

ACNE VULGARIS:

The Psychosocial And Psychological Burden Of Illness

Acne can affect any age group, and those with post-adolescent acne are increasingly being referred for dermatological care.

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Acne vulgaris is a ubiquitous disease, and its potential to cause significant psychological repercussions was first described over 55 years ago.¹

“There is no single disease which causes more psychic trauma, more maladjustment between parents and children, more general insecurity and feelings of inferiority and greater sums of psychic suffering than does acne vulgaris.”¹

Acne is the leading cause for visits to a dermatologist.² Although most cases develop in adolescence, with a 70%-87% prevalence, it can frequently continue into adulthood.^{3,4} Acne can affect any age group, and those with post-adolescent acne are increasingly being referred for dermatological care. In one study almost 18% of women were found to have true late-onset disease, with an onset after the age of 25 years.⁵ The number of adults with acne appears to be increasing, although the reasons are unclear.⁶ Despite its apparent cosmetic nature, the effects of acne can go far deeper than the surface of the skin, and place a heavy emotional and psychological burden on patients that may be far worse than its physical impact.

ADOLESCENT ACNE

Adolescents are psychologically vulnerable. They are sensitive to modifications in their bodies and appearance. Acne commonly affects young people at a time when they are un-

dergoing maximum psychological, social and physical change. Studies have revealed the burden of acne to diminish adolescents' quality of life (QoL) and to impact their global self-esteem.^{7,8} Between 30%–50% of adolescents experience psychological difficulties associated with their acne,⁸ and although the interaction is complex it can be associated with developmental issues of body image, socialization and sexuality. Some patients are severely affected and require more than acne therapy alone.⁹

Acne is the most frequent visible skin disease in adolescents. Unlike most other dermatologic diseases that may be limited to areas covered by clothing, acne is often visible on the face heightening issues of body image and socialization. Therefore, it is not surprising that a susceptible individual with facial acne may develop significant psychosocial disability. Many acne patients have problems with self-image and interpersonal relationships. Effects are aggravated by teasing or taunting, other's scrutiny and the feeling of being on display.¹⁰ Often, embarrassment is a prominent response in acne patients, as it is easier for them to articulate than dysphoria, depression and anxiety. They usually experience social anxiety and general avoidance of activities that bring attention to their condition.¹¹ These feelings often relate to fear of having their faces scrutinized by others and the societal ideal of perfect skin makes appearance the most important factor.¹⁰ Adolescents with acne feel uncomfortable and avoid eye contact, grow their hair long to cover the face and girls often use makeup to minimize the appearance of acne lesions.¹² Studies have shown that acne can significantly impact dress choice in adolescents with acne.^{13,14}

IMPACT OF ACNE AND SEVERITY

The relationship between the severity of acne and emotional distress is poorly understood.¹⁵ A study of university students showed that patients with acne experienced a worsening of their disease during examinations. Increased acne severity was significantly associated with increased stress levels ($P < 0.01$).¹⁶ A recent questionnaire-based survey among 1,560 adolescents in Greece found a



positive correlation between acne and self-reported stress ($P < 0.0001$).¹³

There is generally considered to be a linear relationship between the clinical severity of acne and impairment of QoL. However, impairment is also dependent upon a person's coping ability and some individuals with little objective evidence of acne may endure severe subjective impairment, greatly affecting their QoL.¹⁷ So acne can have a great impact on patient's lives, often independent of severity.¹⁸

sociated with an increasing frequency of psychiatric symptoms, and more likely to be reported in the later stages of puberty. However, population-based studies comparing the frequency of suicide and suicidal ideation in teenagers with and without acne are scarce. A cross-sectional study of 9,567 secondary school students in New Zealand found that 14.1% of students reported "problem acne," which was associated with an increased risk of depressive symptoms (odds ratio [OR], 2.04) and anxiety (OR, 2.3). Symptoms

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Severe acne is associated with increased depression, anxiety, poor self-image and poor self-esteem.^{19,20} Psychiatric symptoms are more common in more severe acne and in the later stages of puberty.²¹

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A few large studies have shown frequent depressive symptoms in adolescents with acne.^{21–23} Kilkenny et al²¹ conducted a computerized questionnaire survey of 2,491 Australian high school students and found self-rated moderate acne to be as-

of clinically relevant depression and anxiety were reported by 14.1% and 4.8% of students, respectively.²² Problem acne was associated with an increase in frequency of suicidal thoughts and suicide attempts. The association of problem acne with suicide attempts remained after controlling for depressive symptoms and anxiety (OR, 1.5).²² One study has estimated the prevalence of suicidal ideation in patients with acne as 7.1%.²⁴ However, psychiatric comorbidity may even occur with milder acne. A Turkish study found that patients with acne were at increased risk for anxiety and depression compared to the normal population, irrespective of the degree

of severity or gender.²⁵ Risk of anxiety and depression were 26.2% and 29.5%, respectively compared to only 0% and 7.9% in the control group.²⁵ A Serbian study in over 350 schoolchildren with acne reported 15% of pupils felt very depressed and miserable because of their acne.²⁶

It has been suggested that patients with moderate-to-severe acne suffer from poor body image, low self-esteem

suicide attempts related to the negative psychosocial impacts of acne have also been documented.^{28,29} A study involving 480 patients with various dermatoses found the highest incidence of depression and suicidal ideas in patients with severe forms of acne and severe psoriasis, while patients with mild and moderate forms of acne had the same level of depression and suicidal ideas as

acne (adjusted OR, 1.80). The differences were greater in boys than in girls. Those with substantial acne were significantly more likely to report mental health problems measured than those with less acne (adjusted OR, 2.25). Social impairment was more common with increasing acne ($P < 0.01$).³¹ Adolescents with substantial acne reported lower attachment to family and friends (mainly boys), not thriving at school (mainly girls) and less experience with romantic relationships and sexual intercourse (mainly boys).³¹ Because these relationships are important for many adolescents, the findings further strengthen the view that acne is an independent risk factor for suicidal ideation.

Acne can result in impairment of QoL and can negatively impact school life, social skills and ability to gain employment. Acne can substantially interfere with social and occupational functioning and result in impairment in QoL. There are numerous available rating scales for quantifying QoL in patients with acne.⁷ Acne negatively affects QoL, and there is not always a correlation between the severity of acne and its impact on QoL. The magnitude of anxiety and depression is proportional to degree of impairment of QoL due to acne.²⁵ Acne patients with greater social sensitivity experience poorer QoL compared to other patients with the same severity of acne.³² Anger, similarly, is associated with poorer QoL and less satisfaction with treatment, independent of other variables.³³

Studies^{25,27,34-38} have characterized the relationship between acne and outcomes such as anxiety, depression, embarrassment, lack of self-confidence, social dysfunction and unemployment. Reducing the psychosocial impact of acne is considered one of the guiding principles for its clinical management,^{37,38} and it is important to measure and evaluate this impact.

Studies on the psychosocial impact of acne have documented dissatisfaction with appearance, embarrassment, self-consciousness and lack of self-confidence in acne patients. Social dysfunction has also been observed, including concerns about social interactions with the opposite gender, appearances in public, interaction with strangers and reduced employment opportunities.^{21,35,39} Furthermore, acne is associated with anxiety, depression,⁴⁰ feelings of anger³³

Acne is associated with increased risk of depression, anxiety and suicidal tendencies and there are some interesting gender differences.

and experience social isolation and constriction of activities. As part of the emotional impact, increased levels of anxiety, anger, depression and frustration are also observed in patients with acne.²⁷ In this study of 615 school children with acne, adolescent girls were found to be more vulnerable than boys to the negative psychological effects of acne, and anxiety levels were higher.²⁷ Given the fact that acne causes psychological suffering, acne can affect social, vocational and academic performance of teenagers.

Additionally, suicidal ideation (found to be about 6%-7% in acne patients) and

those suffering from atopic dermatitis, moderately severe forms of psoriasis and alopecia areata.³⁰

Halvorsen et al³¹ surveyed 3,755 adolescents (aged 18-19 years). Overall, 13.5% reported having substantial acne (a lot or very much), with a slightly higher prevalence in boys. Among respondents, 493 suffered from self-declared substantial acne. Suicidal ideation was reported by 10.9% of all interviewed teenagers and was greater with increasingly severe acne ($P < 0.01$); only 9.5% of those with no or little acne, 18.6% of those with moderate acne and 24.1% of those with substantial



and lower body satisfaction (boys showing lower self-attitude; and girls lower self-worth, independent of weight problems or depressive symptoms).⁴¹ It has been shown to be negatively associated with intention to participate in sports and exercise, perhaps as a result of how acne patients perceive their skin to be evaluated by others.¹³ In a study among Scottish schoolchildren, 10% avoided swimming and other sports because of embarrassment with their acne.¹⁷ Acne has also been shown to negatively affect schoolwork and activities while on holiday.^{13,17} Self-esteem issues are also likely to be the driving force behind higher rates of unemployment in acne, however; there is also an existing bias whereby patients with acne are more likely to be passed over by prospective employers.⁴²

In addition, severe acne had one of the strongest impacts on a person's ability to find a partner, according to dating agents' opinions.⁴³ Other studies have reported up to 20% of adolescents with acne had problems in relationship building due to their acne,¹² or expressed concern about socializing, going out in public or interacting with the opposite sex.⁴⁴ The depression, social withdrawal and anger often seen in patients with acne are hypothesized to be related to the damaging effects of facial appearance on self-concept.^{38,45}

It can create a vicious cycle: not only does acne result in emotional distress, the anxiety evoked by having acne can aggravate the skin condition itself at a time when patients are least capable of coping with additional stress.^{42,46} The psychological affect of acne on patients can be considerable. It can have profound psychosocial consequences, and the severity of disease determines the extent of embarrassment and lack of enjoyment and participation in social activities and can leave permanent scarring,^{47,48} with life-long consequences.⁴⁹

GENDER CONSIDERATIONS

Girls and boys with acne have lower self-attitude, more feelings of uselessness, fewer feelings of pride, lower self-worth and lower body satisfaction than those without acne. In a regression model for body mass index and depressive symptoms, acne explains significantly lower self-attitude (for



boys) and poor self-worth (for girls).⁴¹ Adolescent girls may be more vulnerable than boys to the negative psychological effects of acne.^{40,50}

During adolescence, the frequency of acne increases with age and pubertal development. In girls, the commencement of menstruation is associated with increased frequency of acne.²⁶ The only correlation between sex and acne that appears supported in the literature is that of a decreased QoL and sexual satisfaction among women who suffer from polycystic ovary syndrome and acne.⁵⁰

The impact of acne on a particular patient is not always easy to judge clinically. It has been reported that both women and men find the effects of acne on appearance to be the most bothersome aspect of their disease and the negative effects of acne occur in both older and younger patients.⁵¹ Even mild acne can pose a significant problem for some patients, diminishing their QoL and in some cases their social functioning.^{44,52}

REDUCING ACNE'S PSYCHOSOCIAL IMPACT IS CRITICAL

Acne is not a trivial disease in comparison with other chronic conditions.⁵³ Even if acne is not associated with severe morbidity, mortality or physical disability, it can nevertheless have considerable psychological and social consequences.⁵⁴ Reducing the psychosocial impact of acne is considered one of the guiding principles for its clinical management,^{37,38} and it is important to measure and evalu-

ate this impact. Nowadays effective and safe treatments for acne are available, yet many do not consider it a problem worth treating.⁵⁵ The severe burden of acne is strong justification for effective acne treatment and psychiatric screening for patients with the condition. Most important, improvements in acne after appropriate treatment have been shown to result in enhanced self-esteem, body image and social functioning.

The social, psychological and emotional impairment that can result from acne, especially in its more severe clinical forms has been reported to be similar to that associated with epilepsy, asthma, diabetes, back pain or arthritis.^{41,47,53,56-58} Patients could be more prone to depression, anxiety, social withdrawal and anger, without considering that scarring can lead to lifelong problems with self-esteem.⁴⁴ A study of 111 acne patients aged 16 years and older attending a United Kingdom dermatology outpatient clinic found levels of social and emotional problems are comparable with those in people with severe chronic disabling disease, such as arthritis and epilepsy; 41% had a positive screen for a potential psychiatric disorder.¹⁴ ■

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