



[Original Article]

Early involvement of the child protection team in a tertiary care hospital for detection of child maltreatment

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Abstract

[Background] This study reviewed the status of child protection teams (CPTs) in Japan and surveyed the characteristics and risks faced by abused children and their families. We examined the actual situation of support and intervention on the prevention of child maltreatment.

[Methods] This is a retrospective investigation based on the medical records of all children under 18 who received an intervention from the hospital-based CPT at Chiba University Hospital between April 2016-March 2018. We evaluated the characteristics of the children and their families and compared them between a group suspected of maltreatment and another (non-maltreatment) group. In the group suspected of maltreatment, we evaluated the relationship between each type of maltreatment and family history of government and welfare service interventions.

[Results] In all, 150 cases ($N = 150$) were included in the analysis. There were many infant cases. The non-maltreatment group tended to have higher children's age, NICU hospitalization history rate, unmarried status of parents, medical insurance non-participation rate, and living on welfare rate than the suspected maltreatment group. In infancy, there was more physical abuse if there was no history of administrative or welfare service intervention, but there was considerable neglect even with interventions.

[Conclusions] Families with a high risk of abuse must receive intervention at the earliest, in the perinatal or the infant period, and it is necessary to tailor the content of the intervention to each family.

Key words: Child maltreatment, Child protection team, Intervention, Prevention, Support

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I . Introduction

Child maltreatment, including neglect, is a significant problem worldwide. In Japan, the occurrence of child maltreatment is increasing every year; 205,044 cases were reported in 2020 (<https://www.mhlw.go.jp/content/000863297.pdf>), which is 186 times the number of cases 30 years ago. In many countries, there are various child protection services aimed at protecting abused or neglected children from perpetrators[1-4].

Regarding factors related to children themselves, age, sex, disability, NICU hospitalization history, and others have been reported to affect whether they suffer from abuse[5]. In low-income countries, girls are at an increased risk of murder, sexual abuse, and neglect, while boys are at an increased risk of physical abuse [5,6]. Generally, girls are at a high risk of sexual abuse[7], and children with disabilities are reportedly 3.4 times more likely to be abused than children without them[8]. Moreover, children who have been hospitalized in NICU have been reported to be at risk of abuse[9-11]. Family factors related to the occurrence of abuse include parents' age, marital status, economic status, mental illness, history of maltreatment, and drug and alcohol abuse[5,12-14]. In a study regarding abuse of adolescents, local characteristics, family background, family structure, domestic violence, parent-child relationships, education, and other factors were related to abuse, and the rate of abuse was higher in families with more risks[15].

Hospitals play an important role in evaluating and coping with child maltreatment, and the significance of hospital units working to counteract child abuse and child protection teams (CPTs) is increasing. All health care workers, including doctors in medical institutions, must be aware that they are in a unique position to detect child maltreatment and should endeavor to detect it early [16]. Health care workers have a role in maintaining the health and welfare of children, such as their medical examinations, routine health checkups, and vaccinations, among others. Nevertheless, the number of abuse notifications from medical institutions in Japan in 2020 was only 3,427, or 1.7% of the total; however, many of

these cases were severe and required advanced medical care (<https://www.mhlw.go.jp/content/000863297.pdf>).

Child maltreatment should be judged socially. Moreover, it is challenging to diagnose child maltreatment through medical care alone compared to other diseases. If health workers become aware of child maltreatment, they are required to notify the Child Guidance Center and the child's municipality of residence. However, they will also encounter unacceptable conflicts in medical care that builds rapport because some medical professionals still believe that suspicion of child abuse is the opposite of standard support. There are widely recognized measures of suspicion of abuse[5,12-14], but there are no clear abuse diagnostic criteria or general risk assessment scores.

Interventions and support have been provided to families at risk of abuse to prevent abuse. There are reports that nurses can reduce the number of cases of abuse and emergency outpatient visits when they visit families at risk, such as young, unmarried, and low socioeconomic status (SES) [17-19]. However, evidence-based interventions designed to deal with and prevent child neglect are lacking, and intervention science is not considered very useful for neglect[20]. Nurses were shown to be unable to reduce the risk of recurrence of abuse through two years of intensive home visitation[21]. In contrast, in the United States, it was reported that Child Protection Service (CPS) could reduce neglect through appropriate intervention, and the importance of the method of intervention was emphasized[22]. In the United States, attempts are being made to link back to childcare service follow-up services or other institutions for abused children or children suspected of being abused by parents to inform risk assessment[23].

The purpose of the present study was to investigate the characteristics of children suspected of child maltreatment, their families, and the environment in the cases dealt with by the CPT of Chiba University Hospital, a tertiary medical institution. The second was to find out how multidisciplinary family support intervention affected the occurrence of child

maltreatment. We examined cases of children and their families with whom hospital-based CPT was involved, using chart records from Chiba University Hospital in Chiba, Japan.

II. Methods

Study Procedures

This is a retrospective investigation based on the medical records of all children under 18 who received intervention from the hospital-based CPT at Chiba University Hospital between April 2016-March 2018. Chiba University Hospital is a tertiary medical institution with a pediatric ward, an emergency department, a psychiatric ward, and a maternal-fetal medicine ward. CPTs play an essential role in supporting abused children and their households who need aid and serve to coordinate communication on these cases among clinical departments [24,25]. Children who were reported to the CPT were judged by the CPT board to determine whether there was any suspicion of maltreatment (maltreatment group). Children who were reported to the CPT but were not suspected of suffering maltreatment were classified as

children requiring support (non-maltreatment group). The non-maltreatment group included cases ultimately determined to be serious accidents, along with other cases, such as those involving newborns of pregnant women who needed assistance before childbirth.

Assessments

Evaluation items for children include age, sex, number of siblings, chronic illness or medical condition, neonatal intensive care unit (NICU) hospitalization history, type of abuse, and source of information. Family evaluation items include parents being married or unmarried, living together or apart, medical insurance, family illness history, medical checkup history, and intervention history with administrative and welfare services, among others.

In this study, we did not conduct any statistical analyses except for the demographic data because our sample was considered too small to adequately present statistical findings.

III. Results

There were 157 ($N = 157$) cases handled by the

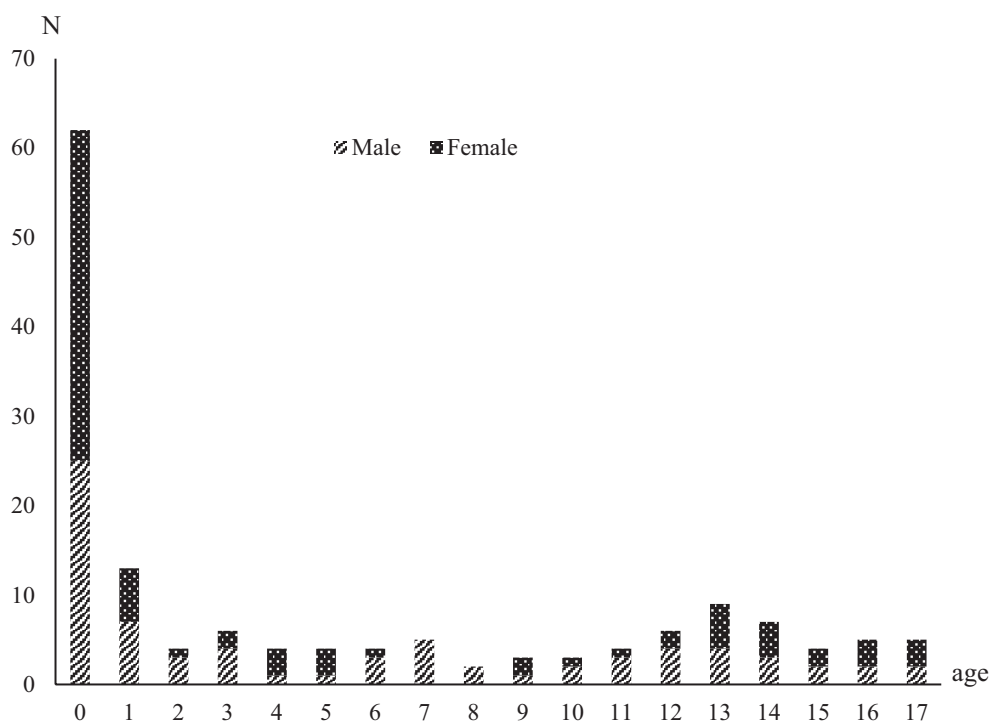


Fig. 1a Number of patients involved in Chiba University Hospital CPT

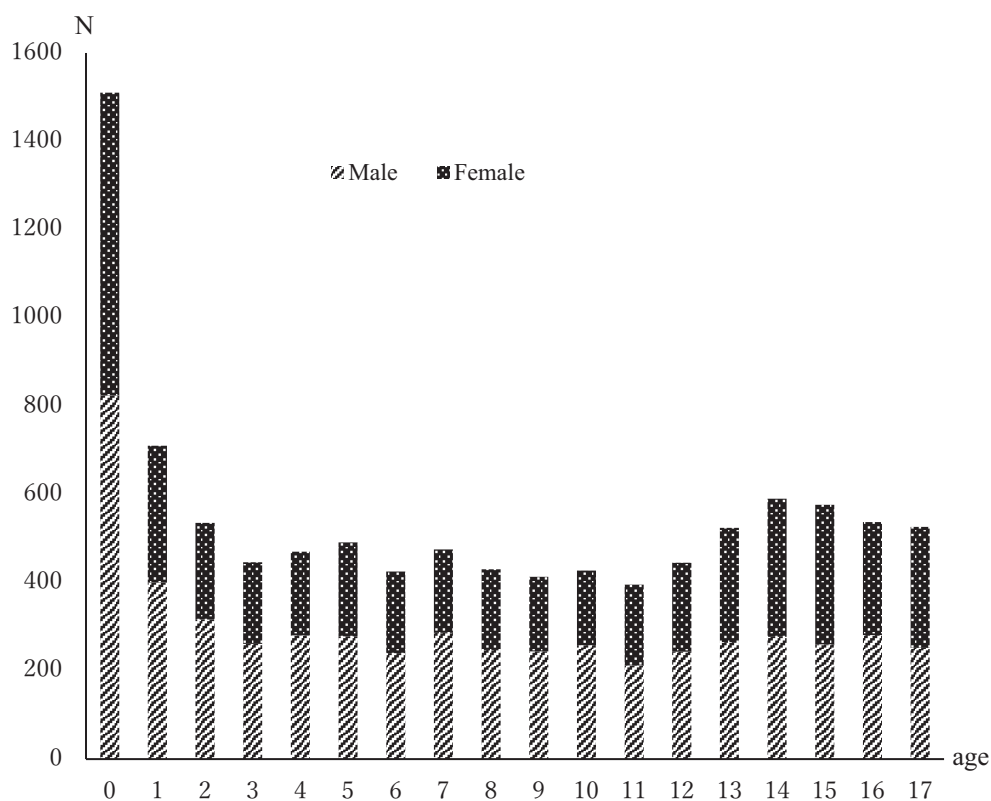


Fig. 1b Number of patients under the age of 18 who visited Chiba University Hospital during the study period

CPT under 18 years of age in the two-year period. Ultimately, 150 cases ($N = 150$), excluding those with unknown nationality (as the information regarding their period of stay and cultural background was unavailable) ($N = 7$), were included in the analysis. Figure 1a shows the breakdown of age and gender of the 150 subjects studied. The distribution of subjects was similar to the distribution of all patients under the age of 18 who visited the research institute at Chiba University Hospital (Fig. 1b).

Characteristics of Children

Table 1a shows the characteristics of the children in this study. The group which had experienced maltreatment tended to be older than the group which had not (Table 1a, 1b). The non-maltreatment group tended to have higher NICU hospitalization history than the suspected maltreatment group (Table 1a). There were no differences between the groups in sex, chronic illness or medical condition, or vaccination history (Table 1a).

Table 1a Characteristics of Children

Characteristic	Maltreatment (N=82)	Non- Maltreatment (N=68)
	N	N
Mean age (S.D.)	6.26 (6.053)	3.68 (5.568)
Sex		
Male	45	29
Female	36	39
Chronic illness		
Yes	50	44
No	31	22
Vaccination		
Yes	18	8
No	3	0
NICU hospitalization history		
Yes	11	32
No	33	13

Characteristics of Families

Table 1c shows the characteristics of the families of the CPT-involved children in this study. There were more unmarried parents of children in the non-

Table 1b Age and gender of children

	Maltreatment (N=82)		non- Maltreatment (N=68)	
	Male	Female	Male	Female
	Infancy (<1 years)	9	12	16
Early childhood (1<, <7 years)	16	11	3	5
School age (7 years<)	20	14	10	9

Table 1c Characteristics of Families

Characteristics	Maltreatment (N=82)	Non- Maltreatment (N=68)
	N	N
Mean age (S.D.)		
Father	37.77 (8.737)	36.37 (9.965)
Mother	35.64 (8.001)	34.37 (8.193)
Father (at birth of child)	31.61 (6.704)	32.81 (8.577)
Mother (at birth of child)	29.32 (5.643)	30.79 (6.616)
Marital status		
Unmarried	5	13
Married	59	46
Divorced	13	6
Remarried	4	0
Living together		
Yes	57	48
No	23	17
Medical insurance		
Yes	73	53
No	5	14
Living on welfare		
Yes	4	14
No	77	53
Pregnancy checkup		
Yes	30	35
No	4	7
Parental chronic illness		
Yes	44	34
No	12	12
Father's chronic illness		
Mental disease	7	4
Physical disease	6	3
No	17	21

Characteristics	Maltreatment (N=82)	Non- Maltreatment (N=68)
	N	N
Mother's chronic illness		
Mental disease	25	13
Physical disease	6	9
both	4	6
No	18	17
Number of siblings (S.D.)	0.65 (0.480)	0.6 (0.494)
Sibling chronic illness		
Yes	10	11
No	40	29
Support by relatives		
Yes	32	29
No	27	14
Intervention history of administrative and welfare services		
Yes	45	29
No	21	20

maltreatment group than in the suspected maltreatment group (Table 1c). Among unmarried people, fewer people were suspected of maltreatment. Married, divorced, and remarried individuals did not show differences between groups. The results also showed that possession of medical insurance tended to be higher in the suspected maltreatment group than in the non-maltreatment group (Table 1c). Furthermore, the non-maltreatment group tended to have a higher number of welfare recipients than the suspected maltreatment group (Table 1c). There were no differences between the groups in parental age, living together, pregnancy checkup, parental chronic illness, number of siblings, chronic sibling illness, support by relatives, or administrative and welfare services intervention history (Table 1c).

Types of Child Maltreatment

Table 2 and Figure 2 present a breakdown of child maltreatment types in this study. The total number of maltreatment cases is presented at the top, while the

Table 2 Types of Child Maltreatment

	Neglect	Psychological	Physical	Sexual
Total	43	24	34	7
Non-repeat	27	12	17	1

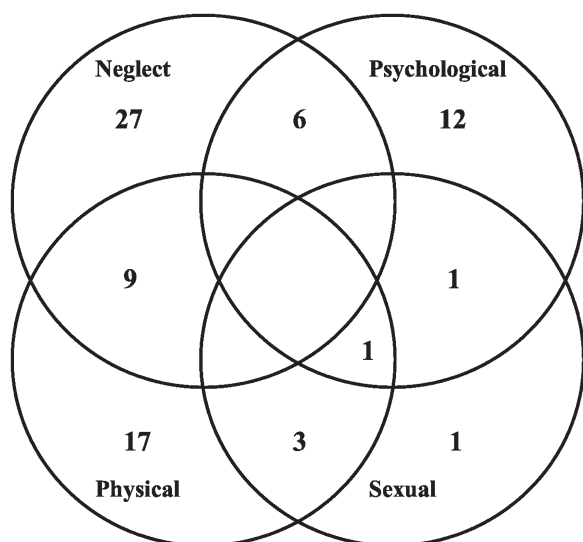


Fig. 2 Breakdown of repeat child maltreatment. Note. Other repeats that cannot be shown in the figure: Neglect + Sexual abuse: 1, Psychological + Physical abuse: 4

number of non-repeat cases is at the bottom of the table. Neglect was the most common type of maltreatment in general, along with non-repeat maltreatment (Table 2, Fig. 2). There were seven instances of sexual abuse, and six (86%) of them occurred with other types of maltreatment (Table 2, Fig. 2).

Analysis of Maltreatment and Intervention History

We investigated the relationship between interventions from the authorities and maltreatment by groups (Table 3). Cases with unknown status of interventions from the authorities were excluded. To investigate the relationship between repeat/non-repeat maltreatment and intervention, the analysis target were the cases ($N = 45$) where maltreatment was not repeated, and the presence or absence of intervention was clear (Table 3). In infants, there tended to be a difference between “presence of intervention history of administrative and welfare services” and “type of maltreatment” (Table 3). A difference was confirmed; incidence of physical abuse tended to be higher with no

Table 3 Relationship between Maltreatment Type and Intervention History

	Neglect (N=23)	Psychological (N=11)	Physical (N=11)
	N	N	N
Infancy (<1 year)			
Intervention history			
Yes	10	1	1
No	1	2	3
Early childhood (1≤, <7 years)			
Intervention history			
Yes	4	1	0
No	3	0	0
School age (7 years)			
Intervention history			
Yes	3	7	5
No	2	0	2
Total			
Intervention history			
Yes	17	9	6
No	6	2	5

Note. Analyzes of non-redundant maltreatment groups with known intervention history

intervention; however, neglect was observed equally with intervention and no intervention. There were no differences by other age groups or total age (Table 3).

IV. Discussion

In this study, there were two findings regarding the relation between multidisciplinary family support intervention and type of child maltreatment. First, physical abuse in infants tended to be greater without intervention as compared to neglect and psychological abuse. This suggests that physical abuse can be reduced by the intervention of administrative and welfare services in the perinatal period and early after birth. Second, it was found that neglect in infants was high even if there was a history of intervention. This indicates that early intervention may not suppress the occurrence of neglect.

Many of the cases handled at Chiba University Hospital CPT were infant cases. Chiba University Hospital has a perinatal mother and child center with an NICU, obstetrics, gynecology, and pediatrics facilities. In addition, because it is a tertiary medical institution that allows inpatient treatment at a psychiatric department, it is thought that the reason is that it intensively treats pregnant women with complications and newborns born from such pregnant women in the community.

The age distribution of the subjects in this study closely resembled the distribution of the total number of patients under the age of 18 who visited Chiba University Hospital. This indicated that the hospital staff's reporting for children requiring assistance was functioning.

Regarding the risks of maltreatment, the examination of cases handled by the Chiba University Hospital's CPT did not provide data suggesting previously unknown maltreatment risks or characteristics of children. In this study, the reported abuse risk as described above was not higher in the suspected maltreatment group; however, some results showed a lower result in the suspected maltreatment group than in the non-maltreatment group. At Chiba University Hospital, departments and co-medical staff report that CPTs are "worried about childcare." The cases reported at CPT meetings were examined to determine if abuse was suspected or not; this indicated that all CPT-intervention cases were at high risk of maltreatment. However, this result may also indicate that a case where the child's condition or family background was "biased" was a CPT case because the children have already been screened. There are a number of risk factors for maltreatment, and anyone who may suspect maltreatment must report it to the CPT. Many maltreatment factors are entangled; some have excluded confounding factors to the extent possible to assess NICU hospitalization history as a risk factor for maltreatment[11], while others have assessed maltreatment risk in a prospective cohort study[13]. Therefore, to assess the risk of maltreatment in Japan, it will be necessary to conduct a large-scale cohort study that removes confounding factors. After assessing a

number of maltreatment risks, it is necessary to confirm whether these risks are accurate in a prospective cohort study. We believe that an abuse risk assessment sheet can only be created afterward.

Regarding the relationship between maltreatment and intervention, administrative and welfare service interventions and support history have been shown to have a notable link to the type of maltreatment. In infants, family intervention and support suppressed the occurrence of physical abuse, but this tendency was not seen in the age group over one year old. This suggests that specific service interventions during the perinatal period or infancy may limit physical abuse in families at risk of abuse. In the months and years after NICU discharge, the risk of abuse remains high, and it is necessary to provide substantial support for families [10,13]. However, our results showed that even if an intervention was performed in infancy, the occurrence of neglect is not suppressed, which is consistent with the previous report that evidence-based interventions were ineffective for neglect[20].

Reports investigating the recurrence of child abuse indicate that neglect recurrence is more related to the CPS system than to child and family characteristics[26]. The report suggests that recurrence of neglect should be examined frequently to detect and effectively control it. In the United States, CPS reduces neglect if safe care intervention is performed[22]. Intervention at home may be necessary for the care of abuse; however, its quality and frequency should change depending on the type of abuse. To determine what kind of intervention is appropriate, we need to evaluate the frequency, content, and type of abuse and conduct a prospective cohort study with the obtained results. This requires collaboration between institutions that handle child abuse. Hence, it is necessary to investigate the neglect response in Japan and revise the content of responses if necessary.

Limitations

There are some limitations to this study. First, this study was implemented at a single institute and thus had a small sample size; to assess large-scale abuse

response, joint research with other institutions of multiple types in various regions is required. Second, because the sample for this study was cases handled by CPT, there may be a bias in abuse judgment and patient background; cases not handled by CPT should be set as a control group. Third, the design of this study was retrospective; to acquire more details and validate data, a prospective study should be implemented. However, unlike typical disease surveys, obtaining consent for study participation from families experiencing abuse or the intervention agencies that work with them may be challenging.

V. Conclusions

This study showed the characteristics of cases handled by CPTs in tertiary care institutions. This study revealed a troubling finding that administrative and welfare service interventions during infancy suppressed the occurrence of physical abuse but were not effective in preventing neglect in infancy. Therefore, families with a high risk of abuse must receive intervention at the earliest, ideally in the perinatal or infant period. Last, it is also necessary to examine the content of the intervention and tailor it to each family.

Contributors

N Saito and TH designed this study. N Saito and ME collected the data. N Saito and TH analyzed the data and interpreted the results. N Saito and TH drafted the manuscript, and EM, GI, N Shimojo, and HI revised it. HI supervised the study. All authors approved the version submitted for publication.

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Conflicts of interest

N Shimojo and HI are members of the Editorial Board of the Chiba Medical Journal. The other authors declare no conflict of interest.

Ethical approval

The study protocol was approved by the Ethics Committee of the Graduate School of Medicine at Chiba University (ID 3261), and the research was conducted in accordance with the Declaration of Helsinki.

Opt-out informed consent was obtained from the participants in the form on the website.

Data availability

The dataset for this study is stored at the Department of Legal Medicine, Chiba University.

The dataset can be accessed on request.

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