A MULTICENTER CHILD MALTREATMENT STUDY: TWENTY-EIGHT CASES FOLLOWED-UP ON A MULTIDISCIPLINARY BASIS*

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SUMMARY: Oral R, Can D, Hancı M, Miral S, Erşahin Y, Tepeli N, Bulguç AG, Tıraş B. (Dr. Behçet Uz Children's Hospital, İzmir, Turkey). A multicenter child maltreatment study: twenty-eight cases followed-up on a multidisciplinary basis. Turk J Pediatr 1998; 40: 515-523.

Twenty-eight maltreated cases were presented in this multicenter study. Hospital distribution was as follows: Dr. Behçet Uz Children's Hospital, 54 percent; Dokuz Eylül University Hospital, 21 percent; Ege University Hospital, 14 percent; Tepecik Social Security Hospital, 7 percent; Atatürk State Hospital, 4 percent. Age and sex distribution was two months to 25 years and 43 percent male, 57 percent female. The offender was the father in 71 percent, the mother in 32 percent and multiple in 25 percent of the cases. More than three child maltreatment risk factors were present in 93 percent. Nineteen patients (68%), nine of which were effectively followed-up were reported to the Social Affairs Bureau. Sixty-four percent gained acceptable health with the support of our team, 14 percent died, and 21 percent failed to comply with follow-up. A multidisciplinary group may interfere both medically and socially with these cases to interrupt the course of maltreatment. Every children's hospital needs such a team to increase diagnosis establishment necessary to initiate social support. *Key words: child abuse, child maltreatment.*

Child maltreatment (CM) is a complex issue presenting with medical, social, economic, legal, and educational problems. The nature of this syndrome necessitates the cooperation of several disciplines in order to first diagnose the cases, then to treat the acute phase health problems, follow-up and also treat the underlying pathology causing family dysfunction[1]. Several disciplines are involved in CM, including medical doctors, lawyers, prosecutors, judges, social workers, teachers, police, child development specialists, and psychologists. Each discipline has very important responsibilities in separate aspects of CM which

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cannot be replaced by another discipline. This is why cooperation among these disciplines is crucial in achieving satisfactory interference with these cases. This idea yielded the foundation of CM follow-up teams at all hospitals in developed countries accepting pediatric patients, since medical and educational professionals are the two major groups to identify CM cases[2].

We established a Child Maltreatment Follow-up Team in İzmir and have carried out since 1994 a training program through a series of lectures on CM at several hospitals and medical settings in İzmir to increase medical doctors' awareness and knowledge of the problem. From September 1996 to May 1997 we carried out monthly child maltreatment case presentation meetings during which diagnosed cases were presented from five teaching hospitals in İzmir. We would like to share our experience with our colleagues, believing it is crucial to let the pediatric community know about all the diagnosed cases until the importance of CM is recognized and appreciated throughout the country[3]. To our knowledge, this is the first case series of CM in Turkey reported predominantly from a pediatric setting.

Material and Methods

A group of physicians within the İzmir Chamber of the Turkish Medical Association gathered in 1993 to form a group to work on domestic violence.

Two subgroups were formed at first, one to deal with violence against women and one to deal with violence against children. In time, the second group was concentrating more on its task and so from the beginning of 1994, the whole group started to deal with CM.

After carrying out several projects on CM[4-6], this group initiated monthly CM case presentation meetings in İzmir in 1996. The attendants of these meetings were mainly medical doctors (pediatricians, forensic medicine physicians, child psychiatrists, general practitioners, pediatric surgeons, neurosurgeons, orthopedists, and public health and family physicians), lawyers, social workers, teachers, and psychologists. We carried out eight meetings in 1996-1997, during which 28 cases were presented from five hospitalts in İzmir. The attendants of the case presentation meetings were asked to present at the meetings any CM case they encountered or followed-up. By informing one of the authors (RO) in advance of the meeting, three to four cases could be presented at each meeting. Presenters were also asked to complete a form describing the cases so data could be collected by the authors.

Name, age, gender, and address of the patient, presenting institution, date of admission to the hospital, number of children in the family, birth order of the index case, self history and family history information, family structure, and

parental demographic information such as names, ages, occupations, diseases, educational-socioeconomic status, CM experience during childhood, substance/alcohol abuse, and marital problems were determined. The type, severity, duration and offender of CM were determined as well. A short summary of follow-up was provided by the social workers at the regional Social Affairs Bureau (SAB), who were attendants at the meetings.

Child maltreatment diagnosis was established in these cases by the recognition of any inflicted trauma directed to the child by a caretaker or someone known to the child who was at least six years older than the child and who caused psysical, sexual and/or psychological injury[1].

The types of CM were classified as physical, psychological and sexual according to medical examination and psychiatric interview findings[1]:

The severity of CM was categorized as follows by an algorithm developed by the authors. It was determined as "severe" if it was continuous and considered to be the cause of any physical or psychological handicap, "moderate" if it was continuous but caused no residual handicap, and "mild" if it was occasional with no major injury or handicap.

The outcome was determined as "physically and psychologically acceptable" if the patient complied with follow-up and there was no finding, either physically or psychologically, related to the abuse course, "death", "handicapped", and "failure to comply with follow-up".

Several features of the sexually and non-sexually maltreated children were compared by Student's t and Fisher's exact tests.

Results

We carried out eight meetings in 1996-1997 during which 28 cases were presented from five hospitals in İzmir. The attendants of these meetings were mainly medical doctors, lawyers, social workers, teachers, and psychologists.

Twenty-eight maltreated cases were presented in this multicenter study. Thirteen (46%) cases were retrospectively published case reports, the remainder (15, 54%) were diagnosed prospectively after the case presentation meetings started. Hospitals at which the cases were diagnosed were the five teaching hospitals in İzmir: Dr. Behçet Uz Children's Hospital, 15 cases (54%), 12 cases from the Department of Pediatrics and three cases from the Department of Pediatric Surgery; Dokuz Eylül University Medical School Hospital, six cases (21%), all from the Department of Child Psychiatry; Ege University Medical School Hospital, four cases (14%), all from the Department of Forensic Science; Tepecik Social Security Hospital, two cases (7%), both from the Department of Pediatrics; and

Atatürk State Hospital, one case (4%), from the Department of Obstetrics and Gynecology.

The distribution of the type of CM was psychological in 86 percent, physical in 65 percent, sexual in 46 percent, and severe neglect in four percent. Pure physical maltreatment was diagnosed in only three cases (11%) compared to 39 percent with both physical and psychological maltreatment and 32 percent both sexual and psychological maltreatment. In four cases (14%) maltreatment consisted of all physical, sexual and psychological components (Table I).

Maltreatment was severe in 22 cases (79%) compared to six moderate cases (21%). There was no case categorized as mild. All sexual maltreatment cases were evaluated as severe whereas 43 percent of non-sexually maltreated cases were moderate. However, the difference between the severity of maltreatment in the sexually versus non-sexually maltreated groups was statistically insignificant by Fisher's exact test ($p=0.08$).

The mean age was 9.6 ± 7.4 years (range between two months and 25 years). This range was between three months and 13 years in 15 children with physical and/or psychological maltreatment, with 73 percent being younger than five years of age. Among those categorized as sexual maltreatment, age distribution was between four to 25 years of age, with 77 percent being older than 13 years of age. The mean age was significantly higher in the latter subgroup (4.6 ± 4.0 vs 15.5 ± 6.0 years, $p<0.0001$).

Gender distribution was 12 male (43%) and 16 female (57%). In sexual maltreatment, however, 15 percent male compared to 85 percent female, whereas in the non-sexually maltreated group, the same distribution was 66 and 34 percent, respectively. This difference was statistically significant ($p<0.01$).

Comparisons between the sexually and non-sexually maltreated cases are shown in Table II.

Table I: Distribution of the Type and Severity of Maltreatment

Type	n	%	Severity	n	%
Psychological	24	86			
Physical	18	65	Severe	22	79
Sexual	13	46			
Neglect	1	4	Moderate	6	21
Physical/Psychological	11	39			
Sexual/Psychological	9	32	Mild	0	0
Sexual/Physical/Psychological	4	14			

Table II: Comparisons Between Sexually and Non-Sexually Maltreated Groups

Parameter		SM* n	SM* %	NSM* n	NSM* %	p
Severity of CM	Severe	13	100	9	57	NS***
	Moderate	0	0	6	43	NS
Gender	Male	2	15	10	66	<0.01
	Female	11	85	5	34	<0.0001
Age (years)		1.5 ± 6.0		4.6 ± 4.0		<0.0001

*SM: Sexually maltreated group, **NSM: Non-sexually maltreated group, ***NS: Statistically nonsignificant (p>0.05).

The offender was the father in 20 cases (71%), the mother in nine cases (32%), step-father and aunt in two cases each (7%), and stepmother, a relative and a neighbor in one case (4%) each. Multiple offenders were responsible for maltreatment in 13 cases (46%), both parents in 10, father and aunt in one, both parents and aunt in one and father and a relative in one case.

The most frequent risk factors associated with CM in this series were as follows, in decreasing order: low educational level in 21 cases (75%), parental psychological problems in 19 cases (68%), marital problems in 18 cases (64%), domestic violence in 15 cases (54%), low socioeconomic level in 15 cases (54%), divorce in 14 cases (50%), and parental alcohol dependency in 14 cases (50%). Less frequent risk factors determined were as follows: unemployment (39%), social isolation of the family (29%), parenthood before the age of 18 years (21%), parental physical illness (21%), unwanted pregnancy (18%), parental substance abuse (14%), stepparent (11%), low parental intelligence (11%), single parent (11%), immigration (7%), and parental maltreatment during childhood (4%). More than three risk factors were present in 26 cases (93%). Low educational and socioeconomic level and severe marital problems were present together in 39 percent of the patients.

Nineteen patients (68%) were reported to the regional SAB. The remainder were not reported because they were retrospective cases. Nine (47%) of the reported cases were effectively followed-up by the SAB. Ten (53%) patients could not be followed-up: seven because of false family address, two because the families lived in other cities, and one because of death while hospitalized.

On follow-up, 18 cases (64%) gained acceptable short-term physical and psychological health with the support of our team. However, long-term well-being

and freedom of continuing CM were confirmed in only 10 cases (36%) on follow-up. Twenty-two percent on follow-up showed sequelae of the maltreatment. Mortality, 14 percent in this series, was encountered in four patients. One of the cases died of nosocomial sepsis indirectly related to CM. The others died of the consequences of CM itself. Thus, true CM mortality rate in this series was 11 percent. Those three children died of drowning, incest/rape and suffocation. All were female, with an age distribution of one, four and 11 years, respectively.

Sixteen cases (57%) in this series were reported to the police department. However, information on legal actions taken is not yet available since the trials are still in process.

Discussion

Bearing in mind that approximately one percent of children referred to hospitals are diagnosed and reported as CM, according to reports coming from developed countries, one would expect at least 300,000 reported abuse cases from Turkish hospitals now that 30,000,000 of the Turkish population are under 18 years of age[1]. It is amazing, however, that only a few cases are reported in this context yearly. This is not only due to the lack of knowledge and sensitivity on the professionals' side, but also because of statistical surveillance insufficiency and the lack of a national organization program to prevent CM.

The physicians' attitudes and behaviors towards and knowledge of CM were determined in a study carried out by the İzmir Child Maltreatment Follow-up Team[4]. We learned that only 58 percent of the sampled physicians ever received any training on CM received a mostly through lectures of only one to two hours. Regarding their level of knowledge about CM, only 10% low score, and no one received high or moderate scores. This study, the results of which were somewhat anticipated, proved that there was a great lack of and dramatic need for medical training on CM.

This series is the cumulative result of the training program carried out by the İzmir Child Maltreatment Follow-up Team in İzmir. We believe that as the training program on CM becomes more organized and is regularly held, the number of diagnosed cases will increase. This assumption is already supported by the finding that the majority (54%) of cases in this series were reported from Dr. Behçet Uz Children's Hospital where the CM training program was relatively more organized in comparison to the other four teaching hospitals.

One may still wonder if CM does exist in Turkey or if it is a local problem of the population Dr. Behçet Uz Children's Hospital serves. To our knowledge there is no pediatric series reported by pediatricians in Turkey. However, there are

some series from child psychiatry or psychiatry departments as well as field studies proving that CM is as important a problem in Turkey as it is in developed countries[5,7].

Our series is the first to our knowledge in Turkey reported by a multidisciplinary team led by pediatricians. This series consists of very obvious cases as was anticipated since the recognition of more subtle cases needs a higher level of training of the medical community as a whole[2]. This is why severe cases comprised 79 percent of our series compared to the 30-40 percent of severe cases reported in literature[8].

In literature, the offender in physical abuse cases could be the father or the mother with almost equal rates[8]. This again contradicts our findings since the father was the offender in 71 percent of the cases in our series. However, this may also be explained by the high percentage of severe cases in our series since it is reported that, although fathers and mothers maltreat their children in comparable frequencies, fathers are more frequently responsible for severe and fatal cases[9,10].

The distribution of the type of CM was severe neglect (4%), sexual (46%), physical (65%), and psychological (86%), in increasing order. It was an anticipated result since some cases of sexual maltreatment were also physically maltreated. All physical and/or sexual maltreatment cases had a component of psychological maltreatment as well. We cannot yet claim this distribution represents the distribution of all CM cases in Turkey though, because of the small size of the series.

There is no significant difference in gender distribution of maltreated children in literature except for in the case of sexual maltreatment[8,11]. In our series, however, two-thirds of the physically and/or psychologically maltreated children were male. As for sexually abused children, only 15 percent were male compared to 85 percent female, which is in accordance with literature findings[11-13].

Presence of multiple risk factors in the majority of cases was an important finding in this series. Several authors have stressed this finding in order to increase the index of suspicion[1,2,8,11,12,14]. Low educational level, marital problems, parental psychological problems, domestic violence, low socioeconomic level, divorce, and parental alcohol dependency were the most frequent risk factors associated with CM in this series. We would like to stress that it should be borne in mind that a thorough social history should be taken from patients admitted to emergency units with trauma to reveal the presence of these risk factors in order to have a high index of suspicion of CM which is usually the only tool for reaching a manage diagnosis in these cases.

As for the reporting of CM cases, it is legally mandatory to report all these cases to police in Turkey, as is the case in developed countries. However, in developed countries, these cases are reported to child protective services and experts decide whether or not to take the case to court after thorough investigation of all the negatives and positives of such an action[15]. Sixteen cases in this series were reported to the police department. However, our concern about reporting these cases to police immediately is that maltreatment of these cases may continue and even become more pronounced during legal actions taken by unskilled investigators. Furthermore, some legal actions may destroy the family's unity and render the family members, including the maltreated child, in a far worse social and economic situation. This is why we, as a group, prefer to report all our cases to the regional SAB and let them decide whether it it necessary to take a legal action or not. Only in cases of sexual maltreatment and those with mortality potential do we report the cases to the police immediately. However, we believe this attitude will need further discussion in Turkey as the number of diagnosed cases increases and complications on interference ensue. Thus, we will develop in time a better medicolegal organization for reporting these cases by gaining more experience in working with maltreated children.

As for case outcome, 64 percent of cases in this series gained acceptable short-term physical and psychological health with the support of our multidisciplinary team. However long-term well-being and freedom of continuing CM were confirmed in only 36 percent of patients on follow-up. Even in developed countries, loss of patients on follow-up is frequently encountered[16,17]. In this series, though, it was encouraging to note that none experienced a severe or fatal CM episode on follow-up.

Mortality is reported to range between 0.1 and 10 percent in the literature[1,8,18]. It was high in our series (14%) compared to literature findings because more severe cases were included and also probably because one of the reporting groups was the Forensic Medicine Department staff which by definition deals only with deceased cases. Even so, the number of fatal cases was too small to compare with literature in terms of abuse type and offender.

In summary, we would like to reiterate that CM does exist in our hospitals. We need to increase medical professionals' awareness and knowledge of CM and of its risk factors so that they are more effective in recognizing such cases. Then, we should develop good reporting procedures so we can get involved in these cases and interrupt the CM course and keep these children healthy both physically and psychologically. In order to achieve all this, we believe every hospital accepting pediatric patients needs a child maltreatment follow-up team to increase diagnosis establishment.

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