v. 4, n. 47, 2024

International Journal of Health Science

STIGMA AND ACCEPTANCE: ADDRESSING THE SOCIAL DIMENSIONS OF CONGENITAL CLUBFOOT IN CHILDHOOD

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Abstract: Introduction Congenital Clubfoot (CC) is a complex orthopedic anomaly characterized by deformities in the foot at birth such as equinovarus, which may occur in isolation or alongside other congenital conditions. Although the exact etiology is not fully understood, genetic, environmental, and mechanical factors significantly contribute to its development. Early diagnosis and appropriate treatment are essential to prevent future complications and enable functional recovery of the affected foot, with the Ponseti method emerging as an effective strategy. Epidemiological studies reveal variations in the prevalence of CC, emphasizing the need for early detection and proper therapeutic interventions to enhance long-term outcomes. Moreover, the association between CC and social issues, including stigma and social interactions, highlights the need for holistic approaches that encourage social inclusion and emotional support for affected children. **Objectives** To analyze and describe the primary social aspects and management of CC in the last decade. **Methods** This is a narrative review that examined the principal social and management aspects of CC, including studies from databases such as MEDLINE – PubMed, COCHRANE, EMBASE, and Google Scholar over the past ten years. **Results and Discussion** Understanding the risk factors associated with CC is crucial for implementing effective prevention and screening measures, which include family history of the disease and maternal smoking during pregnancy. Early diagnosis is pivotal to start appropriate treatment and prevent future complications, necessitating a multidisciplinary approach to ensure an accurate treatment plan for each patient. Both prolonged treatment and untreated CC can significantly impact the psychosocial well-being of affected children, underscoring the importance of psychosocial support during

treatment. The stigma associated with CC can lead to discrimination and social exclusion, making it crucial to implement psychosocial intervention strategies to promote inclusion and acceptance of these children. Furthermore, awareness programs and public education are essential to increase understanding of CC, reduce stigma, and foster a culture of inclusion and support. **Conclusion** The importance of early identification, accurate diagnosis, and appropriate treatment of CC is critical for improving the life quality of affected children. There is a need for a multidisciplinary approach that considers not only the medical aspects but also the psychosocial aspects, including the stigma associated with the condition. Additionally, the significance of awareness programs and public education to enhance understanding of CC and promote the inclusion of affected children in society is emphasized.
Keywords: Congenital clubfoot; Orthopedics; Pediatrics; Social dimensions.

INTRODUCTION

Congenital clubfoot (CC) is recognized as a multifaceted orthopedic condition marked by distinct foot deformities present from birth. Such deformities typically involve equinovarus, where the foot is angled downward and inward, with varying degrees of severity[1]. CC may appear as a solitary condition or in conjunction with other congenital anomalies. While the precise origins of CC remain elusive, a combination of genetic, environmental, and mechanical factors are known to influence its formation[2]. Prompt diagnosis and tailored treatment strategies, including manipulative techniques, casting, orthotic supports, or surgical interventions, are crucial to avert long-term health complications and to enhance the functionality of the impacted foot[3].

The incidence of CC shows notable variability across different populations and geographical areas[4]. Epidemiological data indicate that CC occurs in roughly 1 to 4 infants per 1,000 live births globally. Such disparities likely stem from genetic predispositions, environmental conditions, ethnic backgrounds, and variations in diagnostic practices[5]. Despite its relatively low prevalence, the considerable morbidity and functional repercussions associated with CC underscore the necessity for early detection and precise therapeutic measures to better the prospects for long-term patient outcomes[6].

Over recent decades, the management of CC has significantly advanced, with the Ponseti method becoming a preferred and effective treatment model[7]. Introduced by Ignacio Ponseti in the 1940s, this technique involves a gentle repositioning of the foot, followed by the application of successive casts and sometimes a percutaneous tenotomy of the Achilles tendon to rectify the deformity[7]. Research validates the Ponseti method, showing success rates exceeding 90%, thereby establishing it as the benchmark for non-operative CC management. Nevertheless, severe or stubborn cases might necessitate surgical approaches, including tenotomy, Achilles tendon elongation, osteotomies, and arthrodesis, depending on the severity of the deformity and individual patient factors[8].

The rise in childhood psychiatric issues, particularly bullying, depression, and anxiety, poses significant mental health challenges[8]. Recent findings suggest a linkage between being bullied in childhood and subsequent psychological distress, manifesting as depression and anxiety[9]. The enduring psychological impact of bullying can significantly contribute to mood and anxiety disorders later in life. Moreover, academic pressures, family dynamics, and premature exposure to traumatic content on social media

also contribute substantially to the increased incidence of these mental health issues among young populations[10].

The relationship between CC and its social implications plays a critical role in the management of this orthopedic condition[11]. Research indicates that CC can profoundly affect a child's quality of life and social interactions, often exacerbated by societal stigmas related to the visible deformity and its functional limitations[12]. Perceptions held by parents and caregivers about CC can significantly influence the level of social and emotional support extended to the affected families, thereby indirectly impacting the child's psychological health[13]. It is therefore imperative to develop comprehensive interventions that not only address the medical facets of CC but also foster social inclusion, enhance self-esteem, and provide emotional support to those impacted[14].

OBJECTIVES

To analyze and describe the main social aspects and management of CC in the past decade.

SPECIFIC OBJECTIVES:

1. Investigate perceptions and attitudes of parents and caregivers of children with CC concerning the social stigma associated with the condition.
2. Assess the psychosocial impact of CC on children, including their self-esteem, social interactions, and quality of life.
3. Analyze the experiences of children with CC in social settings such as schools and communities, and how they cope with stigma and acceptance.
4. Explore societal beliefs and attitudes towards CC and how these factors influence the inclusion and integration of affected children.
5. Investigate psychosocial intervention strategies to reduce stigma and promote the acceptance of children with CC both within families and in the community.

METHODS

This is a narrative review, in which the main aspects of the main social aspects and management of CC in recent years were analyzed. The beginning of the study was carried out with theoretical training using the following databases: PubMed, sciELO and Medline, using as descriptors: "congenital clubfoot" AND "prevalence" AND "social dimensions," AND "treatment" in the last years. As it is a narrative review, this study does not have any risks.

Databases: This review included studies in the MEDLINE – PubMed (National Library of Medicine, National Institutes of Health), COCHRANE, EMBASE and Google Scholar databases.

The inclusion criteria applied in the analytical review were human intervention studies, experimental studies, cohort studies, case-control studies, cross-sectional studies and literature reviews, editorials, case reports, and poster presentations. Also, only studies writing in English and Portuguese were included.

RESULTS AND DISCUSSION

Identifying and understanding the risk factors associated with CC is crucial for managing and preventing this orthopedic condition[15]. Epidemiological studies have identified several factors that increase the likelihood of developing CC, including family history of the disease, male sex, maternal smoking during pregnancy, low birth weight, and oligohydramnios during pregnancy[16]. Additionally, genetic and environmental factors have been implicated in the etiology of CC, suggesting a complex interaction between genetic predisposition and intrauterine

environmental influences[17]. Understanding these risk factors is vital for implementing preventative measures and screening strategies aimed at reducing the incidence and severity of CC in at-risk populations[18].

The diagnosis of CC is critical for initiating appropriate treatment and preventing future complications[19]. Diagnosis is typically made at birth or shortly thereafter based on clinical examination assessing the foot and ankle's position relative to a neutral position[19]. Prenatal ultrasound and postnatal radiographs are also utilized to confirm the diagnosis and assess the severity of the deformity. Moreover, differential diagnosis is crucial to distinguish CC from other conditions such as congenital arthrogryposis and other musculoskeletal malformations[20].

Prolonged treatment of CC can pose challenges not only for healthcare professionals but also for the children and their families, potentially negatively impacting the children's psychological well-being[21]. Continuous use of orthotic devices, corrective surgeries, and the need for frequent medical follow-ups can cause emotional stress and anxiety in children, particularly as they grow older and become more aware of their differences from peers[22]. The lengthy duration of treatment can affect self-esteem, self-image, and even social development, leading to psychological issues such as anxiety, depression, and social adjustment difficulties. Therefore, it is crucial for healthcare providers to be attentive not only to the physical needs but also to the emotional and psychological needs of children undergoing prolonged treatment for CC, providing appropriate psychosocial support and intervening early when necessary[23].

Conversely, untreated CC can result in a range of adverse sequelae that impact not only physical function but also the psychosocial development and quality of life of affected children[24]. Without appropriate intervention, foot deformities may worsen over time, leading to significant difficulties in mobility and balance. Moreover, asymmetry in the lower limbs can cause physical discomfort and lead to chronic postural and joint problems[25]. Psychosocially, untreated CC can lead to social stigma, low self-esteem, and difficulties in social integration, as children may face discrimination and exclusion due to their physical condition. Therefore, it is essential to ensure timely access to effective interventions to prevent the debilitating consequences associated with untreated CC[26].

The exploration of perceptions and attitudes of parents and caregivers of children with CC regarding the social stigma associated with the condition is critical for understanding the psychosocial impact of this condition[27]. Studies suggest that stigma can influence the emotional and social well-being of affected children as well as the quality of life of their families[28]. By exploring the perceptions and attitudes of parents and caregivers, this study aims to provide valuable insights for the development of psychosocial interventions that aim to reduce stigma and promote appropriate support for families affected by CC[28].

The assessment of the psychosocial impact of CC on children, covering their self-esteem, social interactions, and quality of life, is crucial for understanding the challenges faced by these patients[29]. Studies have shown that children with CC may experience emotional and social difficulties due to the negative perception of the deformity, physical limitations, and experiences of stigma[28]. Moreover, prolonged treatment and associated surgical interventions can significantly affect the psychosocial well-being of children and their families. Therefore, a comprehensive assessment of these aspects is essential to inform psychosocial support strategies and improve the quality of life of these patients[28,29].

The analysis of the experiences of children

with CC in social settings such as school and community and their ways of coping with stigma and acceptance is fundamental to understanding the psychosocial impact of this condition[30]. Studies have shown that children with CC may face significant challenges, including discrimination, social exclusion, and difficulties in interacting with peers[30]. Additionally, the stigma associated with physical deformity can affect the self-esteem and emotional well-being of these children. However, research suggests that social support strategies, education about the condition, and psychosocial interventions can help children with CC develop coping skills and enhance their quality of life in social environments[31].

The exploration of societal beliefs and attitudes toward CC and their impact on the inclusion and integration of affected children is crucial for promoting more inclusive and empathetic environments[31]. Studies have highlighted the existence of stigmas associated with CC that can result in discrimination, marginalization, and integration difficulties for affected children[29]. Understanding society's perceptions of CC can help identify areas of prejudice and develop strategies to promote acceptance and inclusion of these children in various social contexts[28,30].

Investigating psychosocial intervention strategies to reduce stigma and promote the acceptance of children with CC is essential for improving their quality of life and social integration[31]. Studies have demonstrated the effectiveness of interventions aimed at educating the community about CC, raising awareness of the needs of affected children, and promoting a culture of inclusion and respect[31]. Additionally, psychosocial interventions that strengthen family support and promote self-esteem and social skills in children can be equally important in mitigating the effects of stigma and facilitating their full participation in society[32].

Examining the effectiveness of awareness and public education programs about CC to promote a greater understanding and acceptance of the condition is crucial for mitigating stigma and improving the quality of life of affected children[33]. These programs often include awareness campaigns, educational workshops, and informational materials targeted at the general public, health professionals, and schools. Studies have shown that such interventions can increase knowledge about CC, reduce negative and stereotypical attitudes, and promote a culture of inclusion and support for children with this condition[32,33].

CONCLUSION

The critical importance of early identification of associated risk factors, accurate diagnosis, and appropriate treatment to enhance the quality of life of affected children is emphasized. A multidisciplinary approach is essential to ensure effective management of CC, considering not only the medical aspects but also the psychosocial aspects. Furthermore, investigating the psychosocial impact of CC on children, including the stigma associated with the condition, highlights the need for psychosocial interventions that promote acceptance and social inclusion. Awareness and public education programs are vital for increasing understanding of CC, reducing stigma, and facilitating the integration of affected children into society. Therefore, investing in psychosocial intervention strategies and educational programs is crucial for mitigating the negative impact of CC and improving the well-being of children and their families.

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