Quiz feedback: How to treat acne

In BPJ 20 (April 2009) we published an article on the treatment of acne. GPs were invited to complete a quiz on this topic and the responses were discussed with our GP panel. **Dr Amanda Oakley**, Specialist Dermatologist and Clinical Associate Professor, Tristram Clinic, Hamilton, provided expert commentary on several key issues that were highlighted.

A full version of the quiz feedback can be found online at **www.bpac.org.nz** (search by Publication/CME quiz feedbacks)

The psychological impact of acne

People are affected psychologically to varying degrees by their acne – some have severe acne and seem not to be bothered by it at all and do not even raise it as a concern (especially young males) and some have only a few lesions on their face but are significantly depressed and anxious because of this.

Should doctors be actively asking patients if they want to treat their acne?

Regardless of the number or severity of lesions, acne that causes significant psychological distress is classified as "severe acne".

It is always useful to ask how much the acne is bothering the patient, to determine its perceived severity and the likely adherence to potentially tedious and long term treatment regimens. Patients are usually relieved to be asked how the acne affects them and will readily admit to low self-esteem. Questions may reveal significant embarrassment, withdrawal from social encounters, family friction and clinical depression.

The Cardiff Acne Disability Index (CADI) is a five item questionnaire aimed at adolescents and young adults.[1] It is simple to use, however results do not always correlate with clinical acne severity.

Question 1 asks whether acne has induced negative feelings such as aggression, frustration or anger.

Question 2 asks whether the acne has interfered with social encounters.

Question 3 asks whether the acne has prevented swimming. This question might be altered to include other sports with communal changing rooms.

Question 4 asks about the effect of the acne on the patient's feelings i.e., the degree of concern or depression caused by it.

Question 5 asks about the patient's assessment of severity.

The CADI is available online from several sources including: **www.dermatology.org.uk/quality/quality-cadi.html**

Does junk food cause acne?

Myths about junk food causing acne are still prevalent among young people and their parents. Is there any evidence of a link between certain foods and cause or exacerbation of acne? Also, are there any dietary sources that are beneficial?

Food may influence acne. Acne is absent or much less common in some rural populations than in Westernised urban environments. Some studies have suggested this may be related to dairy products, perhaps because of hormones in milk. Others have evaluated the role of high-glycaemic foods, fat intake or fatty acid composition. Acne is associated with polycystic ovaries and insulin resistance may also play a role.[2]

It is difficult to know how to advise patients. We should probably at least encourage a low-glycaemic, low-fat diet. The Stone Age "hunter-gatherer" diet has been reported to be beneficial. But these diets are difficult for New Zealand teenagers to follow.

Which OTC topical acne products are best?

What advice can a GP give to a patient for selecting an OTC medicated product?

Over-the-counter acne medications may be effective, well tolerated and cosmetically elegant for some patients. But good information about these ingredients is hard to find.

I advise basing your recommendations on products containing benzoyl peroxide. This has comedolytic, keratolytic and anti-inflammatory action. It is available as wash-off or leave-on lotions, gels and creams in various concentrations and is priced from $20 to $30 for 40 g (about one months supply). The low concentrations (2.4 – 4%) are just as effective as higher strength products, and are less irritating.

Salicylic acid (beta hydroxy acid) remains popular and can be found in cleansers and leave-on treatments. It has mild comedolytic and anti-inflammatory effects, but may cause irritant dermatitis (like benzoyl peroxide and topical retinoids). Other useful components include glycolic acid (alpha hydroxy acid), azelaic acid, resorcinol, sulphur and sodium sulfacetamide. Antiseptics such as triclosan are popular as cleansers. Zinc, retinoic acid, niacinamide, tea tree oil, green tea and ayurvedic therapies also are frequently used.

The cost of topical acne treatments

Although topical treatments such as benzoyl peroxide or adapalene are most appropriate for treating mild acne, often GPs consider prescribing doxycycline or other oral antibiotics due to cost issues. The topical treatments are not subsidised and can be unaffordable to many people. What is the advice on this?

Although topical acne therapy remains unsubsidised, we must tell our patients that it is recommended and likely to be of benefit. They are often already spending a great deal of money on remedies of dubious benefit. Ask them!

Antibiotics do not take care of comedones, which should be managed initially with topical benzoyl peroxide and/or topical retinoids. New combination topical products will enhance compliance and results (e.g., benzoyl peroxide / clindamycin and benzoyl peroxide / adapalene). Topical antibiotics as sole treatment are not recommended due to lack of efficacy and bacterial resistance.

Systemic antibiotics are warranted if there are many or deep inflamed lesions, but they do not work any faster than topical treatment. Combined oral contraceptive agents, especially those with antiandrogens such as cyproterone or drospirenone, are effective for women with seborrhoea and mild to moderate acne.

Doxycycline: when to expect to see results

How long does a patient have to take doxycycline until improvement is seen? A "significant improvement" from the patient's perspective is often different from that of the doctor. Once improvement has been achieved, should doxycycline be tapered or stopped?

Whatever drug is being studied, improvement occurs steadily but slowly, plateauing at about six months. There is probably little benefit reviewing before three months treatment has been completed, except to encourage compliance and to manage adverse effects. But many patients achieving 60% reduction in the number of spots

report "no benefit" from the treatment as their expectation is for complete clearance.

Dose tapering has not been well studied in acne. It is useful in rosacea, but rosacea responds much more quickly and completely to doxycycline in most cases.

I favour using doxycycline 100 mg daily until acne clears and then stopping, rather than small doses for six months. We need to balance efficacy in an individual with increasing bacterial resistance in the community. But topical therapy must be continued as maintenance therapy. If significant acne recurs, it is probably time to consider oral isotretinoin.

The role of minocycline

What is the role of minocycline in the treatment of acne?

The most common oral antibiotics for treating acne vulgaris are the tetracycline derivatives, although erythromycin, trimethoprim, co-trimoxazole and clindamycin have also been used extensively. The rationale is the effect on *Propionibacterium acnes* as well as the intrinsic anti-inflammatory properties of these antibiotics. Sensitivity of *Propionibacterium acnes* to erythromycin is lower than to doxycycline or minocycline.

Doxycycline (100 mg) is fully subsidised and effective if taken regularly in doses ranging from 50 mg to 200 mg daily. Adverse effects are common but rarely serious (nausea, oesophagitis, photosensitivity).

Minocycline is considered second-line. It is partially subsidised. It may be more effective than doxycycline in patients that forget to take their pills, as it is thought to stay in the sebaceous glands for several days. It has some serious potential adverse effects (dizziness, hypersensitivity reactions, hepatitis, lupus erythematosus, long-lasting bluish pigmentation), but these are very rare.

Confidence in prescribing isotretinoin

Prescribing isotretinoin for acne with the aid of a decision support tool such as bestpractice Decision Support allows prescribers to feel confident that they are covering all required aspects and are prescribing safely. However it is unclear at this stage how to fulfil the medico legal requirements of prescribing isotretinoin. Does a training course need to be completed?

Bpac comment: On the Special Authority application form for isotretinoin, the prescriber has to indicate that they: "have an up to date knowledge of the treatment options for acne and are aware of the safety issues around isotretinoin and are competent to prescribe isotretinoin". No specific training course currently exists. In order to fulfil this Special Authority requirement, the GP must be competent to undertake the treatment in the same way as for any other clinical situation. It is the responsibility of the individual to familiarise themselves with isotretinoin and the treatment of acne. It is strongly recommended that a decision support prescribing tool is used.

It takes a long time to become expert and comfortable prescribing isotretinoin. Dermatologists in training are closely supervised for four years and may treat hundreds of patients with this drug. The route to acne-clearance is rarely straightforward, requiring dose adjustment and interruption, and careful management of adverse effects. The patient should be prepared for this. Prolonged consultations and careful follow-up are necessary. It is best to have a working relationship with a local dermatologist; but many dermatologists are struggling to accept the changed prescribing environment and prefer to see the patient themselves.

Myths and legends abound. Many patients with acne and /or their parents are misinformed and may demand or refuse appropriate treatment. Proceed with care!

The teratogenicity of isotretinoin

In the special authority criteria for isotretinoin, it states that the patient must agree not to become pregnant during the course of treatment. Can a patient be trusted if they say they are not sexually active or is it simply not good practice to prescribe isotretinoin if a patient refuses oral contraceptives?

I am nervous every time I prescribe isotretinoin to a female. It is essential to ensure she understands the implication of pregnancy. I obtain signed consent. I talk about sexual activity, improved self esteem leading to new relationships, pregnancy testing, contraception, emergency contraception, rape and termination of pregnancy. I make sure she knows who to call or email for further advice. I do not prescribe if I am not convinced she can be relied on. But mistakes happen and you have to be prepared for that.

The overall risk of birth defects is estimated to be up to 30% after exposure during embryogenesis. The burdensome iPLEDGE system in the USA may not have reduced the numbers of pregnancies. Pregnancy testing does not prevent pregnancy. Studies have shown that some exposed pregnant women did not receive counselling. Some women did not use contraceptives due to motivational, cultural and religious barriers.

"Yet because acne is so horrific and so common, even the most conservative risk/benefit analysis finds that, overall, isotretinoin provides far more benefit than risk."[3]

Final word

As GPs become more familiar with treating acne in primary care, what insights can we gain from our dermatologist colleagues?

As for any other medical condition, it is important to take a thorough history and examine the patient carefully. Determine the severity and impact of the acne, and the result of treatment to date. Explain a stepwise and multipronged approach to treatment. Encourage adherence to your recommendations and provide a listening ear.

Isotretinoin is very effective but it should be reserved for severe, treatment-resistant or very persistent acne in well-motivated patients. It is best not to prescribe it yourself unless you are thoroughly informed and are managing numerous patients with acne.

Normally, in mild acne, on the first visit you should be discussing cleansers, and prescribing topical benzoyl peroxide. On review, if necessary add retinoid +/- topical antibiotic. Never prescribe an antibiotic alone – it will not work and you will encourage bacterial resistance. Continue follow-up.

In more extensive or inflammatory acne, use topical benzoyl peroxide (less expensive) or retinoid or both (combined preparation now available) together with oral doxycycline. Review to ensure compliance.

In female patients, you may decide to use "the pill". Low-dose combined oral contraceptives with minimal androgen effect contain ethinylestrodiol and desorgestrel, gestodene or norgestimate. If there is clearly an indication for an antiandrogenic progesterone (e.g., polycystic ovarian disease, hirsutism), the choice is between cyproterone and drospirenone. The latter is not subsidised but may be better tolerated. Evaluate the effect after six months.

For women in whom oestrogens are contraindicated, spironolactone may be a better choice of anti-androgen and may be combined with progesterone-only contraceptive.

Acknowledgement

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References

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