

Munchausen by Proxy Syndrome: A Case Series Study from Turkey

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Abstract Munchausen syndrome by proxy (MSBP) is a rare form of child abuse in which a caregiver deliberately exaggerates, fabricates, and/or induces health problems in those in their care. The condition is extremely difficult to characterize and diagnose, as it manifests in many forms, often confusing the medical team. Insufficient knowledge regarding the syndrome and rare consideration of the differential diagnosis results in failure to recognize the problem. Literature suggests that an increase in physician awareness of the disorder can prevent or reduce its morbidity and mortality. For this reason, we believe that case series can help increase current knowledge on epidemiology, aetiology, diagnostic criteria, advised management of MSBP, and the psychological portrait of the perpetrator. Additionally, no data from Turkey has previously been presented on this issue. This study aimed to report characteristics of MSPB victims and alleged perpetrator, which were diagnosed and managed by a multidisciplinary team.

Keywords Child abuse · Multidisciplinary team · Factitious disorder · Caregiver

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Munchausen syndrome by proxy (MSBP) is a form of child abuse in which a caregiver (i.e., perpetrator) induces physical or psychological signs or symptoms in a child (i.e., victim) who is under her/his care (Hall et al. 2000; Rosenberg 2003; Squires and Squires 2010). Clinical findings of the victims of MSBP are extremely diverse, ranging from no signs and symptoms, to recurrent sepsis and lethal apnea. In the literature, these symptoms are classified into four main groups: poisoning, bleeding, infections, and injuries (Carter, et al. 2006; Criddle 2010; Giurgea, et al. 2005; Kucuker, et al. 2010; Tamay, et al. 2007; Tüfekçi, et al. 2011; Türkmen, et al. 2012; Şahin, et al. 2002). Previous studies with MSBP suggest that the victim is generally under the age of five (Bass and Jones 2011; Fulton 2000). Studies show that the perpetrator is more commonly female and generally the mother of the victim (Schreier 2004). Characteristics of the perpetrator further include: being self-sacrificing, devoting their lives to their child, being highly supportive of the physician, appearing to be medically knowledgeable and/or fascinated with medical details, interfering with treatment, allowing invasive procedures, appearing to be unusually calm in the face of serious difficulties in their child's medical course, and someone who enjoys the hospital environment (Criddle 2010; Schreier 2004; Squires and Squires 2010). Researchers have investigated the motivation behind mothers producing illnesses in their children. Psychodynamic explanations suggest that MSBP may be caused by pathological unresolved early stage parent-child relationships (Black and Hollis 1996; Polledri 1996; Schreier and Libow 1993). For instance, producing illness in her child may help a mother form a connection with hospital medical staff. In such a situation, medical staff may idealize the mother, who is perceived as extremely caring and protective of her child, and thus, compensate her for the psychological neglect and abandonment she likely experienced in her early formative relationships (Schreier and Libow 1993).

It is essential to note, however, that not all perpetrators cause illnesses in their children due to a deep psychological need. Sometimes extrinsic factors may lead to this type of behavior. In the literature, under certain conditions, the mother may cause the abuse as part of a familial pattern. Precey (1998) gave an example of a case of MSPB where a mother considered illness a very powerful tool for gaining attention because as a child, she grew up in a crowded family where attention was only given if she was ill. When she became a mother, she believed that being ill meant she could garner more precious bonding time with her family. Additionally, taking on the role of a parent with a sick child might entail further secondary gains such as enjoying extra attention from friends, receiving sympathy, not having to do unsatisfactory things such as house work or looking after older family members, and forming a social environment at the hospital (Squires and Squires 2010).

The psychological health of mothers in cases of MSPB has also been widely discussed. According to some researchers, psychiatric evaluations of mothers in these cases usually yield normal results (Meadow 1985). Nambu (2004) further states that although there is no proof of a mental illness in these mothers, MSBP is a form of child abuse. Cases such as these usually cause dilemma in courts and frequently necessitate the consultation of an expert witness (Nambu 2004). In the United States, rather than considering MSBP to be an illness, the criminal justice system views it as a form of child abuse (Selene Steelman 2002).

Regardless of the mothers' characteristics, induced conditions and iatrogenic complications can cause victims significant morbidity and even mortality. However, insufficient knowledge regarding the syndrome and rare consideration of the differential diagnosis may result in a failure to recognize the problem. Medical professionals may blindly accept the history given by a parent. Physicians should, therefore, be aware of warning signs of MSBP, including an unusual illness or symptomatic claim that cannot be fully substantiated despite multiple prior consultations; an illness that fails to respond to proper treatment; and/or when the child appears too well to fit the history. Without awareness or intention, physicians may actually enable or reinforce the abuse by continuing the endless search for a magical diagnosis and treatment (Awadallah et al. 2005). A simple review of the medical record can often identify potential inconsistencies that may prevent further unnecessary testing and treatments. A heightened physician's "self-awareness" in MSBP will prevent or reduce the morbidity and mortality associated with this diagnosis (Brink and Thackeray 2012; Feldman and Brown 2002; Hall et al. 2000; Rosenberg 2003; Squires and Squires 2010). As relatively little is known about the psychopathology of the perpetrators (Bass and Jones 2011), we believe there is a need for case series to increase current knowledge on epidemiology, aetiology, diagnostic criteria, advised management of

MSBP, and the psychological portrait of the perpetrator. This study aimed to depict characteristics of victims and alleged perpetrators of our MSBP series, which were diagnosed and managed by a multidisciplinary team.

Method

This paper describes the different characteristics of eight cases of MSBP, diagnosed and followed by the multidisciplinary Child Protection Unit at Hacettepe University Faculty of Medicine. This multidisciplinary team consists chiefly of paediatricians, child psychiatrists, forensic medicine specialists, psychologists, and social workers. Variables investigated in victims of MSBP included: sex, age, age of symptoms, age of suspicion of MSBP, MSBP confirmation age, and presence/absence of findings in sibling. We also investigated characteristics of the incidents such as symptoms of MSBP, any co-existing chronic disease of the child or family, reasons why MSBP was suspected, method of how MSBP was confirmed, classification of MSBP (simulated or produced/based on Monteleone's definition 1998), existence of life threatening danger, and the decision made by Hacettepe University Child Protection Units (HU-CPU) after detection of MSBP. Variables of the alleged perpetrators were: age, marital status, family characteristics of the victims, alleged perpetrator's personality characteristics and relationship with victim, and alleged perpetrator's motivations.

According to the definition by Monteleone (1998), we categorized the cases as "simulated" and "produced." Simulated symptoms are fabricated or the caretaker gives a false or exaggerated history. Produced symptoms are those that the caretaker actually inflicts on the child. Pediatricians and child psychiatrists carried out clinical interviews with the victim and the alleged perpetrator. In this report, all alleged perpetrators are mothers of the cases. The mothers were evaluated by the Department of Psychiatry. A clinical interview was conducted and the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV) criteria (APA 2000) were used for the diagnosis of psychopathology in the mothers. Furthermore, the mother-child relationship was re-evaluated at the child psychiatry department repeatedly. In order to gather consistent and reliable information about family dynamics and risk factors, other members of the family were also interviewed multiple times. Additionally, the Minnesota Multiphasic Personality Inventory – Second Edition (MMPI-2) was administered to all mothers in order to assess their personality characteristics. Two mothers (mothers of case 2 and 6) did not consent to the MMPI-2, three mothers had defensive profiles (cases 1, 7, 8), and for three mothers (cases 3, 4, 5) MMPI-2 answers were invalid. Therefore, the MMPI-2 did not provide valuable information. The Wechsler Adult Intelligence Scale – Fourth Edition (WAIS-IV) was given to

two mothers (cases 4, 5) who were suspected to have cognitive limitations. After the definite diagnosis of MSBP, collaborations were established with different institutions to guarantee the well-being of the child and to coordinate the treatment in support of the mother and child relationship. In this paper, we present the evaluation of victims and their alleged perpetrators and described how each case was handled.

Results

General Characteristics

In this case series, five of the children were male. The median age was 9 months (range: 2 month–13 years) at the onset of symptoms. Five patients were below the age of six when the first symptoms occurred. The median period from first sign of MSBP to diagnosis was 7.5 months (1–48 months). The characteristics of the children are given in Table 1.

The reasons for admission to the hospital were: recurrent attacks of apnea in two children; a chronic abscess that was not healing in one child; attacks of hypoglycaemia in two children; hematemesis in one child; nasal, auditory, and ocular bleeding in one child; inability to walk in one child; and sexual abuse in one child (Table 1). In four cases, there were siblings with similar complaints. Two of them also had sibling deaths with similar problems. MSBP was suspected due to the following: physical or laboratory findings were highly unusual; findings did not correspond with the child's medical history or were not physically or clinically plausible; constant change of medical history; and short-term symptoms that tended to stop or improve when the victim was not with the alleged perpetrator. The mothers were more likely to be very calm even when the clinical picture changed for the worse and were emotionally distant. When the mother-child relationship was evaluated, most mothers were emotionally distant and cold but extremely helpful with regards to the physical care of the child. They exhibited attitudes that encouraged the child's dependence on the mother and showed great satisfaction that their children had multiple medical problems that did not respond to treatment or that followed a persistent and puzzling course.

Characteristics of Presenting Symptoms

When we analysed the presenting symptoms, cases 1, 2, and 3 had “produced” symptoms, cases 4 and 5 had “produced and simulated” symptoms, and cases 6, 7, and 8 had “simulated” symptoms. In Case 1, the mother initiated attacks of apnea by injecting air into the patient's catheter and also injected solution/air into her leg causing abscesses that would not heal (Ozdemir et al. 2013a, b). In Case 2, the mother caused hypoxia in her child which then led to apnea. Of all patients, Case

2 was the hardest and latest to diagnose. The patient was admitted on multiple occasions due to apnea attacks but extensive investigation revealed no aetiology. When examining old records, an intervention by the perpetrator was noticed in a previous EEG monitorization and caused suspicion. Until this time, the perpetrator was extremely self sacrificing, had learned very difficult medical procedures, showed extreme effort to reach the hospital on time, worked in coordination with the treatment team, idealized the doctors and nurses, and was always commended by hospital personnel for all the care she gave her son. Only when the cause of the apnea was attributed to her did her demeanour change, as she became hostile, aggressive, and began to conflict with the treatment team and hospital administration.

In cases 3 and 4, alleged perpetrators administered intramuscular insulin to their children, causing attacks of hypoglycaemia. Case 4 also had simulated symptoms, which were caused by adding her own menstrual blood to her child's urine to imitate hematuria. Cases 3 and 4 had seizure attacks that may have been due to hypoglycaemia. Mental retardation was also detected in Case 4, which may be attributed to the attacks of hypoglycaemia.

The mother of Case 5 simulated symptoms by contaminating iron medication or blood on to her child's body and her clothes imitating hematemesis. Interestingly, the mother obtained blood by cutting her own finger or making her nose bleed. In fact, she even stole blood from tubes that were drawn from other patients and had been at the hospital desk.

Case 6 was admitted to hospital due to hemiparalysis. The physical examination and clinical and laboratory evaluations revealed normal results. After a psychosocial evaluation, it was revealed that the boy regained ability to walk only while in the care of his father however, was brought back to hospital by his mother in a wheelchair continuing to state that he could not walk. When the cause of the hemiparalysis was explained to be psychogenic, the mother refused the diagnosis and continued to seek medical attention from different doctors. As such, she not only reinforced her child's disorder but also allowed very invasive procedures to be performed on him. When medical staff tried to stop the mother's interventions, she left the hospital and follow up was not possible.

The mother of Case 7 complained that her son would offer himself sexually to everybody he met and she collected items of proof (a bag full of his underwear which contained hair and semen from the alleged abusers), she examined his anus daily and followed him wearing a disguise to try and catch the perpetrators (Ozdemir et al. 2013a, b). The child also gave a parallel history of sexual abuse, reporting that he would offer himself to anybody. The father stated he had never witnessed any of the incidents but agreed with his wife's story. The mother had signs of paranoia with prominent manipulation. Furthermore, even though the history given by her was very dramatic, she seemed to be very calm and emotionally

Table 1 Characteristics of victims, symptoms, confirmation and classification of MSBP

	Case 1	Case 2	Case 3	Case 4
Gender	Female	Male	Male	Female
Age on admission	16 months	3 months	3 months	13 years
Onset age of symptoms	8 months	2 months	3 months	13 years
MSBP				
Suspected age	17 months	15 months	4 months	13 years
Confirmation age	19 months	20 months	4 months	13 years
Confirmation period	11 months	18 months	1 month	1 month
Type of symptoms	Recurrent attacks of apnea and unhealing thigh abscess	Recurrent attacks of apnea	Hypoglycemia and seizures.	Seizure, hypoglycemia, hematuria
Associated disease	Seizure	None	Inguinal hernia operasyonu.	Epilepsy and mental retardation
Family history	Maternal recurrent, tooth abscess History of seizure in male sibling	Recurrent infant deaths due to apnea Three siblings died (24, 28, 37 month-old) due to apnea	The father has type 2 DM, treated with insulin. 6 maternal siblings and 7 paternal siblings deceased	Mother has CHF, Father has DM Grandmother has DM and amputated leg due to DM. Six siblings died, four had (1 week, 1 month old, 9, 3.5 years old) history of hypoglycemia
Method of MSPB diagnosis	Video monitoring Separation from mother, Evaluation of MCR	Video monitoring Separation from mother, Evaluation of MCR	Suspicion of DM in the older sibling Atypical tests results Separation from mother, Evaluation of MCR	Atypical tests results. Separation from mother, Evaluation of MCR
Classification of MSBP	Produced	Produced	Produced	Simulated-Produced

	Case 5	Case 6	Case 7	Case 8
Gender	Male	Male	Male	Female
Age on admission	10 months	11 years old	9 years old	6 months
Onset age of symptoms	10 months	11 years old	6 years old	2 months
MSBP				
Suspected age	11 months	12 years old	9 years old	6 months
Confirmation age	14 months	12 years old	10 years old	7 months
Confirmation period	4 months	12 months	48 months	1 month
Type of symptoms	Hematemesis	Hemiplegia	The mother stated that he was exposed to sexual abuse without any supporting data.	Repetitive nasal, lacrimal and auditory bleeding
Associated disease	Recurring LRTI, diarrhea, GER.	Recurring LRTI, asthma	None	None
Family history	None	None	None	One intrauterine ex (6 month). Reason is unknown. The mother was pregnant when the victim's bleeding began
Method of MSPB diagnosis	Separation from mother, Evaluation of MCR	Atypical tests results. Separation from mother, Evaluation of MCR	Psychiatric evaluation of the family	Atypical tests results Psychiatric evaluation of the family and MCR
Classification of MSBP	Simulated- Produced	Simulated	Simulated	Simulated

DM diabetes mellitus, LRTI lower respiratory tract infections, GER Gastro esophageal reflux, MCR mother-child relationship, CHF Congestive heart failure

isolated. When medical professionals explained to the family that the situation was psychological, they never returned to the hospital. The case was legally reported.

Case 8 also had simulated symptoms, including a history of bloody vomiting, bloody stool, and nose-mouth-ear-eye bleeding. The mother contaminated blood on to her child's face, ears, mouth, and nose imitating a hemorrhage. On admission, the mother was also 4.5 months pregnant and her medical history revealed vaginal bleeding on multiple occasions but the aetiology was never found. When hospitalised, the bleeding would stop, however when discharged, she would return to the emergency ward complaining of further vaginal bleeding as well as massive bleeding in her child's ear and nose. On multiple occasions, a source of bleeding for both the mother and child was not determined.

Life-threatening events were detected in all children with produced symptoms. In Case 1, cardiac arrest occurred following an apnea attack leading to a transient loss of vision and loss of function in her left arm. Delay in walking, which might be attributed to chronic abscesses, was seen followed by contractures in her legs due to disuse. Long-term physiotherapy was given. Furthermore, brain death of Case 2 had occurred at the time of diagnosis and hypoglycaemic seizures occurred in cases 3 and 4.

Familial Characteristics

When the characteristics of the families were evaluated, all came from low socioeconomic backgrounds with a patriarchal nature and most of the cases had marital conflict and low marital satisfaction (Table 2). The mothers came from extended families but had low social support and many responsibilities. The fathers remained passive during the illness process with no knowledge regarding the illness, hence were both emotionally and almost physically absent. In three cases (cases 1, 3, and 8), the mothers were subjected to physical abuse by their husbands, and two (cases 1 and 7) reported sexual problems with their partners. The father of case 1 had an extramarital relationship and the mother of case 7 stated she refused to have a sexual relationship with her husband as it reminded her of the sexual abuse that her son had reportedly endured.

Psychiatric Evaluation of Mother and Child

Table 3 shows the individual characteristics of the mother, the motivation behind causing the symptoms, and her underlying psychopathology. Four mothers showed axis two personality traits, two mothers had paranoid findings, and two mothers were depressed (APA 2000). The psychometric evaluation of the mothers of cases 4 and 5 showed mild mental retardation although clinical evaluation was more compatible with borderline intelligence. The Department of Child and Adolescent

Psychiatry evaluated the mother-child relationship. Significant lags in cognitive, behavioral, emotional, or social development were detected in cases 1, 2, 3, and 8. These children were unresponsive to their environment, showed no exploratory behavior, and had shallow affect. Furthermore, mother-child bonding was weak and they seemed to be unhappy children. When mother-child interactions in cases 1, 2, 3, 5, and 8 were evaluated in the playroom, the mothers were emotionally superficial, devoid of empathy, had shallow affect, and showed difficulty in appropriately responding to their child's needs. They were more inclined to tend to their children's physical needs and bonding was thought to be weak and insecure. On the other hand, cases 6 and 7 acted as an extension of their mothers, the produced symptoms were present and significant secondary gains were obtained. It is possible to say that a pathological symbiotic relationship occurred between the children and their mothers. Ultimately, the social services unit that works in coordination with the child protection unit ensured that the children's needs were met and that decisions were made in their best interest. In some of the cases, collaborations were established with local social services.

Outcomes of the Cases

All cases except for case 6 were legally reported and social services were informed. Case 6 was lost in follow-up and we were unable to track the family, therefore the case was not reported. Cases 1 and 5 were followed by family protection in collaboration with local social services and a decision of precaution was made for the treatment of the family. Collaboration with the parents of cases 2, 4, and 7 were not possible. In Case 2, the last apnea attack led to pulmonary arrest and as a result, the child was intubated and admitted to the intensive care unit where the mother was only allowed supervised visitation. The child was diagnosed with brain death and died 1 year later. After the child's death, the parents blamed our hospital and took legal action. The case remains unresolved to date. After the death of the child, we learned that the mother gave birth to another child and she presented to another paediatric hospital with a similar history of apnea for this child as well. This hospital was immediately informed and legal action was taken. In Case 4, family protection was not appropriate, therefore the child was removed from parental care and entered into institutional care. Judicial procedure was started in Case 7; parental rights were given to the father and the mother was committed to a year of psychiatric treatment by the courts. The mother of case 8 was hospitalised due to a high-risk pregnancy at a university hospital near her area of residence. This hospital was informed of the case by our child abuse team and advised to inform social services and take legal action.

Table 2 Family characteristics of MSBP cases

	Case 1	Case 2	Case 3	Case 4
Age of mother and father	22–30	24–32	33–41	31–38
Marital status	Married	Married	Married	Married
Marital relationships	Marital problems, Distant, detached and abusive	Conflictual, distant	Conflictual	Distant, detached
Parental education	M: High school drop out F: Primary school	M: Secondary school F: High school	M: Primary school F: High school	M: Primary school F: Primary school
Level of income	Low	Low-Moderate	Low-Moderate	Low
Familial characteristics of the victim	The parents eloped and married without parental consent. Domestic violence was present. They lived as an extended and isolated family in their mother-in-law's house.	Their first marriage. Because of the recurrent infantile deaths the husband's parents wanted them to divorce but he did not want to.	Their first marriage. Parental disagreement. The mother and father were second degree relatives	An extended family. The mother looked after her bed ridden mother-in-law.
Number of children	3	1	3	1
Perception of social support	The perpetrator was not allowed to speak with her family or neighbours. She has no friends	No parental support	Good husband support	Low parental support

	Case 5	Case 6	Case 7	Case 8
Age of mother and father	29–30	47–55	45–52	19–19
Marital status	Married	Divorced	Divorced	Married
Marital relationships	Distant, detached	Conflictual	Distant, detached abusive	Marital problems
Parental education	M: Primary school F: Secondary school	M: High school F: Graduate	M: High school F: Secondary school	M: Primary school F: Secondary school
Level of income	Low-Moderate	Moderate	Moderate	Low
Familial characteristics of the victim	An extended family (13 people in the same house). Family elders dominated. The father is usually away from home because of his work.	The father has two children from first marriage. The mother's first and father's second marriage. Parents divorced 2 years before.	Their first marriage, they idealized their family but in other meetings problems between each other were observed.	Their first marriage, Parental disagreement. They lived as an extended family in their mother-in-law's house.
Number of children	2	3	3	1
Perception of social support	Low parental support.	No parental support. Conflict with divorced husband	Low parental support	No parental support, Conflict with all family members.

Table 3 Characteristics of perpetrators of MSBP

	Case 1	Case 2	Case 3	Case 4
Personal characteristics	Narcissistic personality characteristics. Extremely demanding and manipulative. Emotionally superficial and poor empathy skills. Distrustful and suspicious of others and unable to completely open up to therapist.	Self- sacrificing until diagnosis. Injecting child with needles. Injecting self with needle	Paranoid personality	Silent and selfless, caring for husband's mother, lonely. Admired by environment, attentive to children, manipulative.
Chronic diseases	Unhealing tooth abscess	None	None	Due to CHF, a coronary by-pass operation was performed. She had depression
Psychiatric diseases	Narcissistic personality trait	Antisocial personality trait	Paranoid personality trait	Depression, mild mental retardation
Motivation (Libow and Schreier 1986)	help seeker- active inducer	active inducer	active inducer	active inducer
Case 5				
Personal characteristics	Interested in family and unselfish. Low in comprehension and judgment, attentive to children and partner. Low emotionality, meets child's physical needs but not psychological.	Paranoid features. Manipulative, Believed that there was an organic problem about her child that the doctors were not able to find.	Tried to convince the doctors of the events, None in chronological order. Paranoid features	Narcissistic personality characteristics. Extremely demanding and manipulative. She demonstrated purposeless falsehoods (pseudo- logia fantastica), pathological lying, restlessness.
Chronic diseases	None	None	None	Repetitive nasal and auditory bleeding (munchausen), multiple application to hospital for many different somatic symptoms (somatisation disorder)
Psychiatric diseases	Depressive symptoms, auditory hallucinations, mild mental retardation	Paranoid features	Paranoid features, Pseudologia fantastica	Anxiety and depressive symptoms, Pseudologia fantastica, Narcissistic personality trait
Motivation (Libow and Schreier 1986)	help seeker -active inducer	doctor addicts	doctor addicts	help seeker
Case 6				
Case 7				
Case 8				

Discussion

This report describes eight cases of MSBP with definite diagnoses. This is the first case series to describe the characteristics of MSBP in the Turkish population. All cases were diagnosed and followed by the multidisciplinary Child Protection Unit at Hacettepe University Faculty of Medicine. Using a multidisciplinary approach, we highlight the importance of collaborations that should help physicians manage a victim of factitious illness in a way that will be beneficial for both the physician and victim.

The average time from onset of symptoms to diagnosis of factitious illness has been reported as 14.9 months in one review (Rosenberg 1987) and 21.8 months in another (Sheridan 2003). Median duration of diagnosis was 7.5 months (range: 1–48 months, mean 12 months) in our case series, which is a significantly less amount of time when compared to the literature.

The age of the children in our study at diagnosis ranged between 4 months–13 years (mean: 46.5 months) and the age of onset was below 1 year in five children. In a literature review, Rosenberg (1987) indicated that the average age of children with MSBP was 39.8 months. Bass and Jones (2011) further reported that a total of 21 (75 %) of the 28 children were under 5 years old at the time of the referral. Interestingly, in our report, three patients older than 6 years of age were conceived to have played a role in the illness. By acting out the sick role, they guaranteed interminable maternal love and affection (Awadallah et al. 2005; Schreier 2004).

In the literature, there is a wide number and variety of presenting symptoms of MSBP. Essentially, these symptoms are classified into four main groups: poisoning, bleeding, infections, and injuries (Carter, et al. 2006; Criddle 2010; Giurgea, et al. 2005; Kucuker, et al. 2010; Tamay, et al. 2007; Tüfekçi, et al. 2011; Türkmen, et al. 2012; Şahin, et al. 2002). The syndrome expression of our cases was distributed as follows: seizures (2), hypoglycemia (2), apnea (2), chronic unhealing abscess (1), bleeding (3), hemiplegia (1), and probable sexual abuse (1). The affected children had more than one factitious disorder in three cases. Furthermore, some acts had lethal effects on the child. In cases 1 and 2, the mother caused attacks of apnea, this caused a neurological sequel in Case 1 but the hypoxia led to brain death followed by death in Case 2. This was the mother's fourth child to die of apnea. In cases 3 and 4, hypoglycemic attacks were induced by injecting insulin. Six siblings of Case 4 had a history hypoglycaemia, which may have lead to death. As seen with cases 4, 5, and 8, bleeding might be simulated or produced by a variety of methods. Perpetrators either mix their own blood or some medications with a child's specimen or actively induce bleeding (Ulinski, et al. 2004).

MSBP perpetrators most commonly direct their harmful behavior to one of their children. However in our case series,

three mothers (case 2, 3, and 4) had more than one affected child. Other studies have also reported cases where the mother directs her manipulations toward two siblings simultaneously (Bass and Jones 2011; Boos et al. 1994).

Schreier (2004) reported that at least 93 % of MSBP cases involved women, mostly mothers, but also female guardians or nurses. In a review of 451 victims of MSBP, the majority of perpetrators (76.5 %) were biological mothers (Sheridan 2003). Similar to Bass and Jones' study (2011), all alleged perpetrators were mothers in this case series. Furthermore, the characteristics of the mothers were very similar to those noted in the literature. From a psychodynamic perspective, the desire to induce illness in their child may stem from an immense need to compensate for maladaptive early parent–child relationships, in which they experienced neglect and abandonment (Black and Hollis 1996; Polledri 1996; Schreier and Libow 1993). They likely attempt to fulfil this need by forming a positive relationship with medical staff who come to idealize them as wonderful mothers. Research has further suggested several possible motivations for engaging in the abusive behavior characteristic of MSBP, including: taking on the role as parent with a sick child, enjoying the extra attention from friends, receiving sympathy, not having to do unsatisfactory things such as house work or looking after older members of the family, and forming a social environment at the hospital (Squires and Squires 2010). As seen in our case series, an illness is a powerful tool in becoming the centre of attention. Furthermore, the family structure of most cases showed a traditional male-dominated set up with high expectations and responsibilities from the mother, most of which she had difficulty in meeting. Another aspect to consider, which was common for many cases, is the structure of the extended family. In Turkey, the extended family is very commonly involved in one's life and even if the elders do not live with their children, it is common that they still play a great role in important decisions. Particularly, mothers in cases 1, 4, 5, and 8 had reported feeling insignificant and emotionally suppressed within the extended family. However, given the child's illness, they became 'perfect' mothers due to the care they gave their child and because they accompanied their children to the hospital. As a result, they were removed from the troublesome home environment.

Some authors have pointed out that although the psychiatric evaluation of the mother is usually normal, it may be invaluable for the evaluation and confirmation of a diagnosis in a child (Maldonado 2003; Meadow 1985; Sigal, et al. 1988). In our study, although a pediatrician is often in a unique position to be among the first to recognize factitious illness and each mother was also evaluated by the department of psychiatry, the evaluation of the mother and child relationship conducted by the department of child and adolescent psychiatry played an important role in the diagnostic process but mainly a key role in the management of the disorder. We advised that the

mother and child be separated, and by attempting to facilitate a healthy separation-individuation process, we hoped to improve the mother-child relationship. In our case series, four mothers had axis 2 personality characteristics (narcissistic, paranoid, antisocial personality traits), (APA 2000) two had paranoid characteristics, and two showed depressive symptoms.

Libow and Schreier (1986) classified the motivation of MSBP Parents into three groups; help seekers, active inducers, and doctor addicts. The review of our cases according to this classification shows that the mothers of cases 1, 5, and 8 have difficulty fulfilling the needs of their family and have developed another solution to cope with such demands, anxieties, and fears by forming a relationship with the medical staff. The mother of Case 1 realized that the doctors were suspicious of her actions, however she continued to return to the same hospital. When confronted, she stated, "I needed somebody to stop me." The mothers of cases 2, 3, and 4 are classified in the active inducer group because they were not open to cooperation; they resisted treatment and we had difficulty evaluating their psychosocial functions because of a reluctance to commit to the treatment process; and they had a history of multiple infant deaths. The mothers of cases 6 and 7 were classified as "doctor addicts" because they showed an obsessive attitude towards their children's illness and became paranoid towards the medical staff.

The department of child and adolescent psychiatry evaluated the mother-child relationships of all the cases and some were followed for an extended period of time. In this case series, it is likely that the younger children were more negatively affected because starting from a very early age, they may have had an ambivalent relationship with their mother, marred by contradictory feelings toward the person who was the source of both their comfort and pain. In all of the cases, a pathological symbiotic relationship was likely formed between the mother and child. We speculate that the mothers in this study had not allowed for the normal developmental separation process that should occur with their child, by making the children both physically (through the illness) and emotionally dependent. We believe that by inducing the illness, they have control over their child's body, which enables them to continue the symbiotic relationship. In cases 4, 6, and 7, this symbiotic relationship may have contributed to the children's participation in the illness. For example, three children gave parallel histories, almost repeating the exact sentences articulated by their mother (Case 7), produced symptoms when in the presence of their mother (Case 6), and did not complain of invasive procedures (Case 4). By meeting their mother's expectations, this ensured that she continued to give them her undivided attention. The symbiotic relationship between a mother and child has been discussed in the literature (Martinović 1995). It is thought that as a result of this symbiotic relationship, by hurting the child, the mother is hurting an extension of herself. The most demonstrative example of this

in our case series was the mother of Case 1. She stated that during the period of inducing illness in the child, she saw her as a part of herself. She considered her child as an inanimate object. It was only during the child's recovery, improvement of interaction with others, and separation from herself that she started to see the child as an individual, which led to an increased awareness about the lethal consequences of her behavior. For both the diagnosis and treatment of this disorder, it is vital to physically separate mother and child. In cases 1,3,4, and 5, mother and child were separated during the diagnosis and treatment process in an effort to protect the child.

In addition to diagnosis and clinical care, the legal process also plays an important role in the follow-up of patients with MSBP. During this period, the protection of the child and the psychiatric evaluation of the mother should be initiated. Literature (Meadow 1985) suggests that the psychiatric evaluation of these mothers are usually normal, contributing to the argument of whether this is a mental disorder. In the fifth edition of the DSM (DSM-V), it is recognized as a mental disorder and labeled '*Factitious Disorder Imposed on Another*' (APA 2013). However, some researchers state that there is no proof of a mental illness in mothers of these cases and consider MSBP a form of child abuse. As previously stated, when these cases reach the courtroom, they often require expert consultation (Nambu 2004) and are typically considered a form of child abuse in the United States (Selene Steelman 2002).

In this case series, as with the literature, the sole interest of the child was considered, regardless of the mother's psychiatric diagnosis. In cases where collaboration with the family was possible, the child was left in the custody of the family. The conditions for this were that another primary caregiver was designated, treatment of the mother was initiated, and we worked with the mother and child to develop a healthy mother-child relationship. In cases where collaboration was not possible, the mother and child were separated. Of the mothers with no psychiatric diagnosis, only one received legal punishment. We believe the reasons for this were that MSPB is not well known in the legal environment in Turkey, that people believe that it is impossible for a mother to harm her child, and that the courts interpreted the evidence presented as being insufficient.

The main limitation of the study is that this report is a case series study with limited cases from only one institution. Thus, the findings cannot be generalized. For future research in this area, we suggest that a multicenter collaboration increasing the number of cases will add significant data to the literature.

Conclusion

Munchausen syndrome by proxy is a very serious form of child abuse as it has a high risk of repetition as well as a high

mortality and morbidity rate. Furthermore, unnecessary invasive medical procedures and medication may negatively affect the child's physical and mental health. For these reasons, early diagnosis is extremely important. MSBP is difficult to characterize and diagnose, as it manifests in many forms, often confusing the medical team. For this reason, we believe an evaluation by a multidisciplinary team who are highly familiar with the condition is vital. Additionally, the evaluation of the mother-child relationship is important for early diagnosis and treatment and also aids in the protection of the child during the treatment process. Evaluation and follow-up with a multisystemic approach, including paying attention to the child's well-being and collaborating with social services, is necessary for the best interests of the child.

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