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PAPER

PATHOLOGY AND BIOLOGY

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Medical Findings and Legal Outcomes in Sexually Abused Children*

ABSTRACT: A previous study published in 2000 on a small group of children concluded that the medical examination in cases of sexual child abuse seldom provided legal proof of sexual abuse [J Forensic Sci 45(2000):115–7]. The present consecutive study included children referred to the police for a forensic medical examination. A colposcope was used to evaluate the anogenital findings which were classified as normal, nonspecific, and abnormal. Four hundred and eighty-two children were included. Abnormal anogenital findings were found in 38% of the girls and 20% of the boys, but there was no relation between abnormal anogenital findings and the two legal outcomes: "appearing in court" and "being convicted." However, the age of the child turned out to be a more important factor in relation to legal outcome than the physical findings. The results of this study suggest that the child's statement and not the physical findings were important for legal outcome.

KEYWORDS: forensic science, clinical forensic medicine, forensic epidemiology, child sexual abuse, legal outcome, medical findings, video colposcope

Sexual abuse (1) of children is a global health issue with prevalences differing between countries (2). A decrease in cases, substantiated by Child Protective Services, by almost 50% during the last 10 years has, however, been reported from the U.S.A. (3). In the Nordic countries, the lifetime prevalence of repeated and serious sexual abuse is estimated to be *c.* 5% (4). The exact prevalence of sexually abused Danish children is not known. A recent Danish survey including nonphysical contact reported that 16% of female adolescents and 7% of adolescent boys had been sexually assaulted (5).

Sexual abuse can be broadly defined from, e.g., fondling to penetration (6) and some assaults do not leave any or only sparse physical evidence. The medical diagnosis of sexual abuse of a child is difficult, although several studies have described medical, especially anogenital findings in sexually abused children not seen in normal children (7–11), and proposals for evaluation and classification of findings have been published (12–14). Most of these studies report that most of the children referred for evaluation of sexual abuse have normal or nonspecific findings (15–17), and a few studies, all from the U.S.A., have described medical findings and legal outcome (16,18,19). One Swedish study has reported the outcomes of the legal process in 94 girls ages 9–22 (20). None has, however, to our knowledge, compared medical findings to police investigation, court procedure, and legal outcome in a consecutive sample of police-reported sexually abused children within a medical forensic setting. Therefore, the purpose of the present study was to examine the influence of medical findings within a medical forensic setting on police investigations and legal outcome in the Danish legal system.

We explore the hypothesis that positive findings, defined as abnormal anogenital findings, lead to a higher rate of prosecution and conviction when compared with normal findings.

Methods

We included all children referred by the police for a forensic medical examination to the Department of Forensic Medicine from January 1, 1996, to September 1, 2002. The Department of Forensic Medicine, Aarhus, Denmark, serves an area of Jutland with *c.* 2.5 million inhabitants (almost half of the total Danish population), of whom half a million are children ages 0–16 years.

Danish law stipulates that all suspected cases of sexual abuse must be reported to social services, but not necessarily to the police. The police investigation procedure includes a videotaped interview of the child, and a forensic medical examination of the victim is often necessary. This documentation will later be used in court.

The case review included the medical records, police reports, and court decisions, including the interview of the child and statements from the perpetrator, family members, and others related to the child and the perpetrator. The results of the police investigations leading to prosecution and the court decisions were reviewed and abstracted. The following data were included: age and sex of the child, nature of the abuse and clinical findings, clinical history, health conditions, family composition, the child's relationship to the perpetrator, and the legal outcome. The forensic medical examination is an hour-long head to toe examination and includes the

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medical history but does not include an interview about the assault. Prior to the examination, the child and his/her parents or guardian have been informed in writing about the purpose of the examination and how it will proceed. The details of the sexual assault come from a report of the police interview with the child, and/or from the statement of the person who reported the assault, and/or the perpetrators.

Since 1994, the Department of Forensic Medicine in Aarhus has used a colposcope (Olympus, Ballerup, Denmark) to help with the examination of the anogenital area. A camera with a 5–16× image magnification is mounted on the colposcope. The camera has different filters so that capillaries and vessels can be viewed with great accuracy. Two medical doctors, the examining doctor and a senior doctor, review the videotape of the anogenital area before writing the medical report on the conclusion of the findings.

Collection of biologic trace evidence, such as semen, is dependent on the time interval from abuse to examination and only relevant for a period of <72 h after the abuse. Children are not tested for sexually transmitted diseases unless the examination or the medical history gives rise to concern as the risk of sexually abused children being infected with Chlamydia trachomatis or Neisseria gonorrhea has been found to be very low in our part of Denmark (21). Anogenital findings were classified as abnormal, nonspecific, or normal findings following the Norwegian classification by Myhre et al. (22). Abnormal findings included lesions and suspect findings such as bleeding, bruising of the anogenital area, abrasions, lacerations, fissures, hymenal clefts, anal fissures, and anal dilatation. The definition of hymenal clefts included complete as well as incomplete clefts of the hymen. Nonspecific findings were erythema and eczema.

Data Analysis and Statistics

The data were entered into Epidata and analyzed by SPSS (version 10.0). In the analysis "Medical findings," "Confession," "Gender," "Age," "Penetration," and "Period of abuse" were explanatory variables, and "Went to court," and "Guilty" were outcomes. The associations between the explanatory variables and the outcomes were expressed as a crude odds ratio (OR). Logistic regression models were used to estimate the adjusted OR for each variable. In the full model, we included all variables. In the reduced model, we only included statistically significant variables, with one exception: the variable "Medical findings" which was considered as the risk factor of interest. The significance of the variable was tested using the log likelihood ratio test, and the goodness-of-fit of the final models was tested using the Hosmer-Lemeshow test statistic (23).

Results

During the 81-month period, 482 children were included, which gives an incidence of 1.48/10,000 children/year in Jutland, Denmark. There were 426 girls (88%) with a median age of 9 years (range 0–15 years) and 56 boys (12%) with a median age of 6 years (range 1–15 years).

Demographic Characteristics

Table 1 shows that a large proportion of the children live with one of the parents only or away from their homes; there was no significant difference between the boys and girls in this respect.

Most children were assaulted in the homes of the perpetrators or outside their own homes (e.g., outdoors, public toilets, etc.). with no significant difference between the gender, and some of the children who were abused more than once were also abused in more than one location.

TABLE 1—*Characteristics of the abused and place of assault by gender.*

Determinants	Gender: Girls (n = 426), %	Gender: Boys (n = 56), %
Living with		
Both parents	25	27
One of the parents	45	48
Outside the home	19	14
Unknown	11	11
Place of assault		
Home of the child	8	4
Home of the perpetrator	33	43
Mutual home	15	16
Several different places	7	2
Other places	25	23
Unknown	13	13

Physical Abuse and Verbal Threats

Verbal threats or direct violence in the form of restraint and corporal punishment were experienced by 105 (22%) children. The verbal threats included hurting/killing the child's family or sending the child to prison or to a children's home. Signs of physical violence were evident at the medical examination in 39 (8%) of the children.

The Sexual Abuse Event and Medical Findings

Thirty-one percent of the girls and 25% of the boys were abused only one time; 18% and 9%, respectively, were abused more than five times. Many children did not, however, recall the exact number of times they were abused, which is the reason for the high number of unknown in Table 2. Thirty-one percent of the girls reported being abused during more than 3 months.

Table 2 shows that fondling was the most typical first experience of sexual abuse for girls, but a large group also reported vaginal penetration; 34% of the children gave no information about or could not recall the type of the first assault. Of the 226 children reporting vaginal penetration, 116 were penile, and *c*. 15% of the children reported oral penetration. The forensic medical examination was performed within a week after the latest assault in about 35% of the children, but about 25% did not know or recall when the latest assault had happened.

Thirty-eight percent of the girls and 20% of the boys had abnormal anogenital findings. Normal findings were observed in 31% of the girls and in 52% of the boys. Hymenal clefts (both incomplete and complete) were seen in 67 girls (16%); the number of girls with hymenal clefts increased with increasing age, and of the girls with a hymenal cleft, 78% were older than 11 years of age. A complete hymenal cleft was seen in only 22 girls, and this finding was even more associated to age as 19 girls were older than 13 years of age.

Legal Outcomes

The legal outcomes were known in 440 cases, and of these, 190 (43%) were prosecuted in court, and 165 of the accused were convicted; the charges were dropped in the rest of the cases or not investigated. Figure 1 shows that the conviction in court (found

TABLE 2—*Characteristics of the abuse by gender.*

Determinants	Gender	
	Girls (n = 426), %	Boys (n = 56), %
No. abusive events		
1	31	25
2–5	15	11
>5	18	9
Unknown	37	55
Period of abuse in months		
<3	43	55
3–18	17	7
>18	14	11
Unknown	27	27
Characteristics of first abuse		
Nonphysical	2	0
Fondling	20	11
Attempt to penetrate	11	2
Penetration vaginally	15	–
Penetration anally	2	21
Combination or other	18	21
No information	32	45
Penetration* (at least one time)		
Vaginal		
Yes	53	–
No	22	–
No information	25	–
Anal		
Yes	15	55
No	61	14
No information	24	30
Oral		
Yes	14	16
No	63	54
No information	24	30
Time between last abuse and the medical examination		
<1 week	36	32
1–4 weeks	15	25
1–12 months	20	14
>12 months	4	7
Unknown	26	21
Anogenital findings		
Normal	31	52
Nonspecific	29	25
Abnormal	38	20
No information	2	3

*The children may have reported more than one type of penetration.

guilty) increased with the age of the child; the highest proportion of dropped cases was for children between 0 and 3 years of age, and very few of the persons accused of having abused the youngest children were convicted.

Table 3 shows the univariate OR and the adjusted OR of the full and reduced models for the outcome "went to court." In the full model, abnormal medical findings (OR = 1.9), confession (OR = 27.0), and the child being 7–10 years old (OR = 4.4) were significantly related to going to court. The significance of the medical findings disappeared in the reduced model. In the full model, there was an increased but nonsignificant risk that the accused appeared in court, if the abused child was a boy. There was a significant relationship between the age of the child and the probability of the perpetrator appearing in court, and this was more likely if the child was between 7 and 10 years of age. The OR between gender and the outcome "went to court" decreased substantially between the univariate and the multivariate analysis. In Table 3, the crude OR for gender was 0.8 in the univariate analysis while the estimate of OR increased to 1.9 in the multivariate regression analysis. This large change of the risk estimate could indicate an

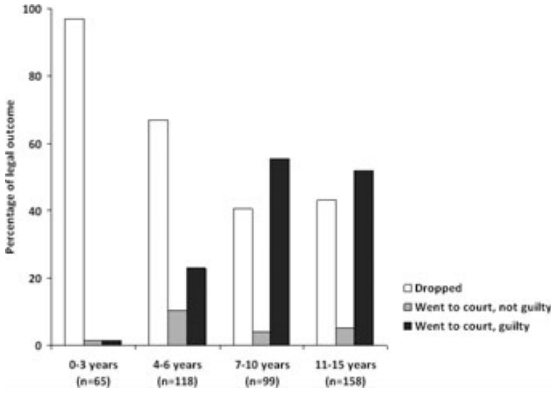

FIG. 1—*The legal outcome compared with the age of the child.*

interaction between gender and one or more of the other variables in the model, and to examine this we calculated the combined effect between gender and age.

In Table 4 it can be seen that when the abused was a boy in the age group 11–15 years then the perpetrator's risk of going to court increased significantly. The OR was estimated to 29.6 which is much higher than the risk estimate in the full regression model in Table 3. As "confessed" in the multivariate analysis was the strongest predictor of the outcome "went to court," all the OR in Table 4 were adjusted for the variable "confessed."

Table 5 presents the OR for the outcome "guilty" for 190 perpetrators who went to court. In the full model, perpetrators who abused boys were more likely to be found guilty (OR = 1.3), but this finding was not statistically significant. The adjusted OR were largest if the perpetrators had confessed, when the child was between 7 and 10 years of age (OR = 10.6), and when the child had been abused for more than 1½ years (OR = 4.8); the latter was not statistically significant and was excluded in the reduced model, which showed statistically significant findings for "confessed" and age.

Discussion

This is the first extensive study outside the United States based solely on police-referred cases for medical examination at the Department of Forensic Medicine, Aarhus, Denmark. The results showed no relation between abnormal anogenital findings and the two legal outcomes (appearing in court and being convicted); thus, our hypothesis was refused. Abnormal medical findings were found in 38% of all girls and in 20% of the boys. Of the cases that went to court, 165 were convicted which were 87% of all the prosecuted cases. Our analyses disclosed four variables to be significant or nearly significant predictors of the legal outcome: confessed, the age of the child with a higher conviction rate in the oldest children, the abused child being a boy (nearly significant), and the duration of the abuse. The age variable and the duration of the abuse as significant predictors may not be surprising. Older children can be expected to give a more detailed interview to the police than can younger children, and late disclosure increases the possibility of more witnesses and more interviews to document the child's statement. The gender variable is a surprise and has not been described by others.

Limitation and Strength of Study

Our study was limited by a simple classification of anogenital findings as normal, nonspecific, and abnormal following a

TABLE 3—*Multivariate logistic regression analysis showing the association (odds ratio—OR) between medical findings and other determinants of the sexual abuse and the legal outcome: went to court.*

	Went to Court (n = 440)		Univariate		Multivariate			
					Full Model (n = 281)†		Reduced Model (n = 433)	
Determinants	Yes n	No n	Crude (OR)	95% CI	Adjusted (OR)*	95% CI	Adjusted (OR)*	95% CI
Medical findings								
Normal	62	83	1		1		1	
Nonspecific	45	85	0.7	0.4–1.2	1.2	0.5–2.6	0.8	0.4–1.5
Abnormal	81	77	1.4	0.9–2.2	1.9	1.0–3.6	1.2	0.7–2.1
No information	2	5						
Confessed								
No	118	245	1		1		1	
Yes	72	5	29.9	11.8–76.0	27.0	7.4–83.7	27.3	10.5–71.2
Gender								
Girls	170	216	1		1		–	
Boys	20	34	0.8	0.4–1.4	1.9	0.8–4.6		
Age (years)								
0–6	41	142	1		1		1	
7–10	59	40	5.1	3.0–8.7	4.4	1.9–10.0	4.7	2.6–8.5
11–15	90	68	4.6	2.9–7.3	2.3	1.1–5.0	3.8	2.2–6.7
Penetration								
No	37	42	1		1		–	
Yes	146	118	1.4	0.9–2.3	0.8	0.4–1.7		
No information	7	90						
Period of abuse								
<3 months	85	106	1		1		–	
3–1½ year	41	31	1.7	1.0–2.9	1.7	0.8–3.4		
≥1½ year	43	17	3.2	1.7–5.9	1.7	0.8–3.7		
No information	21	96						

CI, confidence interval.
*OR adjusted for all other variables in the model.
†The number of children included in the full model is reduced as some of the determinants have many ''no information.''

TABLE 4—*The combined effect of age and gender on the adjusted risk of the legal outcome: went to court.*

	Gender					
	Girls		Boys		Adjusted for Gender	
Age (years)	OR*	95% CI	OR*	95% CI	OR*	95% CI
0–6	1		1.4	0.6–3.7	1	
7–10	5.2	2.7–10.0	5.9	1.4–25.5	5.3	2.6–10.4
11–15	4.3	2.4–7.6	29.6	3.3–265.9	4.7	2.7–8.2
Adjusted for age	1		1.7	0.8–3.4		

Results from logistic regression analysis.
CI, confidence interval.
*OR: adjusted for confessed.

previously reported classification system (22) whereby important details may have been missed. Nonspecific findings were most often seen in the youngest children ages 0–3 years and in children examined less than a week after the sexual abuse suggesting that this type of finding may have been the reason for the initial reporting of suspicion of sexual abuse to the police and not a young child's disclosure of abuse in contrast to what might have been the case for the older children. Abnormal findings, on the other hand, were seen most often in the oldest girls ages 11–15 and those abused for more than 3 months.

Our study cannot report the incidence of sexual abuse in Jutland, Denmark, as it included police-reported cases only from a well-defined geographic region; this might have biased the results toward more serious or nonfamily cases. The study included children with different histories of sexual abuse, with acute as well as late disclosures of abuse, and all acute cases were registered as examined less than a week since last abuse event. The strength of the study was the number of children included, the evaluation of the colposcopic findings by experienced medical doctors at one center, and the admissibility to extensive police and court material from jurisdictions with the same legal procedures.

Other Studies

The results from our study are in contrast to that of Palusci et al. (19), who in their study of 497 children evaluated in 1991–1992 and 1995–1996 found that those with an abnormal examination finding were 2.5 times more likely to result in a criminal prosecution with a finding of perpetrator guilt. Their study, however, was based on data obtained by multiple pediatricians and different

TABLE 5—*Multivariate logistic regression analysis among those who went to court (n = 190), showing the association (odds ratio—OR) between medical findings and other determinants of the sexual abuse and the legal outcome: guilty.*

	Guilty (n = 190)		Univariate		Multivariate			
					Full Model (n = 163)		Reduced Model (n = 188)	
Determinants	Yes, n = 165	No, n = 25	Crude (OR)	95% CI	Adjusted (OR)*	95% CI	Adjusted (OR)*	95% CI
Medical findings								
Normal	54	8	1		1		1	
Nonspecific	38	7	0.8	0.3–2.4	1.1	0.2–5.6	0.8	0.2–2.8
Abnormal	72	9	1.2	0.4–3.3	1.2	0.3–4.4	1.0	0.3–3.1
No information	1	1						
Confessed								
No	95	23	1		1		1	
Yes	70	2	8.5	1.9–37.1	18.8	2.4–167.2	20.4	2.6–160.9
Gender								
Girls	149	21	1		1		–	
Boys	16	4	0.6	0.2–1.9	1.3	0.2–8.1		
Age (years)								
0–6	28	13	1		1		1	
7–10	55	4	6.4	1.9–21.4	10.6	2.1–53.3	7.5	2.1–26.7
11–15	82	8	4.8	1.8–12.7	7.4	1.6–33.4	6.1	2.1–18.6
Penetration								
No	35	2	1		1		–	
Yes	124	22	0.3	0.1–1.4	0.2	0.0–1.1		
No information	6	1						
Period of abuse								
<3 months	70	15	1		1		–	
3–1 ½ year	34	7	1.0	0.4–2.8	0.8	0.3–2.7		
≥1 ½ year	42	1	9.0	1.2–70.6	4.8	0.5–43.6		
No information	19	2						

CI, confidence interval.
*Odds ratio adjusted for all other variables in the model.

examiners during the two periods with no review of photographs or videotape of anogenital findings obtained with colposcope.

Medical evidence and confession were described by Cross, De Vos & Whitcomb (24) to be the strongest predictors of prosecution, while others highlight the importance of the child's history in the diagnosis of sexual abuse (25).

The number of children in our study with normal, nonspecific, and abnormal anogenital findings are comparable with those of others who by colposcopic examination report that most children evaluated for sexual abuse have normal or nonspecific anogenital findings (17,26–28). In some studies, an even lower percentage of abnormal findings in sexually abused children was found (15, 16,27). Abnormal findings in our study were seen most often in the oldest girls ages 11–15 years, in which age group most hymenal clefts also were seen, and in those abused for more than 3 months.

Adams, Harper, Knudsen, & Revilla (16), including 236 children with legally confirmed sexual abuse, on the other hand found a significantly higher incidence of abnormal findings in girls examined within 72 h since last sexual abuse event.

The results from our study showing that abnormal anogenital findings were not a significant predictor for a case to appear in court are in accordance with the tradition in the Danish legal system in cases of sexual abuse of children, i.e., the credibility of the history given carries more weight than anogenital findings.

Conclusion

The anogenital findings of sexually abused children referred by police for forensic medical examinations were not a significant predictor of prosecution or conviction in Danish courts. The age of the child was significant; the older the child, the higher the likelihood that the perpetrator was prosecuted and convicted in court. The perpetrator was more likely to appear in court and be convicted if the child was abused for a longer period suggesting that the child's statement and not the anogenital findings remains the single most important feature in the assessment of child sexual abuse.

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References

1. Lauritsen AK, Meldgaard K, Charles AV. Medical examination of sexually abused children: medico-legal value. J Forensic Sci 2000;45:115–7.
2. World Health Organization. World report on violence and health, Geneva: World Health Organization, 2002.
3. Finkelhor D, Jones L. Why have child maltreatment and child victimization declined? J Soc Issues 2006;62:685–716.
4. Normann EK, Tamos K, Magnus P. Sexual abuse and children—a public health problem? Nord Med 1992;107:326–30.
5. Helweg-Larsen K, Larsen HB. Unges trivsel år 2002, København: Statens Institut for Folkesundhed, 2002.
6. Normann EK. Barn og seksuelle overgrep, Oslo: Ad Notam Gyldendal AS, 1993.
7. Emans SJ, Woods ER, Flagg NT, Freeman A. Genital findings in sexually abused, symptomatic and asymptomatic girls. Pediatrics 1987;79: 778–85.
8. Berenson AB. The prepubertal genital exam: what is normal and abnormal? Curr Opin Obstet Gynecol 1994;6:526–30.
9. McCann J. The appearance of acute, healing, and healed anogenital trauma. Child Abuse Negl 1998;22:605–15.
10. Berenson AB, Chacko MR, Wiemann CM, Mishaw CO, Frierich WN, Grady JJ. A case-control study of anatomic changes resulting from sexual abuse. Am J Obstet Gynecol 2001;184:1043–5.

11. Berenson AB, Grady JJ. A longitudinal study of hymenal development from 3 to 9 years of age. J Pediatr 2002;140:600–7.
12. Kerns DL (editor). Establishing a medical research agenda for child sexual abuse. Child Abuse Negl 1998;22:453–65.
13. Adams JA. Medical evaluation of suspected child sexual abuse. J Pediat Adolesc Gynecol 2004;17:191–7.
14. Adams JA. Guidelines for medical care of children who may have been sexually abused. J Pediat Adolesc Gynecol 2007;20:163–72.
15. Muram D. Child sexual abuse. Relationship between sexual acts and genital findings. Child Abuse Negl 1989;13:211–6.
16. Adams JA, Harper K, Knudson S, Revilla J. Examination findings in legally confirmed child sexual abuse. It's normal to be normal. Pediatrics 1994;94:310–7.
17. Heger A, Ticson L, Velasquez O, Bernier R. Children referred for possible sexual abuse: medical findings in 2384 children. Child Abuse Negl 2002;26:645–59.
18. De Jong AR, Rose M. Legal proof of child sexual abuse in the absence of physical evidence. Pediatrics 1991;88:506–11.
19. Palusci VJ, Cox EO, Cyrus TA, Heartwell SW, Vandervort FE, Pott ES. Medical assessment and legal outcome in child sexual abuse. Arch Pediatr Adolesc Med 1999;153:388–92.
20. Edgardh K, von Krogh G, Ormstad K. Adolescent girls investigated for sexual abuse: history, physical findings and legal outcome. Forensic Sci Int 1999;104:1–15.
21. Nielsen LA, Mikkelsen SJ, Charles AV. Chlamydia trachomatis and Neisseria gonorrhoeae infections in sexually abused children in Jutland. Ugeskr Laeger 2002;164:5806–9.
22. Myhre AK, Berntzen K, Selvaag E, Normann EK, Ruud B, Borgen G. A classification system of anogenital findings. A diagnostic tool in the assessment of sexual abused children. Tidsskr Nor Laegeforen 1998; 118:67–70.
23. Hosmer DW, Lemeshow S. Applied logistic regression, 2nd edn. New York, NY: John Wiley and Sons, 2000. 147–56.
24. Cross TP, De Vos E, Whitcomb D. Prosecution of child sexual abuse: which cases are accepted. Child Abuse Negl 1994;19:1431–42.
25. Kellogg N. The committee on child sexual abuse and neglect: the evaluation of sexual abuse in children. Pediatrics 2005;116:506–12.
26. McCann J, Voris J, Simon M. Genital injuries resulting from sexual abuse: a longitudinal study. Pediatrics 1992;89:307–17.
27. Heppenstall-Heger A, McConnel G, Ticson L, Guerra L, Lister J, Zaragoza T. Healing patterns in anogenital injuries: a longitudinal study of injuries associated with sexual abuse, accidental injuries, or genital surgery in the preadolescent child. Pediatrics 2003;112:829–37.
28. Kellogg ND, Menard SW, Santos A. ''Normal'' does not mean ''nothing happened''. Pediatrics 2004;113:67–9.

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