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## Abstract

Factitious illness by proxy in the pediatric setting refers to a situation where an adult carer, who is usually the mother, either causes or falsifies illness or injury in a child to gain medical attention and to initiate extensive investigations. It is uncommon in pediatric forensic practice. Although originally called “Munchausen syndrome by proxy,” this term has been criticized, as the same apparent diagnostic term was being applied to two quite different individuals. The issue that arose concerned who was actually suffering from the syndrome: was it the individual responsible for the deception (the Munchausen component) or the victim (the proxy)? As our understanding has evolved, it has become obvious that no one really suffers from “Munchausen by proxy,” as it refers to a particular set of circumstances rather than to a diagnostic entity. This is not to say that the term has

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not been extremely useful in focusing attention on certain parents who have repeatedly hurt their children to gain medical attention. However, the term should not imply that those circumstances, in themselves, constitute a specific psychological process with clearly defined, fixed criteria. The characteristic features are summarized in the following chapter in which the terms Munchausen by proxy, Munchausen syndrome by proxy, and factitious illness by proxy will be used interchangeably, given that these terms have all been used in publications.

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## Introduction

A number of years ago, an unusual type of abuse was recognized where a parent or carer had clandestinely either caused or simulated illness or injury in a child (Meadow 1977). The purpose of this activity was believed to be to focus medical attention on the child and family and to initiate extensive clinical investigations (Brown and Tierney 2009; Byard and Beal 1993; Mitchell et al. 1993; Schreier 2002). Initially known as Munchausen syndrome by proxy, it has had quite a contentious history subsequently, with cases being challenged in courts as to the validity of the “syndrome” as a diagnosis (*R vs. LM* 2004). Questions were asked about the nature of the condition and who actually suffers from Munchausen syndrome by proxy – the individual creating the subterfuge or the victim? (Byard 2009).

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## History

Asher in 1951 was the first to use the name “Munchausen” in the medical literature when he used the term Munchausen’s syndrome to describe patients who regularly attended hospital emergency departments and clinics with complex, but falsified, histories of illness (Asher 1951). Their presenting symptoms were often quite convincing, and the aim of the exercise was to achieve hospital admission and treatment. The syndrome represents one manifestation of the “deception syndromes” which are characterized by simulation of illness, pathological lying (*pseudologia fantastica*), and wandering from place to place (*peregrination*) (Green et al. 1999). The name was taken from Baron Hieronymus von Munchhausen [sic], an eighteenth-century German soldier who was known to be a famous raconteur with a wide repertoire of colorful stories, many of which were clearly not true. The complicated stories told to medical staff by hospital-addicted patients with the syndrome that now bears his name were thought to mirror his “embellished” travels (Turner and Reid 2002). Unfortunately, the medical profession is often not well equipped to deal with falsified symptoms, and so the result has often been numerous unnecessary investigations and surgical procedures for the sufferer – all of which are associated with a certain level of morbidity.

Twenty-six years later, in 1977, a far more disturbing disorder was reported by Meadow which involved an adult guardian or parent putting a child forward as a proxy to initiate extensive medical investigations and treatment (Meadow 1977).

Money and Werlwas had actually reported two cases of psychosocial dwarfism that fulfilled these criteria in the previous year (Money and Werlwas 1976).

Confusion regarding terminology has occurred from the earliest days of the syndrome, with the term Polle syndrome being initially coined to refer to cases of Munchausen by proxy inflicted by a parent who was themselves suffering from Munchausen syndrome (Verity et al. 1979). Later this was modified and used synonymously with the term “Munchausen by proxy” (Clark et al. 1984) and then as the confusing “child abuse variant of Munchausen by proxy” (Liston et al. 1983). The name derived from a mistaken belief that Baron von Munchausen had a son called Polle who died at an early age (Burman and Stevens 1977). Subsequent investigations have, however, revealed that the Baron did not have a son and that the name “Polle” instead derives from the town where his second wife had lived (Meadow and Lennert 1984). Given the changes that have occurred in our understanding of factitious illness by proxy, and the essential inaccuracy of the term Polle syndrome, there appears to be little justification to support its continued use.

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## Characteristics

The essential features of Munchausen syndrome by proxy were summarized by Rosenberg in 1987. These involve the fabrication of an illness, or the induction of a genuine illness, in a child by a carer (usually the mother). Illness is used in this context to refer to chronicity in the behavior and not to just a single episode in isolation. Cases are characterized by repetitive attendance at medical facilities for examinations, investigations, and treatment. Other features that are typical are the complete absence of symptoms and signs, or a dramatic improvement in the illness, if the offending carer or parent is absent, and a complete denial by the perpetrator of any involvement in the child’s ill health when confronted. There has also been a significant mortality rate reported in the literature (Rosenberg 1987).

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## Possible Presentations

The range of possible presentations of factitious illness by proxy is extremely varied as the symptoms and signs may be entirely falsified or they may result from clandestine activity/injury, both designed to initiate extensive and often invasive medical investigations (Galvin et al. 2005). In 75 % of published cases, the illness has actually been created (Meadow 1985; Rosenberg 1987). Parental activity has included falsifying sweat tests and stool fat analyses; adding human or animal blood or protein to urine or fecal samples; injecting saliva, vaginal secretions, or feces; injecting insulin or petroleum distillates; poisoning or administering psychotropic drugs, laxatives, or warfarin; scratching or pricking the skin; exsanguinating; and manual suffocation (Galvin et al. 2005; Halsey et al. 1983; Hvizdala and Gellady 1978; Kohl et al. 1978; Lee 1979; Malatack et al. 1985;

Orenstein and Wasserman 1986; Samuels and Southall 1992; Saulsbury et al. 1984; Shnaps et al. 1981; White et al. 1985). Parents may falsely claim that their child suffers from allergies, reflux, or epilepsy, or has been the victim of sexual abuse (Barber and Davis 2002; Meadow 1993). Hospital staff may also become unwitting participants in the process if extensive testing is undertaken because factitious illness by proxy has not been suspected (Donald and Jureidini 1996; Jureidini et al. 2003; Zitelli et al. 1987; Squires and Squires 2010).

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## Perpetrator

Almost all reported cases have shown the perpetrator to be the child victim's mother (Meadow 1984b, 1990). Although only a small number of cases have involved fathers (Makar and Squier 1990; Meadow 1998; Morris 1985; Samuels et al. 1992), it is likely that some collusion may exist between the parents. In cases where the child has been hospitalized, the mother typically gets on well with staff and may have some medical knowledge.

One of the difficulties that has been raised in the use of terminology is that there appears to be no consistent or definable psychiatric disturbances identifiable in the mothers. There is general agreement that psychosis is usually not present; however, the literature is contradictory and incomplete in terms of other diagnoses (Emery 1986). For example, while some studies have documented a low incidence of personality disorders among the perpetrators (Rosenberg 1987), others have found this to be a feature in all cases (Samuels et al. 1992). Part of the difficulty may be the basis and criteria that were used to define what was meant by the term "personality disorder." Others have described depression, emotional disturbances, and drug addiction (Souid et al. 1998).

The psychosocial and medical background of the perpetrators has also yielded variable features. For example, although emotional, physical, or sexual abuse was found in the perpetrators in 11 of 14 cases of imposed upper-airway obstruction in one series (Samuels et al. 1992), a history of abuse in the mother may not always be found (Rosenberg 1987). Whether this reflects the problems inherent in the retrospective evaluation of medical notes is not certain. Although up to 50 % of cases have had some elements of Munchausen syndrome or abnormal illness behavior present, many cases do not (Meadow 2002).

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## Victim

One of the difficulties that arises, particularly in case of induced asphyxia, is in differentiating this from sudden infant death syndrome (SIDS). Generally victims of factitious illness by proxy tend to be older than infants who succumb to SIDS, with the average age at diagnosis being a little over 3 years. This compares to the majority of SIDS cases who are aged less than 9 months. Although victims of

inflicted suffocation tend to be a little younger than other cases, there is still a significant difference in the average age at death. Infants with spurious apneas usually have the first episode between 1 and 3 months of age and survive for 6–12 months after this (Meadow 1990).

The spectrum of factitious illness by proxy has expanded, with cases detected in a number of countries (Feldman and Brown 2002). The victims have included fetuses, older children, and adults in care, and a similar behavior has also been described in pet owners who repeatedly create illness and injury in their animals to obtain veterinary attention (Awadallah et al. 2005; Munro and Thrusfield 2001a, b).

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## Motivation

The exact motivation for this type of behavior is poorly understood, and this is probably a reflection of the very eclectic nature of cases that are grouped under this umbrella (Brink and Thackeray 2012). At one end of the spectrum, there may be an unconfident young mother who fabricates symptoms so that she can have the comfort of medical attention with reassurances that her child is fine. This contrasts with the other end, where perpetrators will not only asphyxiate children in their own family but may also harm the children of relatives and neighbors, and even adopted children. An example of this was a woman who fatally asphyxiated seven infants over a 23-year period (DiMaio and Bernstein 1974). One difficulty arises in identifying parents who may merely be genuinely over-concerned about their child's health; this is sometimes a particular problem if the child has had a significant illness in the past that resulted in intensive medical contact.

Suggestions for the motivation for these types of actions have ranged from an overly simplistic concept that it is merely a type of attention-seeking behavior to more complicated ideas that it represents the manifestation of an encapsulated behavioral disturbance akin to a “perversion” or that it is simply a form of serial killing. While diagnoses of factitious illness behavior (Munchausen syndrome) have been made in some mothers (Kucuker et al. 2010), this does not apply to the majority of the perpetrators, who usually do not have any diagnosable psychiatric illness. This suggests that the basis for the diagnosis has been established on similarities in behavior rather than in psychopathology – behavior that has been undertaken in an effort to obtain that “curious sense of purpose and safety in the midst of the disasters which they themselves have created” (Meadow 1985; Rosenberg 1987).

It is sometimes unclear whether there was a genuine intention to murder an infant or whether the lethal event occurred due to a miscalculation when the mother was attempting to increase the severity of the symptoms. Certainly this may be plausible with the first infant death, but it becomes less tenable as the death toll rises. Ambivalence in maternal feelings toward victims also suggests that there is a very complicated sequence of psychopathological processes contributing to the overall behavior other than simple secondary gain (Meadow 1995).

## Pathological Presentations/Diagnosis

Both hospital and forensic pathologists may be involved in the assessment of cases. In hospitals, pathologists may be asked to examine biopsy material from particularly puzzling cases or to perform autopsies on cases where the lethal mechanism is unclear (Byard 2010). Tissues taken from patients may include liver biopsies to exclude rare metabolic disorders or skin biopsies from unusual rashes. Characteristics of such cases often include the large number of clinical services that have been consulted, the range of the differential diagnosis, the number of inconclusive tests, and the lack of agreement on the possible etiology of the presenting features. Unfortunately, the failure of treating pediatricians to recognize inflicted injury/disease means that there may have been active, albeit inadvertent, participation by the medical profession in the process, with perpetuation of the situation (Jureidini et al. 2003).

Forensic pathologists may encounter infants who have allegedly been found dead in their cribs, sometimes with a history of recurrent apneas or apparent life-threatening events (ALTEs). In these circumstances, establishing the diagnosis based purely on the autopsy findings will usually not be possible, as acute asphyxia has no pathognomonic markers (Byard 2011; Byard and Jensen 2007; Byard and Tsokos 2005). This is also true even when an infant has been repeatedly rendered hypoxic to produce significant apneic episodes (Light and Sheridan 1990; Mitchell et al. 1993).

If an infant has been suffocated without undue force, for example, under a pillow or into a soft surface such as a mattress, the autopsy findings will be indistinguishable from SIDS, with no evidence of injury, and petechial hemorrhages limited to the thoracic cavity (Mitchell et al. 2002; Moore and Byard 1993; Valdes-Dapena 1982). This absence of autopsy findings may have resulted in incorrect diagnoses of SIDS being made in a number of cases where infants were suffocated by their parents. For example, the diagnosis of SIDS in five infants in a single family must raise the likelihood of either an inherited cardiac or metabolic condition or inflicted asphyxia, particularly given that two of the children were aged 13 months and 2 years, respectively (Diamond 1986). On occasion, police investigations will uncover Internet usage by a parent who has accessed numerous websites for information on ways to murder an infant or child without leaving signs. Smothering is usually mentioned. For this reason it may be useful to have police check home and work computers in suspicious cases.

The assertion that multiple deaths in a single family are most likely due to natural causes (Carpenter et al. 2005) has been challenged, with a reanalysis of the data in the series reducing the number of “natural deaths” from 87 % to 43 % (Bacon and Hey 2007). These authors also warned that “it is misleading to classify every unexplained death as natural if no unnatural cause has been established.” While it is agreed that the diagnosis of SIDS has sometimes been made too readily in the past (Emery et al. 1988), it would seem unlikely that up to 10 % (or more) of infants whose deaths were attributed to SIDS were smothered by their mothers (Meadow 1989). In the author’s experience, these cases are uncommon but are less likely to be overlooked if there has been a careful interview of the parents by trained personnel, formal death scene investigation, and performance of the autopsy

according to standard protocols by a pathologist, preferably with pediatric forensic experience (American Academy of Pediatrics 2001; Byard and Krous 1999; Smialek and Lambros 1988). Despite the best investigations and intentions, however, there will always be a certain number of cases that will remain unproven or undetected.

Another form of lethal inflicted injury that usually leaves no pathological findings is poisoning. For this reason, the standard pediatric autopsy requires the taking, toxicological testing, and storing of body fluids such as blood and vitreous humor and tissues such as liver. Biochemical analysis of serum, vitreous humor, and gastric content electrolytes may also be informative in cases of lethal salt poisoning (Coe 1993; Su et al. 2010). Medications prescribed for the parents or present in the homes may guide toxicological screening and testing, and poisoning has occurred from a wide variety of drugs including phenothiazines, insulin, warfarin, antidepressants, barbiturates, laxatives, and antidiarrheal agents. Unfortunately, further issues in interpretation arise in the very young as central blood samples from the heart may not be appropriate for analysis due to postmortem redistribution, and toxic and/or lethal levels for many drugs in infants have often not been established, with standard ranges based on adult data (Byard and Butzbach 2012).

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## Diagnosis

The diagnosis of factitious illness by proxy is often difficult, and even when confronted with incontrovertible evidence, the response of the perpetrator is often complete denial (see “[Case Report](#)” below). The major issue with establishing the diagnosis is to ensure the safety of the victim and other children in the household. A somewhat controversial technique that has been used is in-hospital covert video surveillance which consists of setting up a hidden camera to film the interaction of the parent with the child (Hall et al. 2000). Although it has been claimed that this technique will exonerate the innocent, and while it has been used successfully to identify a number of cases of factitious illness by proxy, there has been considerable debate as to its ethical status (Anonymous 1994; Byard and Burnell 1994; Epstein et al. 1987; Foreman and Farsides 1993; Rosen et al. 1983; Shabde and Craft 1999; Shinebourne 1996; Southall et al. 1987, 1997; Williams and Bevan 1988). While observation in hospital is not guaranteed to either detect or prevent the behavior (Berger 1979), it has been estimated that in 95 % of cases events have been recorded. Criteria for the implementation of covert surveillance have been reported (Samuels et al. 1992), in addition to guidelines for the forensic evaluation of possible cases (Sanders and Bursch 2002). Potential medical liability on the part of hospitals undertaking covert surveillance in the event of an adverse outcome has also considerably limited its use in recent years. Multichannel monitoring of infants who are being smothered may be an alternative technique which typically shows evidence of obstructive apnea with considerable body movement artifact, thus dispelling any ideas that this may be considered “gentle battering.”

## Case Report

The following case study provides details of a family where two infants had died and the mother was filmed by covert video surveillance attempting to suffocate a third infant (Byard and Burnell 1994).

Case 1: A previously well 10-week-old girl had been found by her mother in her crib, pale and not breathing. She had been bottle-fed an hour and a half previously. Her mother initiated cardiopulmonary resuscitation resulting in shallow breathing recommencing. The infant was taken to a local hospital by ambulance where clinical examination, laboratory testing, electroencephalography, and cranial ultrasound revealed no significant abnormalities. No further episodes occurred during 2 days of in-hospital monitoring on an apnea mattress. Three days after discharge, a similar episode occurred at home resulting in readmission to the hospital where she was found to be slightly drowsy, hypotonic, and tachypneic. Tests, including toxicology, blood and urine cultures, serum electrolyte measurements, an electrocardiogram, a chest X-ray, a scintiscan for gastroesophageal reflux, and measurements of urinary amino acid and organic acid levels, were normal. She was monitored for 5 days in hospital with no further episodes and was discharged with an apnea mattress alarm.

The day after discharge she was again found by her mother apneic and pulseless after the apnea alarm had sounded. Despite attempts at resuscitation she remained ventilator dependent, with death occurring six and a half hours after her discovery at home.

At autopsy there was no evidence of injury or underlying disease that could have caused or contributed to death. Death was attributed to diffuse hypoxic-ischemic encephalopathy complicating a resuscitated apparent life-threatening event (ALTE) in a case of SIDS.

Case 2: A little over a year later, a second sibling, a previously well 8-week-old girl, was found by her mother to be pale and apneic in her stroller following a long walk. Resuscitation was not successful. At autopsy there was no evidence of injury or underlying disease that could have caused or contributed to death, and so death was attributed to SIDS.

Case 3: A year later, a third sibling, a previously well 6-week-old girl, was found pale and apneic by her mother. She was investigated in a peripheral hospital with no abnormalities being found. Two weeks after discharge, she was again seen at the hospital following a further apneic episode but was removed from the hospital by her parents the same day, only to be readmitted the following morning after yet another apneic event had occurred. Given that she remained pale and hypotonic for a number of hours, she was transferred to a pediatric hospital for investigation.

Review of all three cases revealed that every apneic episode had occurred in the presence of the mother alone. As physical examinations, laboratory tests, and autopsies when undertaken had not demonstrated any underlying organic cause



for the apneic events, the possibility of factitious illness by proxy (or Munchausen syndrome by proxy, as it was then known) was raised. Covert video surveillance was set up but was initially restricted to visiting hours only. A decision was then taken to admit the mother to hospital with the child and to film continuously. The next day the mother was filmed turning off the apnea alarm, placing a folded towel on her shoulder, and forcing the infant's face into the soft fabric. After several minutes the mother put the unconscious infant back in the crib and then turned the alarm back on.

When confronted by the police who had been watching the video, the mother denied that the event had occurred. Eventually she pleaded guilty to manslaughter of the first infant (case 1) and to causing grievous bodily harm to the third infant (case 3) and was sentenced to 3 years imprisonment with a non-parole period of 12 months. Charges in the second infant (case 2) were not pursued. Following the court case and sentencing, the surviving infant was placed in foster care and did not experience any further apneic episodes.

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## Prognosis

As can be seen from the above cases, factitious illness by proxy is not a benign entity and may be associated with significant morbidity and mortality (Stirling 2007). In one study of 117 victims, 9 suffered some form of permanent disability and 10 died (Rosenberg 1987). The most common symptoms prior to death were decreased conscious state, seizure, apnea, bleeding, and diarrhea. Major causes of death were poisoning in five (three due to salt poisoning) and suffocation in four (Rosenberg 1987). Brain damage may occur in survivors from repeated hypoxic episodes or from drugs or poisons, and unfortunately there may be considerable morbidity associated with unnecessary medications, investigations, and operations (Meadow 1984a). As many as 20 % of children who have died had been identified correctly in one series as being victims of Munchausen by proxy, but had been discharged from the hospital to the care of their parents (Rosenberg 1987).

Meadow had a mortality rate of 33 % in his series of 27 infants who were repetitively suffocated by their mothers, with further investigations revealing 18 previous deaths in the 33 older siblings of these infants (a mortality rate of 55 %) (Meadow 1990). In another series, the sibling mortality rate was 11 %, with 39 % also having had illnesses fabricated by their mothers (Bools et al. 1992). When the deaths of siblings were subsequently examined, a number of the fatalities had been attributed to SIDS, which in retrospect must be viewed with skepticism. For example, the two fatal cases described by Steinschneider that linked repetitive apneic episodes with SIDS (Steinschneider 1972) were in reality homicides occurring in a family in which three other sibling deaths had occurred in children under the age of 28 months (DiMaio 1988; Firstman and Talan 1997; Little and Brooks 1994; Hick 1973).

## Conclusion

The concept of “Munchausen syndrome by proxy” has undoubtedly been an extremely useful one which has enabled the identification of situations where serial deaths have occurred in some families due to inflicted injury. It has also enabled the early detection of this situation in other families enabling protection of the victim and siblings. However, problems do exist, as the use of a specific name may have created undue certainty in the minds of investigators who may assume that there must be clear diagnostic criteria with a defined victim and an identifiable perpetrator. It must be remembered that a syndrome in medicine is *not* necessarily a diagnosis (Byard 2009). The lack of defining features in Munchausen by proxy has led many to avoid using the term and also has resulted in certain courts declaring that it cannot be regarded as a recognized psychiatric disorder or mental illness. Instead it is “merely a name for a type of behavior” (*R vs. LM* 2004). In an attempt to address this issue, it has been suggested that the term should be dropped in favor of diagnoses that are more specific to individual cases (Fisher and Mitchell 1995; Morley 1995). Other terms such as “pediatric condition falsification” (PCF) and “factitious disorder by proxy” (FDP) have been proposed (Ayoub et al. 2002; Craft and Hall 2004; Schreier 2002). The advantage of the latter terms is that they enable the situation to be flagged without attempting to link it to possible motives and psychological profiles of the alleged perpetrator; that is, the most important part of the equation, the abused child, has been identified without being lost within the semantic jungle of medical terminology.

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