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Review Article

Providing comprehensive psychosocial care for adolescents with keloids in dermatology practice

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ABSTRACT

Keloids, characterized by excessive collagen deposition resulting in raised and often painful scars, profoundly affect the psychosocial well-being of adolescents, leading to anxiety, depression, and social withdrawal during a critical period of identity formation. Current literature highlights these challenges but lacks comprehensive management strategies within dermatological practice. This review identifies the need for integrated care models that combine clinical treatment with mental health support, including routine psychosocial screening, immediate counseling referrals, and adolescent-specific education programs on keloid management and emotional coping. Training dermatologists to recognize psychological distress and adopt compassionate communication is essential. Collaborative research should focus on evaluating these integrative care models and developing evidence-based guidelines. By pioneering these comprehensive strategies, dermatology practices can improve physical outcomes and significantly enhance the quality of life for adolescents with keloids, addressing both the physical and psychological scars. Future research should prioritize the longitudinal impact of these interventions on mental health and treatment adherence, establishing a new standard of care that fully supports adolescent keloid patients. By implementing these comprehensive strategies, dermatology practices can enhance physical outcomes and significantly improve the quality of life for adolescents with keloids, addressing both the physical and psychological impacts in the management of keloids in this vulnerable population.

Keywords: Keloids, Anxiety, Depression

INTRODUCTION

Keloids result from abnormal wound healing in predisposed individuals, leading to the overproduction of type I collagen that extends beyond the original injury. Their continuous growth is characterized by pruritus, pain, and restricted mobility as they invade the surrounding dermis. Keloids do not regress spontaneously and frequently recur after excision. They develop in areas under high skin tension, most commonly on the anterior chest, scapula, and jaw/neck.[1] Keloid formation is influenced by both genetic and environmental factors, disproportionately affecting melanated individuals. The risk of development is higher in pregnancy and adolescence, with the most significant risk in those under 30.[2,3] These individuals endure early development and a high recurrence rate, contributing to the chronic nature of keloids.

Current treatment modalities for keloids target reducing their size and improving cosmetic appearance. First-line therapies include silicone sheeting, compressive dressings, and intralesional corticosteroid injections.[4] While other non-invasive methods such as ultrasound, laser, and cryotherapy exist, these approaches have highly individualized responses to treatment. Surgical excision is considered the definitive treatment for keloids, though it carries the risk of new and worsening keloid formation. To prevent recurrence, combination therapy is applied postoperatively. Newer therapies aim to interfere with the pathophysiologic progression of keloids.[4,5] Monoclonal antibodies targeting signaling pathways and angiogenesis can help reduce these recurrence rates.

Given that keloids often develop during adolescence and frequently recur, they impose a significant physical and psychosocial burden on an already vulnerable population. Dermatological conditions during adolescence profoundly impact quality of life (QoL).[6] These individuals frequently report stigmatization and endorse a negative self-perception. Visible keloids can hinder confidence, causing withdrawal and isolation that can exacerbate self-esteem issues.[6,7] Pain and pruritus are further implicated in perpetuating poor emotional and mental outcomes.[8] During a time when adolescents are exploring their identity and forming meaningful relationships, the added burden of keloid scars can significantly affect their psychosocial well-being.

The chronicity of keloids, due to their tendency to recur after treatment, can lead to ongoing stress and anxiety persisting from adolescence into adulthood. Early intervention that includes psychosocial support for adolescents suffering from keloids is an integral part of providing patient-centered care. Routine psychosocial assessments within dermatology practice should be conducted for adolescents with keloids, concluding in counseling referrals as needed to facilitate multidisciplinary care. In addition, destigmatizing keloids through educational programs can help promote social awareness and community support. Evidence-based models for providing psychosocial support within dermatology practice require further investigation and implementation to improve the QoL in adolescent keloid patients.

PATHOPHYSIOLOGY OF KELOID DEVELOPMENT

Keloid formation presents a complex process that involves environmental insults on genetically susceptible individuals. The heritable component of keloids includes various gene mutations and polymorphisms. Individuals from specific ethnic backgrounds, particularly those with darker pigmentation, are more likely to be predisposed to keloids, suggesting a strong genetic contribution underlying keloid development.[9,10] For example, polymorphisms in the TGF-β and pro-inflammatory cytokine pathways may contribute to keloid pathogenesis, providing a target for new therapies.[10] Understanding the genetic and molecular aspects of keloid formation offers invaluable insights for developing targeted therapies and allows physicians to better counsel patients who have a known predisposition. That stated, the complexity of gene-environment interactions makes it challenging for researchers to fully understand the genetic component of keloid pathophysiology.

The interaction between environmental insults and genetic predisposition influences the likelihood and severity of keloid formation. These environmental triggers range from minor insect bites and piercings to acne, burns, and surgical incisions.[11] Complications in the healing process, such as wound tension, infection, and inflammation, can exacerbate the abnormal growth of scar tissue. According to Zhang et al, these factors perpetuate microenvironmental changes that drive pathogenesis. In addition, exposure to ultraviolet (UV) radiation stimulates melanocyte activation and collagen production, making sun protection a crucial part of preventative therapy.[12] Environmental insults at any point in the wound-healing process can worsen outcomes. As a result, the approach to keloid prevention and treatment must be individualized to address each patient's unique risk factors.

To best address therapeutic targets, understanding the process of keloid development is essential. The pathogenesis of keloid formation begins with abnormal remodeling processes that occur during wound healing, characterized by fibroblast dysfunction, excessive collagen production, and dysregulation of cell signaling within the wound microenvironment.[13] Wound healing begets a stepwise process that begins with inflammation, progresses through cell proliferation, and concludes with matrix remodeling. An imbalance in any of these phases can culminate in the formation of a keloid. Gauglitz et al proposed that increases in levels of pro-inflammatory cytokines sustain fibroblast activity and exaggerate collagen deposition. These interactions enable scar formation to extend beyond the borders of the initial insult, contributing to pruritus, pain, and restricted mobility. Limandjaja et al show that invasion into the surrounding dermis histopathologically distinguishes keloids from hypertrophic scars. Importantly, predisposed individuals do not develop keloids in response to every skin injury.[14] This suggests a complex interplay of multiple pathogenic factors contributing to variability in keloid formation, both between different individuals and in response to various insults.

One pathogenic factor contributing to intra-personal variability in keloid development is the location of the insult. Keloids can form anywhere on the body, but they are more likely to develop in specific locations, such as the earlobes, neck, chest, upper limbs, and shoulders.[14] These regions experience mechanical stress due to relatively higher levels of skin tension. Tsai et al explain that these areas incur excessive horizontal and vertical stretching during normal body movements. Repetitive stretching of

the skin counteracts the intrinsic action of myofibrils that facilitates wound closing during healing.[15] Consequently, excessive scarring, often in predictable patterns, is more likely to occur. Additionally, skin above the collarbones is generally exposed to more UV radiation, contributing to increased pathogenicity. Granted that these areas can often be challenging to cover, keloid location and visibility can significantly affect an individual's QoL.[8] Adolescents are among the most vulnerable to keloid formation, making the psychosocial impact of keloids particularly significant within this population.

PSYCHOSOCIAL BURDEN OF KELOIDS IN ADOLESCENCE

Understanding the impact of keloids on QoL is an essential component of providing patient-centered care, particularly for adolescents who are at higher risk of keloid formation and who often face difficulties with social activities and anxiety related to having keloids. Lu et al demonstrated that patients with visible keloid scars scored higher in interpersonal relationship sensitivity, depression, and anxiety on the Checklist-90 (SCL-90) compared to those with invisible scars and a control group. That stated, keloids negatively impact mental health outcomes regardless of visibility, with those affected showing elevated anxiety and depression scores.[16] In other words, all patients with keloids are at risk of developing psychiatric co-morbidities and therefore should be provided comprehensive care. Keloids frequently develop on the chest, face, and arms, resulting from skin trauma like acne and ear piercing.[17] These locations are commonly visible, creating the potential for social scrutiny. In diseases with higher visibility, such as acne, there can be an increase in stigmatization that can result in bullying, reduced self-worth, and reduced QoL.[18] Given the high prevalence of acne in adolescence, the additional burden that keloid patients face with visible scarring can exacerbate psychosocial challenges.

Although keloids ubiquitously lower QoL, female patients are particularly vulnerable to psychosocial burdens as a consequence of increased stigma and societal pressure. Female patients are at a higher risk of experiencing more severe mental health implications secondary to keloid formation.[16] Additionally, females face increased stigma, which puts them at greater risk for bullying, isolation, and reduced self-worth.[18] This heightened vulnerability is often exacerbated during adolescence. Low self-esteem and pressure to conform to societal beauty standards can create social anxiety. Adolescents with visible differences compared to their peers face higher rates of social isolation which is a risk factor for suicidal ideation.[19] For adolescent females, who are more likely to develop visible keloids due to ear piercings, understanding the greater mental health impact they face is crucial to effectively managing the psychosocial implications in this population.

While keloids can develop in anyone, they disproportionately affect melanated individuals, including African Americans, Latinos, and Asians.[20] Understanding how patients of color perceive their keloid scars is crucial for addressing their psychosocial challenges and improving their QoL through individualized care. Compared to white patients, African American patients report increased embarrassment and negative perceptions about scar appearance and related sequelae.[21] In other words, cultural perceptions of keloids can significantly influence how individuals react to the stigma associated with them. For example, in traditional practices, keloids are more accepted and, in some cases, intentionally created. Tribes in Nigeria participate in scarification for both therapeutic and identification rituals, while in Western countries, body branding has gained popularity.[20,22] Individuals within these cultural groups may be protected from stigmatization, empowering them to embrace their scars as part of their identity. Recognizing the differences in cultural expectations related to keloids is an important insight for physicians to consider when determining how to address psychological burdens.

The physical burden of keloids can further induce psychological distress, increasing levels of stress, anxiety, and depression. The primary physical impairments of keloids include pain, pruritus, and restricted mobility, which all contribute to lower levels of QoL.[23,24] Although medical interventions can alleviate these symptoms, the lengthy treatment process and high recurrence rate can discourage patients from completing their treatment plans. Additionally, these treatments carry side effects including telangiectasias and skin discoloration.[23] Surgery, for example, can lead to worsening keloid recurrence and often requires multimodal therapy post-operatively. The chronicity of their condition, coupled with the lack of efficacious options, can leave patients feeling hopeless.

CURRENT APPROACHES IN DERMATOLOGY FOR MANAGING KELOIDS

Current therapies for managing keloids include silicone gel sheets, intralesional injections, laser therapy, surgery, and monoclonal antibodies. Although these treatments effectively reduce keloid size and improve cosmetic appearance, they are ubiquitously limited by high recurrence rates. Silicone-based products, such as silicone gel and silicone gel sheeting, are commonly used as the first-line therapy for minor keloids and hypertrophic scars. These silicone products are available in several forms, including creams, sprays, and gel cushions. Although the exact mechanism is unclear, silicone enhances skin hydration and creates an occlusive environment that reduces collagen production and regulates fibroblast activity.[25] Silicone gel sheeting is known for its minimal side effects, including mild local irritation, and has been shown to reduce pain, tenderness, and itching while helping to flatten keloids. It is typically recommended to use silicone gel sheeting for 12–24 hours daily over 2–3 months to achieve optimal results.[26] Though effective, efficacy requires a high level of adherence to treatment which can pose a challenge for adolescents. Alternative

therapies, such as intralesional injections, may be favored for this population.

Intralesional corticosteroid injections, traditionally triamcinolone acetonide (TAC) monotherapy, are administered every 4-6 weeks due to their anti-inflammatory and antiproliferative effects. Darzi et al demonstrated that intralesional corticosteroid injections can significantly reduce keloid volume and associated symptoms, although the recurrence rate can be high without adjunct therapies. Other side effects may include skin atrophy, telangiectasias, and changes in pigmentation.[27] Recent literature suggests polytherapy to be more effective than monotherapy for intralesional treatment. Wu et al. described a combination of botulinum toxin A (BTA) and TCA as the most effective intralesional therapy for improving height and subjective appearance of pathological scars.[28] Despite their short-term effectiveness, all intralesional therapies share the risk of keloid reformation and, therefore, may require frequent administration. Multimodal therapies, including lasers, may be indicated for individuals whose keloids remain despite an aggressive approach with injections.

Lasers used in dermatological treatments can be categorized into ablative and non-ablative types. Ablative lasers, like the 2940 nm Er and the 10,600 nm CO_2 laser, work through absorption by water in the skin, causing localized tissue destruction and reduced lesion volume. Non-ablative lasers, such as the 585-59 nm PDL and 1064 nm Nd, target the microvasculature of scars, causing thermal injury that leads to collagen changes and scar remodeling. Laser treatments often require multiple sessions spaced 4-8 weeks apart and may cause side effects like itching, pigmentation changes, and blister formation. Both PDL and CO_2 laser therapies have shown effectiveness in treating keloids and hypertrophic scars.[29] Lasers may be an effective keloid treatment; however, they require multiple sessions, can be painful, and may have undesirable side effects.

Surgical excision is the definitive approach for removing keloids but often leads to high recurrence rates. Highly trained precision is required because the procedure creates a new wound that can develop into another keloid.[3] High recurrence rates underscore the challenge of managing keloids effectively with surgery alone. To improve outcomes, excision is usually combined with other treatments such as radiotherapy, corticosteroid injections, cryotherapy, and silicone gel sheeting.[30] Multimodal therapy can enhance the effectiveness of keloid management by concurrently addressing various aspects of wound healing and scar formation. Overall, successful outcomes depend on the surgeon's experience, method, and patient adherence to post-operative care.

Novel therapies are in development that treat keloids by targeting specific signaling factors involved in their pathogenesis. Monoclonal antibodies, which have been used successfully in other areas of medicine, can potentially interfere with key signaling pathways that drive keloid formation, such as those involving transforming growth factor-beta (TGF-β). By targeting molecules like TGF-β1 and TGF-β2, monoclonal antibodies may reduce the excessive collagen production and abnormal fibroblast activity characteristic of keloids.[31] This targeted approach could provide a more effective treatment option compared to conventional therapies, which often focus on symptom management rather than addressing root causes. Moreover, the application of monoclonal antibodies could pave the way for more personalized treatments based on the dysfunctional pathways specific to each individual's keloid pathogenesis. While this approach is still under investigation, it holds promise for improving outcomes in patients with this condition.

Choosing an appropriate therapy can be challenging but should align with patient goals. Adolescents may choose corticosteroid injections and silicone-based products over surgery or laser therapy for several reasons. These noninvasive treatments are generally less intimidating, involve fewer risks, and have shorter recovery times compared to surgical or laser procedures, which can be more invasive and painful. Adolescents may also prefer these options because they can be easily incorporated into daily routines, providing a more convenient and less disruptive approach to managing keloids. Providing comprehensive patient-centered care includes addressing both the physical and psychosocial sequelae associated with chronic skin conditions. The adequacy of psychosocial care provided by dermatologists is a subject of ongoing importance and discussion.

PSYCHOSOCIAL CARE MODELS

Integrating psychosocial care models into dermatology practice creates a patient-centered approach that recognizes the reciprocity between dermatologic conditions and psychiatric comorbidities. Routine psychosocial assessments offer an effective and convenient opportunity to screen patients for bio-psycho-social challenges related to their diagnosis. Rauch et al. reported that more than half of adolescent patients with positive psychosocial screenings have never had a psychological assessment. Not only does this emphasize the prevalence of unaddressed needs in this population but identifies a gap in their care. Given that positive psychosocial screenings occur at similar rates between both dermatology and primary care settings, implementing these evaluations into routine dermatologic practice can ensure that the holistic needs of adolescent patients are addressed.[32] Furthermore, referrals for positive screenings to psychiatric professionals should be conducted when care needs exceed the scope of a dermatologist, such as individuals requiring psychopathology diagnosis and intervention.[33] Consequently, patients receive multidisciplinary care that addresses prevalent issues that may have otherwise gone unnoticed. For adolescents with keloids, the chronic nature of their condition may warrant

earlier intervention to prevent the development of psychiatric comorbidities secondary to their condition.

Providing adolescents with age-appropriate education on keloid development may empower them to move beyond the stigma associated with their condition and achieve realistic treatment outcomes. Education is frequently cited as an essential intervention to reducing health-related stigma. This strategy proves effective at the interpersonal level—by helping individuals understand and manage their condition more confidently—and at the community level, where increased social awareness helps foster a more supportive environment.[34] As experts in their field, dermatologists serve as the collective authority responsible for educating adolescents and their caregivers about keloid formation, treatment options, and expected outcomes. Emphasizing the likelihood of recurrence is particularly important, given the high rates of keloid reformation after treatment. Furthermore, psychological stress has been linked to increased recurrence rates, making it essential for dermatologists to manage patient expectations.[35] By educating patients about the possibility of keloid recurrence and the impact of psychosocial health on this risk, dermatologists can better support their patients in achieving realistic outcomes.

In addition to education initiatives, stigmatization of visible skin diseases (VSDs) also impacts the type of social support interventions best suited for improving QoL. While both self-stigma and external stigma negatively influence the psychosocial well-being of individuals with chronic skin conditions, the literature suggests that these types of stigma require different management strategies. Germain et al advocate for individuals suffering from internalized stigma secondary to VSDs to be directed to online-based interventions.[36] Providing adolescents with reputable digital resources on their condition is a low-cost, age-appropriate intervention that dermatologists can incorporate into routine care plans. Furthermore, health professionals can use social media platforms to educate and dispel misinformation surrounding VSDs like keloids. This approach is two-fold; it targets self-stigma and enhances community awareness, which can reduce external stigma.[37] That stated, current literature reveals a lack of quality studies describing stigma reduction specific to adolescents with VSDs. Addressing this gap through further research is required to appropriately manage the psychosocial implications of keloids in adolescents using evidence-based care.

Adolescence presents a unique transition in life where responsibility for treatment decisions and adherence shifts from caregivers to the individuals themselves as their independence grows. However, this transition is complicated by a bidirectional relationship between psychological disorders and treatment adherence. Adolescents are vulnerable to mood fluctuations, which can negatively impact adherence to medical treatment.[38] As a result, worsening chronic conditions create more physical and psychological burdens. That stated, robust research indicates that individuals are more likely to comply with their treatment if it aligns with their goals.[39] This implies that involving individuals in their care and prioritizing their desires may improve treatment adherence and mitigate the psychosocial burden of their condition. That stated, no studies have investigated the efficacy of this intervention in adolescents with chronic skin conditions. Future research initiatives should explore how involving adolescents with keloids in their plan of care impacts their psychosocial sequelae.

BARRIERS AND CHALLENGES IN PROVIDING PSYCHOSOCIAL CARE

While treatment of cutaneous pathology is often the primary goal of many dermatologists, providing patient-centered care additionally requires addressing the psychosocial impacts of chronic skin conditions. This concern has evolved into a branch of dermatology deemed "psychocutaneous medicine," which explores the multidisciplinary interactions among dermatology, psychology, and psychiatry.[40] Psychocutaneous medicine, also known as psychodermatology, recognizes the potential for psychiatric comorbidities associated with chronic skin conditions; however, several factors limit its real-world clinical application. Physicians often find themselves struggling to meet patient demands because of time constraints during consultations. The increasing pressure placed on physicians to see more patients has resulted in a decrease in the quality of care they provide.[41] These time limitations may prevent physicians from providing comprehensive care instead focusing on treating only visible conditions.

Without adequate time to evaluate psychiatric comorbidities in patients presenting with dermatologic complaints, physicians often end up relying on their own heuristics to judge the psychosocial burden of a patient's condition. Patient perceptions of disease severity are an essential metric to consider when developing a plan of care.[42] Physician-reported accounts may overlook essential psychosocial considerations, such as self-esteem and body image, that contribute to an individual's internal suffering. Nagpal et al underscores the importance of relying on patient-reported experience by demonstrating a direct relationship between patient illness perception (IP) and QoL for common dermatologic conditions. Furthermore, nonwhite study participants reported lower levels of illness perception, reflecting negatively reflected in QoL measures.[43] Considering keloids disproportionately affect melanated individuals, dermatologists treating adolescent keloids should be mindful of how their patient population internalizes the stigma related to their diagnosis. Incorporating psychosocial screenings can provide an effective solution that values patient input without requiring a significant time investment. In doing so, physicians can more effectively address patient concerns.

Although psychodermatology advocates for a multidisciplinary approach to dermatologic conditions, systemic barriers exist that pose a challenge to accessing

mental health services. The underutilization of psychological screenings and varying socioeconomic status contribute to a critical gap in the continuity of holistic patient care. Tang et al found that over a quarter of individuals with skin conditions do not have their mental health needs adequately addressed.[44] This reflects a multilevel failure in identifying psychiatric comorbidities and directing individuals to appropriate care. Dermatologic providers can help bridge this gap by making referrals to mental health professionals. However, socioeconomic barriers may still impede access to necessary healthcare services. Insurance often fails to provide adequate coverage for dermatologic and psychological interventions alike.[45] Addressing these barriers requires systemic change, particularly for marginalized communities.

The stigma associated with chronic skin conditions creates a communication barrier between patients and their physicians, particularly among adolescents. This population may be reluctant to share information to protect themselves against feelings of embarrassment or shame, especially in situations involving bullying or teasing from peers.[46,47] As adolescents navigate their identity and strive for peer approval, creating a safe space for discussing both the cosmetic and emotional implications of keloids can foster healthy communication. In recognizing the negative impact of VSDs on self-image and self-esteem, healthcare professionals can restructure the vocabulary associated with cosmetic disorders by using terms such as "condition" rather than "disease" to deconstruct stigma and reinforce normalcy.[19] Acknowledging and addressing barriers to implementing psychosocial care models for adolescents with keloids can empower systemic change, enabling the integration of holistic, evidence-based care within dermatological practice.

FUTURE DIRECTIONS

Future research should prioritize evaluating the efficacy and practicality of integrating comprehensive psychosocial care for adolescents with keloids into dermatology practice. Although current literature underscores the importance of identifying psychiatric comorbidities associated with chronic skin conditions, standardized approaches remain lacking. Developing and implementing psychosocial assessments as early intervention tools is essential to improve patient outcomes. Current assessments of QoL and the psychosocial burden of keloids have primarily been studied in adult populations.[8,35,48] Given the high prevalence of keloid formation in adolescents and their social vulnerability, it is crucial to further investigate psychosocial assessments tailored to this population. Additionally, longitudinal studies are required to evaluate the practicality of applying these screenings in real-world clinical settings. If evidence-based models can be developed, dermatologists can rely on standardized algorithms for approaching adolescent keloid care that extends beyond the surface of their condition.

Another barrier to improving clinical outcomes for adolescents with keloids is distinguishing between the physical and psychological benefits of therapeutic modalities. Current treatments focus on eliminating the physical aspects of keloid scars, including visibility, pain, and pruritus. The psychosocial benefits secondary to physical improvement are debated in current literature. Kim et al demonstrate that clinical outcomes following keloid removal significantly improve pain and pruritus, but there is insufficient evidence supporting its efficacy on mental health.[48] Alternatively, Furtado et al. describe a positive correlation between psychological factors and physical appearance, particularly in individuals with visible keloids.[35] Future research should clarify the relationship between treatment and both physical and psychosocial clinical outcomes. Furthermore, longitudinal studies can investigate the psychosocial burden of keloid recurrence. Such research can better inform dermatologists to counsel patients regarding expected treatment outcomes.

Beyond integrating psychosocial assessments and improving clinical outcomes, systemic factors pose significant challenges. Access to mental health providers varies depending on socioeconomic status, insurance coverage, geographic location, and healthcare infrastructure.[49] Even with established referral systems, adolescents may still struggle to receive adequate psychological care. Future research is needed to explore the impact that healthcare access has on dermatologic referrals for mental health services. Additionally, cultural stigmas surrounding mental health issues can discourage individuals from disclosing psychological distress.[50] There is a lack of research characterizing the relationship between cultural stigma and the assessment of psychiatric comorbidities in dermatology. Consequently, future research should understand how cultural attitudes and resource availability influence the psychosocial care dermatologists can provide.

To address the issue of discontinuity of care, integrated care models are being successfully implemented across various fields of medicine. The psychodermatology model, for example, incorporates cognitive behavioral therapy, stress management, and mindfulness into dermatology practice. While this approach has shown promising clinical outcomes, more research is needed to appreciate its effectiveness in adolescents with keloids. Additionally, advanced statistical models are necessary to conduct a thorough cost-benefit analysis of these care models. Although previous studies suggest that psychodermatology can significantly reduce overall healthcare costs by concurrently addressing the physical and psychosocial aspects of skin conditions, the practicality of widespread implementation requires further investigation.[52] Moreover, assessing patient-reported outcomes may provide evidence of its clinical effectiveness.

Evaluating the psychosocial burden of dermatologic conditions requires a detailed patient interview. However, time constraints and productivity pressure can negatively impact physician-patient interactions. Consequently, physicians may develop care plans based primarily on the physical appearance of keloids on the exam.[35] In other words, physicians may only initiate conversations about psychosocial burden if they subjectively perceive the keloid severity to warrant such discussions. Future research should thoroughly investigate the barriers limiting a more comprehensive approach to providing psychosocial care within dermatology practice. Overcoming these obstacles is an essential first step to improving the clinical outcomes of adolescents with keloids.

CONCLUSION

Keloids disproportionately affect adolescents, imposing a significant psychosocial burden on an already vulnerable population. The chronicity of keloids, coupled with high recurrence rates despite multimodal therapeutic approaches, emphasizes the need for patient-centered dermatological care that extends beyond treating outward pathology. Addressing the psychological needs of these patients is crucial to preventing the development of psychiatric comorbidities secondary to their dermatologic condition. Dermatologists can incorporate psychological screenings and educational initiatives into daily practice to help reduce health-related stigma. Despite robust literature indicating a link between chronic skin conditions and psychological burden in adolescents, further research is required to evaluate the real-world effectiveness and feasibility of implementing psychosocial care models in the treatment of adolescent keloids. By integrating evidence-based strategies and advancing research on psychosocial support, dermatologists can provide holistic care that targets improving the QoL for adolescents living with keloids.

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