number of examined victims with more than 20 lesions in these perpetrator groups was considerable. Despite the small number of participants, one might say that RAS committed by a stranger or an ACQ carries a higher risk of having lesions and possibly many lesions. This is in contrast to what other studies have shown [11]. We are unable to classify how the "no information" perpetrator group relates to other studies.

When looking at the sixteen victims who reported exposure to manual strangulation or other kinds of violence against the neck, the dominant type of perpetrator was a stranger or an ACQ. Despite the small number of victims who had reported this type of violence, this information is viewed as very important during clinical forensic examination, and this type of violence is taken very seriously due to its potentially serious consequences [16].

As for the location of the assault, our observations confirmed those of other studies [1, 2, 17], namely that at least half (55%) occurred in private homes, whereas one third of the cases (31%) reported the location as a "public place". Ingemann-Hansen et al [2] showed that the youngest age groups were more often assaulted in a public place. With these data in mind, surveillance footage and information about monitoring may be prophylactic and helpful to authorities. Of course, this depends on the camera's localisation, functional state and if the victim reports the assault to the police in time to get the recording before it is deleted.

With regard to alcohol, it is difficult to determine its influence in rape cases. When referenced later in trial, it is important to make known the uncertainty of the doctor's estimate in the clinical forensic examination report

about the victims who are under the influence of alcohol or medication. Eight women who were assessed to be unaffected by alcohol had a BAC of more than 1.0 per thousand and one even had a BAC of 1.7 per thousand.

We found no correlation between the measured BAC and the total number of observed lesions and no indication that a higher BAC level reduces the number of observed genito-anal lesions. We have not been able to find specific literature to which this correlation can be compared, but in a report from the Danish Crime Prevention Council [11], the possible association between victim information about alcohol consumed before the assault and lesions was investigated, and the authors reported that victims who had more than five drinks before the assault more frequently had lesions than victims who had less than five drinks.

The impact of alcohol on RAS can be further studied in the future. Because the examining doctor only provided estimates, we do not know the exact BAC at the time of the RAS or the behaviour of the victim due to the effect of alcohol. Alcohol is known to affect judgment and is relevant in the assessment of victims' behaviour. Therefore, alcohol remains an important factor in RAS [18].

CONCLUSION

We have documented that RAS victim age in Denmark continues to decrease. We also saw that RAS by a stranger or an ACQ first contact acquaintance carries a higher risk of lesions. In addition, we found that more victims were exposed to manual strangulation or other kinds of violence against the neck when the perpetrator was a stranger or an ACQ.

This study confirms that it is still the youth who needs advice on how and where to make new acquaintances under circumstances that are safe. Half of victims know their perpetrator and one in four perpetrators is an ACQ. One in ten RAS is committed by more than one perpetrator. Women must be cautious and aware of their perceived behaviour when under the influence of alcohol or medication in relation to potential RAS situations.

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