PSYCHOLOGICAL ASPECTS OF PAEDIATRIC BURNS (A CLINICAL REVIEW)

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SUMMARY. Burn injuries in childhood can be traumatic with lasting effects until adulthood. This article reviews the various psychological issues one confronts when treating paediatric patients with burn injuries. A wide range of factors influence recovery and rehabilitation from paediatric burns. The role of family members, family dynamics, parental reactions, parental psychiatric illness, and pre-morbid psychiatric illness in the child are important factors. The entire family and the burned child have to show good coping skills if recovery from paediatric burn injuries is to be possible. It is very important that paediatric burn units realize the need for a child psychiatrist and psychotherapist in their rehabilitation team. Good psychotherapy along with burns-related treatment will go a long way to enhance the quality of life of these patients.

Keywords: paediatric burns, psychological issues

Introduction

No injury is more painful than severe burns and no image more horrifying than that of a child transformed by burns. Burn injuries induce immense pain, as do the treatments to combat infections and burn-scar contractures.[1] It is necessary that burn rehabilitation programmes in children address the needs of such children, who may be as severely affected psychologically as by the burn scars.[2] Scientific advances in treating acute burns have led to a marked increase in the number of children surviving massive burns.[3,4] As the number of children living with burns has increased, so too has concern for the psychosocial outcomes and interest in action to enhance quality of life for burned children.[5]

This article is written for burn care professionals engaged in the difficult but rewarding endeavour of helping children and their families recover from massive burns. First we look at what is known about long-term outcome, psychosocial adaptation, and quality of life for paediatric bum survivors en route to adulthood.

We describe the psychological issues and their importance as they evolve in a typical pattern of recovery through time. Although patients may be focused on the present moment, helpers who are aware of burned children's history and their future potential are better able to assist patients to get through this moment adaptively.[6]

Follow-up studies of paediatric burn injuries

Contrary to expectation, empirical data indicate that most burn survivors, even those with the most extensive and disfiguring injuries, demonstrate long-term adjustment comparable to normative values of standard psychometric measures.[7] Only 15-35% of paediatric burn survivors report behavioural problems.[8]

This lack of observable psychopathology does not equate to a happy or easy adjustment. When competence and social skills are evaluated, another 50% show diminished competence while when both behavioural problems and competence are assessed, approximately 70-80% of each sample indicate deficits in competence and/or elevated behavioural problem scores on rating scales.[9] These and other data suggest that while most burn survivors appear to be doing well, they may be suffering internally. They develop the public persona of a person doing well much of the time, especially in familiar situations. They may also feel a sense of well-being. However, like all people, they also have a private persona, a part of themselves that is shared selectively with people they trust. The private persona of a burned child is sensitized to looking different and is anxious about being rejected, teased, or ridiculed. These private feelings vary in their saliency and are situation-specific.[10]

Post-burn adjustment has not been predicted by the

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characteristics of the burn itself nor is there evidence that burn size, age, location, and percentage are related to the quality of adjustment. Some reports have associated disfigurement with poorer adjustment.[11] The most significant determining factor of psychosocial adjustment for paediatric burn survivors appears to be family support.[12] For the older child or adolescent, support received from peers is also important. In one study, high extroversion and social risk taking, together with family characteristics of high cohesion and low conflict, accounted for 80% of the variance between well-adjusted and poorly adjusted adolescent survivors of paediatric burns.[13]

The ultimate goal of paediatric burn care, beyond survival and functional restoration, is to restore the quality of life and the potential for productive adult lives. Burned males reported significantly more somatic complaints; burned females reported not only significant elevations in somatic complaints but also greater withdrawal, more thought problems, and more aggressive and angry behaviour.[14] This supports findings that appearance impairment is a greater source of distress and has a stronger impact for females than for males.[15] Burn survivors feel adequate self-worth within the context of family and friends while socially they express lowered self-esteem, manifested through anxiety and withdrawal as well as intrusive thoughts and difficulty with concentration.[16]

The most significant limitations on the long-term quality of life for the paediatric burn survivor seem to be not functional impairment but rather anxiety and social impairment in relating to others. The Gestalt of disfigurement, unhappiness with appearance, stigmatization, social anxiety, maladaptive coping, and social discomfort is more likely to result in significant long-term impairment than the physical results of severe burn injuries.[17] The physical impediments of burn scar contractures, amputations, and diminished hearing and/or eyesight do not prevent burn survivors from performing activities required for self-care. For these individuals, social and emotional challenges during childhood and adolescence lead to long-lasting anxieties, fear of new social settings, and decreased self-esteem.[18] This cycle of appearance distinction, anxiety, and withdrawal to avoid rejection creates barriers to the success of many burn survivors. Researchers are increasingly focused on stigmatization, dissatisfaction with appearance, social anxiety, and development of interventions to assist survivors in coping with these social obstacles.[19]

Issues related to body image and stigmatization

Body image is multidimensional, and includes self-perception and expectations of how others evaluate appearance. Beliefs about one's strength, physical sensations, sexuality, movement, facial features, and physical boundaries are integral.[20] Burn survivors may experience alterations in all of these areas. In all children the developmental stage impacts body image throughout childhood and is assumed to be the same for burned children.[21] Most of the literature on body image in the burned child is based on clinical observation with scant empirical data. The paucity of studies in this area reflects the difficulty of assessing relevant aspects of body image in burned children.

Stigmatization originates from the original Greek word *stigma*, which referred to body signs designed to indicate something unusual or bad about the moral status of the individual who bore the signs. Stigmatization has retained a similar purpose of separating certain individuals from the rest of society. Stigmatizing behaviours may be obvious, such as staring, teasing, or bullying; or they may be subtle, such as avoiding eye contact, ignoring, or expressing pity.[22] Stigmatization has three specific effects on people with appearance distinctions, viz. poor body-esteem, a sense of social isolation, and a violation of privacy effect. This refers to the inability of the person to be anonymous, without undue attention.[23] Sometimes extra attention is meant to be positive, but is nonetheless intrusive and dehumanizing.

Social anxiety is an important factor in social impairment and emotional functioning among nonclinical populations of children and adolescents. Children who are rejected or neglected by their peers report substantially more social anxiety than their accepted classmates. Those with high social anxiety perceive themselves as less socially accepted and report lower levels of global self-esteem than less socially anxious peers.[24] As yet, no studies have been published studies on social anxiety in the adaptation of burned children. However, given the findings related to adolescent and young adult burn survivors, such investigations are imperative for early identification of the risk of developing a more serious psychopathology.

Paediatric burns and the role of families

Burn injury and its treatment are family affairs from the beginning, particularly for paediatric patients. The family unit is disrupted and traumatized. The characteristics of the family and family dynamics are important in predicting the course of recovery. Families may be facing the loss of a wage earner and/or financial ruin while caring for the patient. Even at hospitals where medical care is free of charge to the families, the attendant costs of lost wages, travel expenses, and special arrangements to care for the patient post-discharge can be devastating.[25]

Family members play a critical role in long-term care and rehabilitation of the burned child and often become extended members of the treatment team. Family members can be extremely helpful in supporting the best interests of the child during the difficult months or years ahead. Identification of the psychosocial strengths and vulnerabilities of family members, including those who contributed

to the burn injury, help the team to develop a treatment plan that will facilitate adjustment of the child and the entire family unit.[26,27]

The role of the child psychiatrist in paediatric burns

Burn care is improved by a comprehensive multidisciplinary programme in which mental health professionals are integral. A child psychiatrist and a trained psychotherapist should be involved in the treatment of burned children throughout their recovery.[28,29] An essential role of the child psychiatrist is to consult with and guide other burn care professionals and patients' families with regard to psychosocial issues and to collaborate in cross-disciplinary therapeutic interventions.[30]

Psychological healing occurs over time commensurately with physical healing in a pattern that is relatively predictable and consistent, although mediated by individual dynamics. Awareness of this pattern allows caregivers to anticipate the emergence of psychosocial issues and to prepare patients for coping with those issues. Many parents of burned children are limited in their financial resources and in their education.[31] A child recovering from serious burns and reconstructive procedures requires even more time and attention from a caretaker than prior to injury. Hence the burn team must assist the family by teaching the caretaker what a child needs as well as providing emotional support to the caretaker, helping to obtain resources, and monitoring the child's care.

Sometimes parental inadequacy involves a more sinister neglect and/or abuse of a child.[32] Abused children have complications throughout their recovery related to family and care provider dysfunctions, making the identification of risk factors critical. The burn team must find ways to work effectively with the family of the abused child over the long term, sometimes including the abuser, as the child often returns to the family. Care providers can be honest with families about reports that are mandated by law and they must project a non-judgemental attitude.[33] The long-term management of child abuse and neglect goes beyond the scope of this review.

Pre-existing psychiatric disorders are common in histories of older burned patients, and frequently contributed to the aetiology of the injury.[34] Attention deficit disorder and attention deficit hyperactivity disorder are predisposing conditions for burns, especially during periods of "drug holiday".[35] Substance abuse often plays a causal role in burn injuries in the older child. Young people who abuse flammable inhalants are at particular risk for burn injury.[36] Adequate management of such conditions is clearly necessary for successful reconstruction and rehabilitation.

Reconstructive procedures for a child may begin during the first year post-injury, and continue for many years. Throughout those years, psychosocial processes challenge the child's well-being. Soon after discharge from acute treatment, the child is forced by wound breakdown, dressing changes, exercises, splints, and pressure garments to confront anew the losses and possibly to experience a delayed grief reaction. The burn-injured child, however, may appear more "normal" at acute discharge than a year post-burn when the child is actually healthier. Initially, following debridement of dead tissue, a child's skin is discoloured but retains its shape; missing ears, nose, or lips may be obscured by dressings. A burned face is much like a masked one. Even with undamaged muscle tissue, it is sometimes difficult for a child to project the former level of facial animation. Burn-associated growth delays may have negative effects on psychological functioning as has been found for people with other growth hormone-related deficiencies.[37]

Early in the rehabilitation phase, focus is primarily on functional physical recovery, and the changes in body image, self-esteem, and social identity consequent to disfigurement often go ignored. While children are wearing pressure garments or splints, they tend to think of their bodies as temporarily different, and they hope that, at the end of treatment, their old bodies will magically reappear. However, when the devices are discontinued, a new phase of body image adaptation begins and children are confronted with the permanence of their scars.[38]

Families also continue to experience the stressful process of adaptation. Feelings related to the traumatic incident resurface frequently and must be resolved. Parents must cope with the ordinary pressures of life while also grieving. The care of an injured child requires a great deal of time and energy, which may compete with the care available for the uninjured family members. The early adaptation period (lasting about a year) is tumultuous but gradually calms down. By about two years post-injury, most families are able to focus more on the ordinary tasks of life and less on recovery from burns. During this time they begin to fully realize the long-term implications of the irrevocable changes created by the injury.[39]

Goals of psychotherapy in paediatric burn patients

- Help children cope with social anxiety and stigmatization. Rehearse use of diverse coping skills and practise empathetic perceptions of others. Provide assistance as needed with integration in community and school.
- Promote development of a positive self-image. It is helpful to remind children of the courage and strength required to survive the injury and to have accomplished the difficult work of rehabilitation, i.e. it is helpful to promote a "heroic" identity.
- Use this approach to give children a positive frame through which to view their burn scars as visible

signs of what they have achieved. Be aware, however, that over time this image should evolve into a self-concept that includes more realistic aspects.
- The ultimate goal is for the children to think of themselves simply as persons who were burned and have many interests and strengths as well as vulnerabilities and difficulties to overcome.
- Assist in developing an overall plan for reconstruction and rehabilitation.
- At each opportunity, assess the patient's and/or family's desires and expectations for reconstruction and assist them to communicate clearly with the burns team.

Many burn centres provide psychosocial care for burn survivors during acute hospitalization and in conjunction with reconstructive and rehabilitation procedures. However, limited funding for mental health services means that only those with the most disruptive psychiatric disorders can access such attention; most burn survivors do not meet those criteria. The care they receive as children from the burn teams acutely may be the only opportunity to receive professional attention for their distress. Fortunately, the intensity of the relationship between the burn team and burned children and their families can facilitate psychosocial interventions provided in the brief period when children usually receive their reconstruction and rehabilitative treatments. The strength of those relationships also ensures the success of referrals for continued treatment, when necessary and available. Our therapeutic strategy is designed to break maladaptive connections between cognition, emotion, and behaviour, and to replace them with more adaptive thought and behavioural patterns through cognitive behavioural therapy, family systems therapy, psychoeducation, and psychopharmacology.[40] Early recognition of distress, well-directed interventions, psychoeducation, and supportive therapy in the context of a strong therapeutic relationship may prevent much of the paralysing anxiety previously noted, thus limiting the need for more in-depth and protracted term treatment. Another approach to treatment that has been successful is the Burn Camp. A Burn Camp is a place where children with burns get a chance to interact and mix with other children who have suffered burns like them and thus learn to understand that they are not alone as victims of their fate. Group psychotherapy sessions in these burn camps also serve as part of the burn rehabilitation process.[41]

Conclusions

There are many reasons for believing that the survivors of serious burn injuries, even those who appear well-adjusted as children, will be impaired in their abilities to develop into well-adjusted adults. Even after years of rehabilitation work, disfigurement is the norm for individuals with massive burns. The years of special treatment impose major disruptions on the family and interfere with the child's normal development and social integration. Today, improvement in burn survival has greatly surpassed our ability to improve the aesthetic and psychosocial aftermath of burn injuries. As more children survive, research is focusing on the more holistic aspects of outcome and ultimately on improving quality of life.

RÉSUMÉ. Les lésions causées par les brûlures en age pédiatrique peuvent être traumatisantes, avec des effets qui duraent jusqu'à l'âge adulte. L'auteur de cet article passe en revue les différentes questions psychologiques qu'il faut confronter dans le traitement des patients pédiatriques atteints de brûlures. La guérison et la réhabilitation après les brûlures pédiatriques subissent l'effet d'une vaste gamme de facteurs. Le rôle des membres de la famille, la dynamique familiale, les réactions et les troubles psychiatriques des parents et les maladies psychiatriques prémorbides de l'enfant constituent des facteurs importants. Toute la famille et l'enfant brûlé doivent démontrer de bonnes habiletés d'adaptation si la guérison de l'enfant brûlé doit être possible. Il est très important que les centres des enfants brûlés comprennent la nécessité de la présence un pédopsychiatre et d'un pédopsychothérapeute dans l'équipe de réadaptation. Une bonne psychothérapie associée au traitement spécifique des brûlures fait beaucoup pour améliorer la qualité de vie de ces patients.

Mots-clés: brûlures pédiatriques, problèmes psychologiques

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