Acne vulgaris in Malta
A dermatologist's perspective

Lawrence Scerri
Dermatologist

INTRODUCTION

Acne vulgaris is an inflammatory disease of the pilosebaceous units characterized by oily skin, and the formation of comedones, papulo-pustules, and less frequently nodulo-cystic lesions. Permanent scarring which may have profound negative psychosocial effects in the short and long term is a real risk[1]. Varying degrees of acne affects at least 85% of 16 year old boys and girls, with a tendency towards natural resolution by the age of 25[2]. Acne may less commonly affect older age groups, particularly in females. Exacerbating factors include psychological stress, pre-menstrual state, and oily applications including cosmetics. The alleged role of diet constitutes a common misconception among acne sufferers[1]. An extensive array of topical and oral medications are nowadays available for effectively treating acne of any severity[3]. Treatment needs to be tailored according to the type and severity of the acne, and must be administered with the least possible delay if scarring is to be minimized or prevented. Other than the mild forms of acne which may respond to over the counter (OTC) applications, acne treatment falls squarely within the competence of the prescribing physician. Health education can go a long way towards helping the public to better understand this common affliction, and to provide general guidance that will in turn aid to keep acne related morbidity to the lowest acceptable levels.

SURVEY

Objectives and methods

A dermatologist-based questionnaire survey was carried out by the author, with a view to evaluating various aspects of the problem of acne vulgaris in Malta. The questionnaire was designed to elicit the following information:

- sources of patient referral to the dermatologist (author)
- acne care prior to referral
- acne medication received by patients prior to referral
- incidence of 'spot picking'
- patient knowledge of perceived acne-exacerbating factors and natural history of acne
- correlation of acne severity with the degree of embarrassment it produces
- acne severity and degree of scarring according to gender
- correlation between acne medication received in the 6 months prior to referral and acne severity
- correlation between oral acne medication received more than 6 months before referral and the extent of acne scarring

RESULTS

Demographic data

One hundred consecutive patients with acne, newly referred to the dermatologist (author), were recruited in the survey. Recruitment took place in the year 1999, both from the public hospital dermatology department (14 patients), as well as from private practice (86 patients). The sources of private referral were: 66 self-referred; 14 referred by family doctor; 4 referred by pharmacist; 2 referred by beauty therapist/hairdresser. Gender distribution was equal with 50 male and 50 female patients. The age distribution was: 31 patients below the age of 16 years; 63 patients aged 16 to 25 years; 6 patients over 25 years old.

Acne duration, previous acne care, and patients' perceptions

The duration of acne at the time of referral was: less than 3 years in 47 patients; 3 to 6 years in 40 patients; over 6 years in 13 patients. Inquiry on previous care for acne revealed the following pattern: 62 patients made use of OTC applications; 46 patients attended a beauty therapist (58% of females, 34% of males); 36 patients had been to a dermatologist; 27 patients had seen a family doctor; 5 patients received no previous care.

The medical acne treatment received in the 6 months prior to referral was as follows: topical medications (antibiotic, benzoyl peroxide and/or retinoid) in 43 patients; oral antibiotic in 22 patients; oral hormonal therapy (oral contraceptive pill combined with cyproterone) in 2 patients; none in 51 patients. Worth noting is the fact that one male patient who had severe acne with scarring, was on an anabolic steroid prescribed in connection with an infertility problem. The intake of oral acne medication before the 6 months prior to referral consisted of: antibiotic in 22 patients; hormonal therapy in 6 patients; none in 77 patients. In addition, none of the patients had received oral isotretinoin prior to referral.

Inquiry about the harmful habit of 'spot picking' produced an affirmative reply in 71 patients. An assessment of the degree of embarrassment experienced as a result of acne was performed by means of a linear visual analogue scale, the score ranging from 1 to 10 (mild embarrassment : score 1-3, moderate embarrassment: score 4-7, severe embarrassment: score 8-10). Mild embarrassment was recorded in 12 patients, moderate embarrassment in 36 patients, and severe embarrassment in 52 patients. The patients' replies to perceived acne-exacerbating factors are summarized in **table 1**. Moreover, **table 2** summarizes the patients' responses to questions relating to infectivity, natural disease duration, the risk of scarring, and the influence of timely treatment on the incidence and degree of eventual scarring.

Table 1. Response to questions on possible acne-exacerbating factors (Right answers are denoted as bold underlined figures)

	Yes	No	DK
Chocolate (n=100)	56%	**28%**	16%
Fried food (n=100)	68%	**23%**	9%
Foundation (n=37)	**73%**	19%	8%
Hair gel (n=70)	**60%**	29%	11%

Table 2. Response to questions on nature and complications of acne (Right answers are denoted as bold underlined figures)

	Yes	No	DK
Acne is contagious	14%	**78%**	8%
Acne lasts several years	**93%**	7%	0%
Acne can cause scarring	**97%**	3%	0%
Early treatment minimizes scarring	**93%**	1%	6%

Acne clinical characteristics and correlations

In 76 patients, acne affected only the face, whereas the face and trunk were both affected in 24 patients. The predominant morphology of the acne lesions was as follows: mixed (comedones and papulo-pustules) in 49 patients; papulopustular in 32 patients; nodulocystic in 14 patients; comedonal in 5 patients. The clinical severity of the acne was considered to be mild to moderate in 44 patients, and moderate to severe in 56 patients. Acne scarring was absent in 59 patients, whereas 34 patients had mild to moderate scarring, and 7 patients demonstrated moderate to severe scarring.

Table 3. Association between clinical severity of acne and related embarassment

Acne severity	Mild embarrassment	Moderate embarrassment	Severe embarrassment
Mild to moderate (n=44)	16%	39%	45%
Moderate to severe (n=56)	9%	34%	57%

Table 4. Acne scarring according to gender

Degree of scarring	Male (n=50)	Female (n=50)
None	58%	60%
Mild to moderate	28%	40%
Moderate to severe	14%	0%

Moderate to severe embarrassment was commonly experienced in connection with all levels of acne, being somewhat more pronounced in the more severe acne cases as outlined in **table 3**. Acne severity was found to be slightly greater in males, with 60% of males compared to 52% of females having moderate to severe acne. The degree rather than the incidence of acne scarring was also found to be greater in males as may be seen in **table 4**. Moreover, the incidence and degree of scarring was observed to be directly proportional to the duration of acne as per **table 5**.

It was more likely for patients with more severe acne to have received medical acne treatment in the 6 months prior to referral as shown in **table 6**. Finally, **table 7** demonstrates that a substantial proportion of patients with established acne scarring had not received oral acne medication before the 6 months prior to referral.

Table 5. Degree of scarring according to duration of acne

Acne duration	No scarring	Mild to moderate scarring	Moderate to severe scarring
< 3 years (n=47)	70%	23%	7%
3-6 years (n=40)	57%	38%	5%
> 6 years (n=13)	23%	61%	16%

Table 6. Medical acne treatment received in the 6 months prior to referral to dermatologist according to clinical acne severity

Acne severity	Topical agents	Oral antibiotic	Hormonal therapy	None
Mild to moderate (n=44)	39%	14%	2%	57%
Moderate to severe (n=56)	46%	29%	2%	46%

Table 7. Degree of scarring according to oral acne therapy received more than 6 months before referral to dermatologist

Degree of scarring	Antibiotic	Hormonal	Isotretinoin	None
Mild to moderate (n=34)	29%	9%	0%	68%
Moderate to severe (n=7)	29%	14%	0%	57%

Discussion

To the author's knowledge there exists no recent published data regarding the problem of acne in Malta. The pilot survey being reported, despite not permitting statistical analysis, reveals important trends that are worth documenting, and some of which warrant further investigation and intervention.

The fact that 86 out of 100 consecutive patients with acne recruited in the survey, opted for private rather than national health service (NHS) specialist care, lends itself to various interpretations. The waiting time for routine referrals to be seen in the NHS dermatology department is currently 3 to 4 weeks, which is not unreasonable by today's standards, and considering that acne is not an acute condition. Possible reasons for acne patients predominantly resorting to private specialist care include an even faster access to a specialist with the added option of self-referral, the private health care setting often being perceived as more patient friendly, and reluctance to taking a morning off from work or school to attend an NHS morning specialist clinic when a specialist may be seen in the evening albeit having to pay a fee (bigger incentive for private medical insurance holders).

As much as 77% of private acne patients were self-referred, in contrast to only 16% being referred by a family doctor. Moreover, only 27% of all the patients, private and public, admitted to having received acne treatment from a family doctor in the past. Given that a family doctor is expected to be competent in treating patients with mild to moderately severe acne, which constitute 44% of the survey's sample, the above figures therefore imply a lower than expected contribution by family doctors towards overall acne care. This may be due to endemic cultural trends, as well as to the anomalous local primary health care set up whereby the family doctor does not, by right, play a central role in the management of the patient's overall health.

As much as 62% of the patients admitted to making use of readily available OTC acne products in the past. In second place came beauty therapists to whom 46% of the patients, around two thirds of females and one third of males, had resorted at some stage during their acne problem. Beauty therapy practice today, incorporates a bewildering range of skin care techniques and applications that are acceptable and appealing to the public at large, and indeed does occupy a prominent position in today's cosmetic culture. However limits of practice should be clearly defined, adhered to, and enforced. The management of inflammatory skin conditions including inflammatory acne falls outside the field of competence of the beauty therapist. It is therefore in the interest of the patient, that appropriate regulatory restrictions to this effect are incorporated in the Health Care Professions Act which is currently being re-drafted.

Acne sufferers constitute a very vulnerable and exploitable patient sub-group, and hence need proper guidance. They should be protected from being lured into non-validated, non-medical practices that only serve to delay the institution of effective medical therapy. In the case of moderate to severe acne, lost time translates into avoidable permanent scarring. In the author's opinion, the Maltese Department of Public Health is becoming increasingly efficient in curbing misleading health-related advertising in the media. This department ensures that the contents of proposed health-related adverts in the media are routinely scrutinized and censored by medical experts in the respective field before approval is granted.

The mistaken notion that diet plays an important part in the causation of acne is still very much prevalent amongst the public at large. In fact, only 28% and 23% of acne patients rightly believed that chocolate and fried food respectively do not influence the course of acne. Another commonly quoted acne-related dietary misconception concerns the ingestion of dairy products. The level of awareness of the comedogenic, and hence acne-exacerbating potential, of oily cosmetics such as foundation and hair gels was encouragingly high at 73% and 60% respectively. Moreover, the vast majority of patients knew that acne is not contagious and that its course spans over several years. Virtually all the patients knew that acne can cause scarring and that early effective treatment minimizes or prevents scarring.

Notwithstanding this knowledge, 41% of the patients had varying degrees of visible scarring. This rate of scarring is worrying when one compares it to the substantially lower rate of scarring in the UK which is seen in around 17% of cases of acne[1]. The local high rate of acne scarring is probably largely due to the late institution of effective medical treatment in patients with moderate to severe acne. Another likely contributing factor is 'spot picking' which is unfortunately a common habit among patients. Along the same lines and being just as damaging is the lancing and squeezing of acne lesions, which is allegedly practiced by a number of beauty therapists locally. One may argue that this being a dermatologist-based survey gives rise to skewed data which would hence explain the higher rate of acne scarring, since patients with more severe acne are more likely to visit a dermatologist. However this is not the case since as many as 44% of the patients coming to the dermatologist according to this survey suffered from mild to moderate acne.

Another interesting statistic that emerged from this survey is that males had more severe acne and acne scarring than females. However, the world literature on acne does not imply that the severity of acne and related scarring is generally influenced by gender. It is therefore probable that additional female patients with more severe acne and associated scarring do exist locally but were not captured by this survey, possibly because these are seeking alternative, non-medical therapies. One may also speculate that local female acne sufferers may be generally less aware of the benefits of medical treatment compared to their male counterparts.

Scarring is likely to complicate moderate to severe forms of inflammatory acne, and normally takes at least 6 months to develop. Patients with such acne severity require oral therapy in addition to topical agents in order to achieve clinical control. In this survey, 66% of the patients with visible scarring had never received oral treatment going back to more than 6 months before referral. It is therefore likely that undertreatment as well a delayed treatment are responsible for the high local incidence of acne scarring. This survey confirmed that the incidence of scarring increases with increasing duration of acne. Moderate to severe inflammatory acne is usually effectively controlled by courses of oral antibiotics and hormonal therapy, but the recurrence rate is high and repeated courses are required. Given that therapy with oral isotretinoin is associated with a very high cure rate without the need for repeat courses (with very rare exceptions) one should consider this treatment option more often[4]. The long term savings in financial and 'scarring' terms certainly outweigh the apparent short term high cost of the drug[5]. It is noteworthy that none of the patients entered in the survey had previously received oral isotretinoin.

Conclusions

- The negative psychosocial impact of acne at all levels of the disease should never be underestimated.
- There is evidence to suggest that acne in Malta is undertreated, and this is reflected in the high incidence of associated scarring.
- Public education campaigns may help convey the important message that acne is a skin disease which responds to medical treatment, the timing of which is crucial in minimizing consequent scarring. Health education should also aid to dispel popular misconceptions related to acne.
- Family doctors should be given the opportunity to update their knowledge of acne management, as well as to become more involved in the management of at least the milder forms of acne.
- The limits of practice of beauty therapists should be clearly defined, and there should be appropriate legislation to ensure proper regulation of such practice. In particular, it should be clearly laid down that the management of inflammatory skin conditions including inflammatory acne is solely the responsibility of a medical practitioner.

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