

# Acne and acne scarring

## The case for active and early intervention

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Acne as a disease is so common as to be considered a normal rite of passage, and costs the community a substantial amount in resources. Yet acne is a devastating disease striking most adolescents at their most vulnerable time when their life long self esteem and sense of identity is being developed. This article reviews the importance of acne to the individual and attempts to make the case for early and aggressive treatment.

**Acne by any definition is part of normal human experience. In the United States it is estimated to affect 45 million people, with a lifetime prevalence of 85%.<sup>1</sup> Consumers spend \$US100 million per year in over-the-counter remedies. Together with the loss of productivity and unemployment, the direct cost of acne in the USA has been estimated to exceed \$US1 billion per year.<sup>1</sup> No similar figures are available for Australia, but the situation would be expected to be similar pro rata for the population. Extrapolating from these figures, acne may be costing \$AUS100 million per year to the community.**

### The case against treatment

Acne, in some form or other, happens to virtually everyone, is inconsequential in many, and is so common that we must question whether it is a disease worthy of treatment or a normal occurrence that should be ignored. It is very expensive to treat such a high proportion of the population for a largely self limiting problem. Long term antibiotics, hormonal therapies, isotretinoin, multiple topical prescriptive products, and over-the-counter preparations come at a huge cost to the community.

The direct cost of medical services by general practitioners and dermatologists needs to be justified in economic and medical terms. We should also consider the development of community antibiotic resistance,<sup>2</sup> and the long term and widespread use of often suboptimal doses of antibacterial agents in acne therapy do not help this. Recently there has been a significant debate about the safety of isotretinoin in acne treatment because of its twin problems of teratogenicity<sup>3</sup> and induction of depressive disease.<sup>4</sup> There is no doubt about the teratogenic ability of this medication and it requires a high degree of vigilance in the female childbearing age group.<sup>5</sup> The depressive aspects are less clear cut but are a major source of patient concern. On analysis of the available evidence, isotretinoin

does not appear to add to the depression of the acne patient,<sup>6</sup> although the available studies are still limited and there is significant literature warning of idiosyncratic cases of depression with this agent.<sup>7-9</sup> General practitioners may find themselves in the middle of this debate trying to allay their patients' anxieties and doubts.

### The case for treatment

Acne is an aesthetically unpleasant and embarrassing condition. Severe cystic acne causes pain, recurrent bleeding and purulent discharge. Before isotretinoin became widely available patients would occasionally become severely toxic, required hospitalisation and were extremely difficult to treat. Patients with severe forms of acne, notably conglobate acne, may rarely go on to develop secondary systemic amyloidosis,<sup>10</sup> renal failure,<sup>11</sup> arthritis and rheumatoid conditions.<sup>12,13</sup> Acne has also caused severe cutaneous complications including: pyoderma gangrenosum<sup>14</sup> – a mutilating facial disease requiring extensive reconstructive surgery,<sup>15</sup> squamous cell carcinoma,<sup>16</sup> and death from metastases of this cancer.<sup>17</sup>

However, it is the psychosocial distress that acne produces that makes such a powerful argument for its timely and adequate treatment. Acne is predominantly a disease of adolescence, a time of changing body image and sense of self; when there is a relative inability to psychologically deal with the unsightliness and self esteem problems of active acne.<sup>18</sup> Affected adolescents report more social isolation and self consciousness than their unaffected peers<sup>19</sup> and experience more dissatisfaction with their facial appearance, embarrassment and social inhibition with feelings of unhappiness and anxiety.<sup>20</sup> Forty-two percent of patients in one study classed the impact of acne on their self image to be moderate to severe.<sup>21</sup> Employment prospects are affected<sup>22</sup> and interpersonal difficulties are more common than in those without acne.<sup>23,24</sup> The incidence of body

dysmorphic disorder is higher in acne patients than in the general population with this affliction being present in 8.8% of 159 patients.<sup>25</sup>

Quality of life questionnaires clearly demonstrate that acne vulgaris significantly affects patients' quality of life, but there is variable correlation with severity.<sup>26,27</sup> However, generally the more severe the acne the more embarrassment is felt. For adults, quality of life was adversely affected by their acne, regardless of severity.<sup>28</sup> Adolescent patients are typically more vulnerable to the development of depressive disease than other age groups.<sup>29</sup> The cosmetic impact of even relatively mild to moderate acne can be a significant emotional burden for the patient and may act as a precipitating factor for depressive illness.<sup>29</sup> Suicidal ideation was also assessed in different dermatological disease states and revealed 5.6% of acne patients entertained acute suicidal thoughts.<sup>30</sup> Suicide does occur in dermatological patients as it does in all medical subgroups but acne figures prominently with seven 'successful' suicides occurring in acne patients from a total of 16 reported in one case series.<sup>31</sup>

The development of postacne scarring is particularly devastating and often represents the failure of adequate and timely medical therapy.

Current treatments for acne are very effective. It has been suggested that isotretinoin reduces anxiety and depression in cystic acne patients after its successful implementation<sup>32</sup> and gives durable results in 85% of patients after one course of treatment.<sup>33</sup> Hormonal treatments in the form of anti-androgens such as cyproterone acetate and spironolactone,<sup>34</sup> topical preparations such as adapalene,<sup>35</sup> azelaic acid,<sup>36</sup> topical antibiotics,<sup>37</sup> retinoic acid,<sup>38</sup> and light and laser treatments<sup>39</sup> may help to replace or augment long term antibiotic therapy ensuring a sufficient armamentarium to decrease the incidence of postacne scarring.

Unfortunately scarring may affect up to 95% of patients and is maximally related to severity and duration of acne before adequate therapy is instituted.<sup>40</sup> Most scarring in acne is atrophic rather than hypertrophic in type with destruction and dissolution of supporting tissues. Early and effective treatment of acne is the most appropriate way to prevent scarring

and to minimise the psychological effects of acne and its resultant scarring.

## Conclusion

Despite the relatively high cost that a community must bear when it takes on the challenge of treating a common disease such as acne, the adverse social, psychological and physical effects justifies active, early and aggressive treatment.

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