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A Review on Medical Child Abuse and Child Protection

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Abstract:

Background: Medical child abuse describes a child receiving superfluous, deleterious, or potentially harmful medical care at the caretaker's incitement.

Objectives: To focus on medical child abuse as an entity and emphasize its epidemiology, clinical presentations, prevention, and management.

Results: In the United Kingdom, the annual incidence of medical child abuse in children below one year of age increased to 3:100,000, while its prevalence in Arab countries, including Iraq, is ambiguous due to the lack of medical evidence and inadequate clinician's awareness. At diagnosis, the average age of victims is between 14 months and 2.7 years. Female caregivers are the most common offenders. Clinically, medical child abuse could fit into three stages; falsification of illness story, falsification of illness story and physical signs' fabrication, and inducing illness in children. Successful diagnosis mandates scrutinizing medical records to identify discrepancies between caregivers' stories versus clinical findings or investigations. Management requires recognizing abuse, halting it, securing the child's safety, maintaining the family's integrity when possible, and aborting unnecessary lateral referrals within the healthcare system.

Conclusion: Reported cases of medical child abuse are increasing steadily, while less severe ones go unrecognized. No diagnostic tool can help other than the physician's high index of suspicion. The management follows the same principles applied for other forms of child abuse, while good medical practice ensures its prevention.

Keywords: Fabricated illness; factitious disorder; induced illness; pediatric condition falsification.

Introduction:

Roesler and Jenny defined medical child abuse (MCA) as a child receiving superfluous, deleterious, or potentially harmful medical care at the caretaker's incitement [1]. For instance, when a child's caregiver urges that the child needs a gastrostomy tube, albeit testing to the contrary or when a caregiver intentionally contaminates the child's central line with feces, this constitutes MCA [1]. Like other forms of child abuse, including physical and sexual, MCA focuses on the child's harm [2]. In 1977, Meadow referred to MCA as "Munchausen syndrome by proxy" (MSBP), as a specific pediatric entity of Munchausen syndrome described earlier, in 1951 by Asher, a renowned British endocrinologist who published reports on patients who duped their physicians [1, 2]. Baron von Munchhausen, born in 1720, was a gifted raconteur and a German mercenary; in 1951, Richard Asher dedicated Munchausen's syndrome to the Baron's memory because he was famous for traveling worldwide and telling false stories [3]. With growing recognition of MCA as a medical dilemma, scholars coined alternative terms describing the condition, including pediatric condition falsification, caregiver-fabricated illness, factitious disorder by proxy, and child abuse in the medical setting [4]. Whereas MSBP and the alternative names focused on the parents' or caregivers' motivation; MCA defines the abuse and how medically a child can be harmed [1]. Hence, instead of determining the caregivers' motivation to deceive the medical healthcare, the clinician can focus on the optimal approach to manage MCA's entity [1]. MCA puts the child, as victims, at a significantly augmented risk for a wide range of psychological consequences, and these are not limited to child withdrawal, hyperactivity, hysteria, infant feeding disorders, and even the adoption of Munchausen behavior in the future [5]. Our review article emphasizes MCA's importance and its peculiar nature as a unique type of child abuse while shedding light on its epidemiology, the spectrum of case presentations in clinical settings, and outlines the best approach to managing and preventing this grave entity.

Epidemiology: Over the last several decades, the absence of a unified MCA definition limited the understanding of its true extent and consequences [5]. Earlier, this form of abuse was only observed in case reports; however, more reports nowadays have been appearing in the literature, with over a thousand reported cases worldwide [6]. Published reports could represent the tip of the iceberg, as they are more likely to represent the more intense side of a spectrum,

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while numerous mild and moderate MCA pass unrecognized. In the United Kingdom, the British Paediatric Surveillance Unit suggested that MCA's annual incidence in children under one year is around 3:100,000 [7]. In Rome, researchers estimated MCA to exist at a rate of 1:190 admissions, based on reviewing and objectively analyzing 751 consecutive admissions to a children's hospital [8]. Other scholars believe this condition should still be considered "rare" but not "extremely rare", as numbers of victims are on the rise [8].

In Iraq, there are few reported cases of MCA, and according to specialists, they attribute this rarity to the lack of awareness among healthcare practitioners concerning MCA; therefore, there could be many victims of child abuse who are still suffering behind the curtain of social and cultural constraints [9]. Hence, the incidence and prevalence of MCA are yet to be determined in Iraq. Meanwhile, Iraqi healthcare professionals and clinicians continue to publish case reports and case series on this form of abuse in Iraq, as reported by Sarhat and colleagues (2019) [9]. Whether due to an actual increment of prevalence or better appreciation of the problem, MCA's incidence appears to be escalating [1]. Nationally speaking and particularly in Iraq, the lagging of legislation concerning child abuse management calls for urgent attention and signifies the alarming threat of more adverse outcomes, including physical, psychological, and economic consequences [9].

Profile of the Child Victim and the Munchausen Perpetrator: According to McClure, Sheridan, and Fujiwara, both sexes are subjected similarly to MCA, while younger children are at a higher risk of MCA, with a mean age at the time of diagnosis between 14 months and 2.7 years [1]. Female caregivers are the most common offenders; published data points to female perpetrators' predominance at 85% to 98% of medical child abuse cases [1]. In 2017, Yates and Bass reviewed 796 cases published from 1965 to 2016, and they found that more than one-third of the perpetrators (45.55%) worked within healthcare settings [10]. According to Mash, parents who claimed clinical features involving at least six organ systems in their children's illness with the absence of a genetic disorder and/or reported at least six allergies in reasoning the failure to thrive are more likely to have MCA [6]. According to Yates and Bass, MCA offenders are more likely to have had a history of abuse earlier in their life [1].

The Spectrum of MCA: There are three defined stages of falsification through which the caregiver can induce harm to the child; nonetheless, there may be a direct transition from the first to the third stage, and each alone can be mischievous to the child.

I. False illness story alone, despite that the caregiver is not directly hurting the child; he or she may suffer considerably and undergo many unrequired investigations and treatments. For example, "A boy had nine colonoscopies, a bronchoscopy, gastroscopy, two jejunal biopsies, and angiography. He incurred a Nissen fundoplication and an ileostomy and lived on total parenteral nutrition for four years. The mother did not harm him directly; she merely presented a false story about his intractable vomiting and diarrhea. After separation from his mother, the child fed normally and became healthy".

II. False illness story with the fabrication of signs, in which the caregiver falsifies the illness story and tries to persuade the clinicians by tampering with the child's samples or medical records.

III. Induced illness, in which the caregiver reinforces the false story by poisoning, smothering, or inflicting physical injury to the child, resulting in a genuine illness [7].

Diagnosis of Medical Child Abuse: No single test can help in the diagnosis of MCA other than the physician's ordinary senses and index of suspicion, given that the reported manifestations do not align with the clinical findings or illnesses that do not adjust with established protocols of treatments, and, albeit a thorough evaluation, the child's caregiver keeps aiming for more investigations and clinical exams [1]. According to Rosenberg and Sheridan, the average time from onset of manifestations to diagnosis is between 14 months and 2.7 years [1]. Clinicians need to comprehend that MCA is not a diagnosis by exclusion, asserting pursuing an alternative diagnosis as with other less encountered conditions; putting MCA on the differential diagnosis should be the initial step [1]. The critical elements to successfully diagnose MCA involves; conducting a comprehensive review of medical records to validate any symptoms and illnesses that are being reported and contrast these with the reliable results from the clinical examinations and diagnostic testing, and sometimes a hospital admission is vital to observe the child's symptoms and the child-caregiver interaction directly, and finally considering a trial separation of the two to observe any discrepancies (Figure 1) [1].

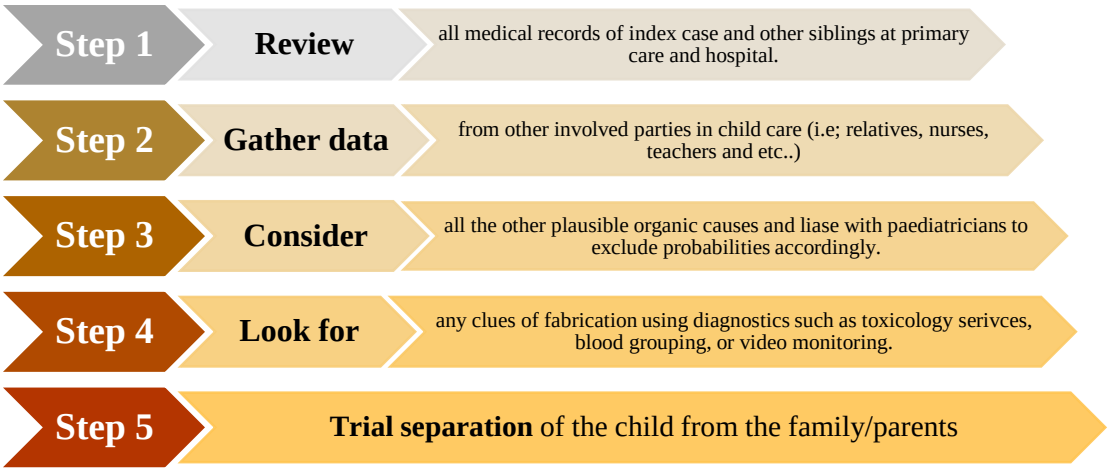

Figure 1: Five-Step Model: Diagnostic Strategy in MCA [1].

Clinical Presentations in Healthcare Settings: The child usually presents with problems relating to only one system, for instance, recurrent seizures or a story of diarrhea and vomiting (Table 1) [7]. A minority may present as if they have a multi-system ailment, and some of the children may have a genuine illness in addition to the superimposed fake one; therefore, the caregiver can fabricate a wide range of physical signs (Table 2) [7]. Consequently, medical centers providing highly specialized services for children are more likely to encounter a factitious illness [1].

Table 1: Clinical Presentations in MCA [7]

System	Clinical Presentation
CNS *	Fits, ataxia, and drowsiness
GIT*	Failure to thrive, vomiting, and diarrhea
Respiratory*	Dyspnea, apnea, and hemoptysis
Renal*	Hematuria
Endocrine*	Metabolic alterations, including Glycosuria
Allergic*	Rash, diarrhea, vomiting, mucosal swelling
Otolaryngological	Epistaxis, discharge, foreign bodies
Dermatological	Abscesses, dermatitis artefacta
Musculoskeletal	Arthritis and locked joints
Hematological	Bleeding tendency and anemia
Immunological	Fever, infections
Cardiovascular	Dysrhythmias, pallor, cyanosis
Educational	Dyslexia, disability, special needs

* Most common presentations

Table 2: Physical Signs of MCA [7]

Physical Signs	Perpetrator's Fabrication
Bleeding (hemoptysis, hematuria, other forms)	The parent uses their blood
Fits	By inducing hypoxia (smothering), using a medication, or salt
Failure to thrive	By depriving the child of food or diluting food, sucking the food from the stomach using a nasogastric tube
Diarrhea	By the use of laxatives
Vomiting	By introducing emetics, fingers down to child's throat, or the parent presents his/her vomit as the child's vomit
Fever	Through manipulating temperature charts, heating thermometer, or contaminating the IV line with salivary secretions, feces, or non-distilled water
Dermatitis	By spilling caustic solutions, scratching, or damaging the skin
Chronic discharge	By repeated poking of child's body orifices with a foreign object
Anemia	By venipuncture or connecting IV line to drain blood
Metabolic	By adding medications or chemicals to the urine or blood samples of the child

Management: In essence, MCA's treatment relies on the same general protocols involved in the other forms of child abuse and as per a multi-step model. The initial step is to recognize that the abuse is taking place [5]. The second step requires aborting the ongoing act of abuse, which requires withdrawing harmful medical treatment; thus, healthcare personnel are indispensable for the commission of MCA and essential for bringing it to an end [5]. The third step should enforce securing the ongoing safety of the victim (child), and this step can be as simple as meeting with parents to get their cooperation and declare the new healthcare plan. Nevertheless, in case of the perpetrator is unwilling or unable to cooperate, at this phase, legal actions and child protective services should intervene to rectify the situation [5]. Once the former steps are fulfilled, the evaluation can be initiated to assess and manage the psychological and physical consequences of the abuse, which may vary from mild to devastating; thus, the prognosis depends on the scope, severity or extent, and length of the exposure to abuse [5]. The final step is to maintain the family's solidarity as much as possible while ensuring the child is persistently safe [5]. For mild and moderate MCA, keeping the child with the family is often possible and plausible if the family shows an understanding of the consequences of their actions and observe the medical care plan; in contrast, in severe forms of MCA or denial of the perpetrators, the child should be separated from the offender to ensure the long term safety of the child [5].

Prevention: The efficient and reliable medical practice represents the ultimate prophylactic tool of MCA, which is achievable via early recognition of warning signals of MCA, and designing standardized processes for medical procedures that are often linked with MCA, is also another sound prophylactic strategy, for instance, a multi-step process for gastrostomy tube placement to prevent unwanted tubes in children [1]. Further, aborting lateral referrals within the healthcare establishment represents a cornerstone in preventing MCA and efficiently decreasing unnecessary healthcare interventions that augment the abuse scenario [1, 2]. Finally, boosting the awareness of healthcare workers and the public on MCA should halt caregivers from being complicit in the abuse; therefore, educating the medical and paramedical staff on features to look for can help prevent MCA at a much earlier stage [1, 4].

Level of Evidence: We evaluated the review article's level of evidence as per the system rectified by the Centre for Evidence-Based Medicine at the University of Oxford [11]. Accordingly, our manuscript fits level-5 within the hierarchy of medical evidence. Future research should emphasize the importance of systematic reviews (level-1 studies), meta-analytic studies, and big data for rigor understanding of MCA, as with other medically induced and psychiatry-related conditions [12-15].

Conclusion:

In short, the numbers of reported medical child abuse cases in the literature are increasing, with many other less severe cases going unrecognized due to social and cultural restraints. Medical child abuse manifests clinically as one of three defined stages of falsification by the perpetrator. Nonetheless, there is no individual tool (test) that can help diagnose the abuse other than the physician's high level of suspicion. Currently, managing medical child abuse mimics the same general guidelines for countering other forms of child abuse. On the other hand, abstaining from lateral referrals within healthcare institutes and across medical practices or specialties is central in preventing this underdiagnosed medical enigma.

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Conflict of Interest: The authors declare no conflicts of interest and that they have self-funded the study.

Author's Contribution:

Mustafa Al-Jarshawi (MA) conceived the study concept, conducted the literature review, and wrote the first draft of the manuscript. Ahmed Al-Imam (AA) review the first draft of the manuscript, conducted a critical appraisal on the topic, and prepared the article for scholarly submission.

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مراجعة حول إساءة معاملة الطفل الطبية وحماية الطفل

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الخلاصة:
خلفية البحث: الإساءة الطبية للأطفال تصف الطفل الذي يتلقى رعاية طبية غير ضرورية أو ضارة أو قد تكون ضارة بتحريض من قبل ذوي الطفل أو القائم على رعايته.
الأهداف: للتركيز على إساءة معاملة الأطفال الطبية والتأكيد على مدى انتشار هذه الحالة وأعراضها السريرية وكيفية الوقاية منها ومعالجتها.
النتائج: في المملكة المتحدة، ارتفع معدل حدوث الإساءة الطبية للأطفال في الأطفال دون عام واحد إلى 3: 100000، في حين أن انتشاره بين العرب، بما في ذلك في العراق، غير معروف بدقة بسبب نقص الأدلة الطبية والوعي غير الكافي لدى الأطباء. متوسط العمر عند التشخيص هو 14 شهرا إلى 2.7 سنة. كان ذوو الطفل من النساء ومقدمات الرعاية أكثر الجناة شيوعا. من الناحية السريرية، يمكن أن تنقسم الإساءة الطبية للأطفال إلى ثلاث مراحل؛ تزوير قصة المرض، أو تزوير قصة المرض مع تلفيق علامات جسدية، أو افتعال المرض في الضحايا (الأطفال). يتطلب التشخيص الناجح مراجعة شاملة للسجلات الطبية لتحديد التناقضات بين قصص مقدمي الرعاية للطفل مقابل النتائج السريرية أو التحليلات الطبية. تتطلب معالجة هذه الحالة الطبية، التعرف على الإساءة، ووقفها، وتأمين سلامة الطفل، والحفاظ على كيان الأسرة الموحد عندما يكون ذلك ممكنا، وإيقاف الإحالات الجانبية غير الضرورية داخل نظام الرعاية الصحية.
الاستنتاج: تتزايد حالات الإساءة الطبية للأطفال المبلغ عنها بشكل مطرد، بينما لا يتم التعرف على الحالات الأقل خطورة. لا توجد أداة تشخيصية يمكن أن تساعد في التشخيص بشكل يغني عن إرتفاع مؤشر الشك لدى الطبيب المعالج. تتبع معالجة الإساءة الطبية للأطفال نفس المبادئ المطبقة على الأشكال الأخرى من إساءة معاملة الأطفال، بينما تضمن الممارسة الطبية الجيدة الوقاية منها.
الكلمات المفتاحية: مرض ملفق؛ الإعتداء الطبي على الأطفال؛ متلازمة مانشاوزن بالوكالة.