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Case Report

Kempe Syndrome: Case Report

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Abstract

Kempe's syndrome, or child abuse syndrome according the World Health Organization (WHO), is defined as any form of abuse or neglect affecting a minor under 18 years of age, encompassing all types of physical abuse, sexual abuse, neglect, and commercial or other forms of exploitation that impair the child's development and dignity. We present the case of a four-year-old male with a history of child maltreatment and parental negligence, including both physical and psychological abuse, associated with a third-degree burn on the right upper limb. The detection of physical signs such as injuries, scars at different stages of healing, and signs of neglect, together with psychological fluctuations manifested in the child's behavior, enabled the diagnosis of Kempe Syndrome.

Keywords: *Kempe's Syndrome; Case Report; Thermal Injuries; Maltreatment*

Introduction

The child maltreatment syndrome represents a serious global public health problem, with physical, emotional, and social consequences. It refers to any manifestation of violence, harm, or abuse whether physical or psychological, as well as situations of neglect or carelessness that occur while the minor is under the responsibility of parents, guardians, or other individuals who exercise authority or physical and/or intellectual superiority over the child. Identifying this syndrome poses a clinical challenge, particularly in contexts where violence is normalized or where health institutions lack material and human resources [1].

In México, corporal and humiliating punishment toward minors remains a deeply rooted form of upbringing, underscoring the need to make this problem visible. It is estimated that more than 60% of children and adolescents have experienced some type of violence [2].

Despite advancements in awareness and detection of the syndrome, many cases go unnoticed due to the lack of clinical suspicion, underreporting, and the sociocultural complexity surrounding child maltreatment. In our country, data from the National System for the

Comprehensive Protection of Girls, Boys and Adolescents indicate that in the past five years, more than 45,000 cases of violence against minors have been reported annually, with physical abuse and negligence being the most frequent forms. However, these figures are believed to underestimate the true magnitude of the problem due to underreporting [3].

Case Description

A male patient, 4 years and 10 months of age, was found wandering in a public street by security personnel, who noticed an injury on his right upper limb. He was referred to a secondary-level hospital and, due to the severity of the injury, subsequently transferred to a tertiary-level hospital. Upon arrival, the child stated that the burn had been caused by intentional direct contact inflicted by his stepfather using a stove of unspecified characteristics, leading to the diagnosis of Battered Child Syndrome.

At admission, the patient exhibited signs of neglect and poor hygiene, as well as a third-degree partial-thickness burn caused by direct flame exposure, involving 2% of total body surface area on the right upper limb. The injury encompassed the palm of the hand and the anterior aspect of the forearm, with the wound bed covered by hematic crusts (Figure 1). On the abdomen, a hypochromic, crescent-shaped scar was observed in the left upper quadrant, accompanied by an adjacent filiform hyperchromic lesion. On the back, multiple filiform lesions characterized by hyperpigmentation in the scarring phase were noted, along with significant alopecia in the interparietal region. The remainder of the physical examination revealed no additional abnormalities.

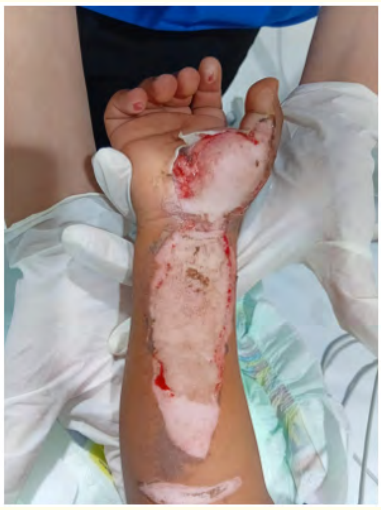

Figure 1: *Third-degree burn on the right upper limb.*

Clinical studies reported hemoglobin 13.4 g/dL, hematocrit 39.6 mm^3, MCV 86.3, MCH 29.2, leukocytes 15,210 cells/µL, neutrophils 53%, segmented neutrophils 5%, bands 0%, lymphocytes 42%, monocytes 5%, platelets 287,000, glucose 93 mg/dL, urea 30.0 mg/dL, BUN 14.0 mg/dL. Triglycerides 97 mg/dL, direct bilirubin 0.1 mg/dL, indirect bilirubin 0.1 mg/dL, albumin 4.1 g/dL.

Serum electrolytes: sodium 140 mEq/L, potassium 4.0 mEq/L, chloride 103 mEq/L, calcium 9.4 mEq/L, phosphorus 4.9 mEq/L. Coagulation times: PT 11.3, aPTT 32.1, INR 0.97.

Analgesia was provided with ketorolac and ibuprofen, along with antibiotic prophylaxis using clindamycin.

On the second day of hospitalization, a consultation with the child psychiatry service was requested due to the history of child maltreatment, resulting in the diagnoses of child neglect and adjustment disorder; risperidone therapy was initiated.

During the mental health evaluation on the fourth day of hospitalization, symptoms of anxiety associated with the adjustment disorder were noted, including startle responses, enuresis, onychophagia, short attention spans, difficulty initiating sleep, and hyperactivity; therefore, the risperidone dosage was increased.

As the condition evolved, the child displayed irritability and reported intentions to inflict violent actions toward his primary caregivers.

On the fifth day of hospitalization, he was taken to the operating room for surgical debridement, during which a split-thickness autologous skin graft was harvested and applied to the distal third of the medial aspect of the forearm.

He returned to the operating room on the eleventh day for surgical debridement, where the lesion was found to be in a centripetally progressing epithelialization phase, with millimetric islands of reticular dermis containing fatty papillae and no evidence of infection. The procedure concluded with the placement of Epifast patches.

On the twelfth day, he was diagnosed with *Entamoeba coli* parasitosis, and treatment with metronidazole was initiated.

He was discharged on the thirteenth day due to adequate clinical progress, with prescriptions for ibuprofen, metronidazole, and risperidone, and instructions for follow-up with the state mental health center, plastic surgery, child psychiatry, physical therapy, and psychology.

Discussion

Historically, superstition together with customs and traditions has contributed to the mistreatment of minors, as well as to infanticide, sacrifice, slavery, abuse, and ritual offerings, among other practices. However, the social evolution that preceded the scientific consideration of child maltreatment allowed for a broad call to protect children [4].

The earliest records of Kempe Syndrome or Battered Child Syndrome date back to 1860, described as the "battered child syndrome" by Auguste Ambroise Tardieu, based on autopsy findings from 32 children who had been beaten or burned to the point of death. It was not until 1959 that pediatrician Henry Kempe introduced the term Battered Child Syndrome to the American Academy of Pediatrics, and in 1962, the complete description of the condition was published, including pediatric, psychiatric, radiologic, and legal aspects [4]. In Mexico, the Official Mexican Standard NOM-046-SSA-2005 protects children and adolescents by adopting international legislative measures aimed at safeguarding their rights [5].

According to WHO, child maltreatment is defined as any form of abuse or neglect affecting a minor under 18 years of age and encompasses physical or emotional abuse, sexual abuse, neglect, and commercial or other forms of exploitation that harm or may harm the child's health, development, or dignity, or that may jeopardize survival within a relationship of responsibility, trust, or power. Clinically, Battered Child Syndrome can be assessed from the perspective of chemical violence, lack of care, sexual abuse, emotional maltreatment, Münchausen syndrome by proxy, and physical violence. In the present case, the discussion focuses exclusively on physical maltreatment [1].

According to Dr. Kempe's publications, in some cases clinical manifestations may be limited to a single traumatic episode; however, upon admission, poor skin hygiene, malnutrition, poor general condition, and multiple soft-tissue injuries may be noted. If no new lesions of any type appear during hospitalization, the diagnosis is reinforced, and skeletal or hematopoietic disorders-where spontaneous or minor-trauma injuries may occur-are ruled out [6].

Physical examinations must include both extraoral and intraoral assessment. Extraoral examination begins at the skull, identifying hematomas, exostoses, depressions, fractures, areas of alopecia, ear-lobe avulsion, conjunctival hemorrhage, active lacerations, and

scars in various stages of healing. Lymph nodes, facial bone structures, and the temporomandibular joint should be palpated to identify limitation of mouth opening, pain, deviations, and correlation with any traumatic history [7].

Subsequently, the arms, back, thorax, and legs must be examined to identify hematomas, scars, burns, or any other indicator of physical maltreatment that does not correlate with the reason for or date of admission. Intraoral examination should be systematic, assessing integrity, ecchymosis, hematomas, and lacerations of the labial frenulum caused by forced feeding with a bottle or feeding utensils; palatal lacerations; mucosal burns caused by extremely hot foods or caustic substances; and abnormalities in tongue mobility or morphology [7].

Behavioral indicators in victims of Battered Child Syndrome may include defiance, aggression, depression, or violent tendencies. However, the child may also appear unpredictable, shy, fearful, with low self-esteem, antisocial tendencies, and oral habits such as finger sucking, bruxism, and onychophagia [7].

The Mexican Guideline for the Presumptive Diagnosis of Child and Youth Maltreatment, published on November 30, 2006, specifies that, in descending order, the most frequent forms of maltreatment are neglect, physical maltreatment, and emotional maltreatment (data from the National System for Integral Family Development). The recommended steps include obtaining a complete medical history, performing a physical examination, issuing a medical injury report, and, depending on the facility, conducting imaging and laboratory studies [8].

According to the guideline, signs of physical maltreatment include hematomas, ecchymosis, erythema, and contusions on the face, lips, mouth, thorax, abdomen, arms, and legs; scars in various stages of evolution; object-shaped marks such as those from belts, cables, chains, irons, among others; unexplained burns on the palms, feet, arms, and back (e.g., cigarette burns); unexplained dislocations and fractures in different stages of healing (such as clavicle fractures); muscle injuries; human bite marks; ocular trauma; and cranioencephalic trauma. The next step is the preparation of a Medical Injury Report, detailing the type, size, shape, color, location, number, estimated age, and expected healing time of each injury while assessing severity [8].

In such cases, healthcare professionals have the legal and ethical responsibility to recognize signs of abuse and to activate the necessary protection mechanisms, providing multidisciplinary management. Timely diagnosis can save a child's life and prevent permanent sequelae [9].

Conclusion

The clinical case presented underscores the importance of timely detection and comprehensive management when child maltreatment is suspected. The identification of physical signs such as burns, scars in various stages of healing, and indicators of neglect, together with psychological disturbances reflected in the child's behavior, enabled the diagnosis of Kempe Syndrome. Immediate medical care, psychological follow-up, and surgical intervention were essential to achieving the patient's stabilization and physical recovery, demonstrating the relevance of coordinated interdisciplinary collaboration.

Furthermore, this case highlights the need to strengthen healthcare personnel training in the detection and management of child maltreatment, as well as to reinforce public policies that ensure the protection and follow-up of minors with this history. Adherence to clinical and legal protocols, the use of national guidelines, and a multidisciplinary approach not only facilitate the management of the physical consequences of maltreatment but also address the emotional and social dimensions of the patient, supporting comprehensive recovery and reintegration into a safer and healthier environment.

Conflict of Interest

The authors declare no conflict of interest.

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This work was funded by the researchers.

Ethical Considerations

This work complies with current bioethical research regulations. Patient confidentiality was always ensured by omitting sensitive personal information that could allow identification.

The publication of this case aims to contribute to medical knowledge and to raise awareness regarding the detection of child maltreatment, without compromising the patient's dignity or rights.

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