

# Management of Acne

## Classification

Acne can be broadly classified into the following categories:

**Mild:** The disease consists of open and closed comedones with some superficial papules and pustules.

**Moderate:** Encompasses more frequent deeper papules and pustules with mild scarring.

**Severe:** Comprises all of the above **plus** nodular abscesses and leads to more extensive scarring.

## General advice

- Patients with acne should be encouraged to wash twice daily using a gentle cleanser<sup>1,2</sup>.
- Use of a light non-comedogenic moisturiser may be useful<sup>1,2</sup>.
- Patients should be dissuaded from picking or squeezing spots<sup>1</sup>.
- Acne is not caused by a poor diet. The role of diet in acne remains controversial and a healthy diet should be positively encouraged<sup>1</sup>.

Refer to [algorithm](#).

## Topical therapy

- Apply to all affected areas every day (e.g. whole face) not to individual lesions<sup>3</sup>.
- Treatments are effective but can take up to 8 weeks to work<sup>1</sup>.
- Topical benzoyl peroxide and retinoids can irritate the skin particularly at the start of treatment. Consider gradual introduction e.g. short contact and/or less frequent application<sup>1</sup>.
- Cream preparations are also usually less irritant than gels.

### Topical Benzoyl peroxide

- Low strength preparations 2.5%-5% are recommended as all strengths are equally effective<sup>3,4</sup>.
- Inflammatory lesions may improve more rapidly with benzoyl peroxide than retinoids<sup>2</sup>.
- Is bacteriocidal, thereby minimises antibiotic resistance<sup>2</sup>.
- Can cause bleaching of fabric<sup>1</sup>.
- Emphasise there must be some skin peeling if treatment is going to work, if problematic reduce the frequency of application e.g. to alternate days.
- Combination of benzoyl peroxide and adapalene (Epiduo<sup>®</sup>) is available and can be effective in patients not responding to topical benzoyl peroxide or retinoid as monotherapy.

### Topical Retinoids and related medicines

- Recommended for all cases of acne (unless systemic retinoids are prescribed)<sup>2</sup>.
- May cause irritation. Adapalene is usually better tolerated<sup>1</sup>.

- Unstable in combination with benzoyl peroxide, except adapalene<sup>2</sup>. If this combination is necessary they should be applied at different times e.g. one in morning, other at night.
- Can promote antibiotic efficacy by improving penetration and providing synergistic comedolytic and anti-inflammatory effects<sup>2</sup>.
- Recommended as a long term maintenance treatment<sup>1</sup>.
- Avoid in pregnancy. Female patients of childbearing age should use contraception.
- Exposure to sunlight of areas treated with topical retinoids should be avoided or minimised. When exposure cannot be avoided, a sunscreen product and protective clothing should be used.
- Combination of benzoyl peroxide and adapalene (Epiduo<sup>®</sup>) is available and can be effective in patients not responding to topical benzoyl peroxide or retinoid as monotherapy.

#### Topical antibiotics

- Must not be used as a sole treatment or in combination with systemic antibiotics as bacterial resistance is a growing concern<sup>1</sup>.
- Combination products with benzoyl peroxide or retinoids are recommended to avoid topical antibiotics being applied as a sole treatment.
- Treatment should be limited to 12 weeks duration if possible<sup>2</sup>.

#### Topical Azelaic acid

- Has comedolytic, antimicrobial and anti-inflammatory properties.
- Second line option if topical retinoid and benzoyl peroxide are not tolerated<sup>5</sup>.
- Risk of hypopigmentation in patients with darker skin<sup>2</sup>.

## Systemic Therapy

### Oral antibiotics

- Should not be used as a sole treatment. Prescribe in combination with topical benzoyl peroxide or topical retinoid<sup>1</sup>.
- Tetracyclines are first line. Oxytetracycline 500mg twice daily is the most cost effective however lymecycline 408mg once daily and doxycycline 100mg once daily are likely to have better adherence due to their once daily dosage. Avoid excess sun exposure when taking doxycycline (dose-dependant, but idiosyncratic, phototoxic reaction).
- Erythromycin 500mg twice daily is second line (first in pregnancy) due to high bacterial resistance<sup>1</sup>.
- If possible, limit courses to 12 weeks duration<sup>2</sup>.
- When continued beyond 12 weeks, treatment should be reviewed at least every 6 months<sup>6</sup>.
- In the event of pregnancy or patient being prescribed oral isotretinoin by dermatology, tetracyclines should be stopped<sup>1</sup>.
- Other antibiotics that can be used for resistant cases are minocycline, trimethoprim, septrin, azithromycin, etc. Higher doses of antibiotics are also sometimes used in resistant/severe cases. These are usually started in secondary care.

### Oral contraceptives

- Women with lesions confined to the lower face may be more likely to benefit<sup>2</sup>.
- Second and third generation combined oral contraceptives are generally preferred<sup>1</sup>.
- Co-cyprindiol (Dianette®) is used in moderate to severe acne where other treatments have failed and discontinued 3 months after acne has been controlled<sup>1</sup>.
- Unopposed progesterones can make acne worse<sup>1</sup>.

### Other treatments

- Isotretinoin – Effective in resistant and severe cases. Can only be prescribed and will be monitored by secondary care. Side effects include teratogenicity, hyperlipidaemia, dryness and irritation of skin and mucous membranes, mood changes, etc. Women of child bearing potential need to be on effective contraception 1 month before, during and 1 month after treatment; and usually registered with a pregnancy prevention programme.
- Dapsone – Can be helpful in resistant and severe cases, and in those who cannot take isotretinoin.
- Spironolactone – Given as 50mg bd can be helpful especially in patients with polycystic ovarian syndrome.

### Referral to secondary care

- Routine referral: Acne not responding to 2 courses of oral antibiotics (continued for 12 weeks each time) in combination with topical therapy. However, consider early referral for acne at risk of significant scarring/keloids, or acne with significant psychological impact.
- Urgent referral: Severe acne

For more information on acne and management click here (<http://www.pcids.org.uk/clinical-guidance/acne-vulgaris>)

Also, refer to [acne treatment algorithm](#). All treatment suggested in the algorithm are deemed the most cost effective but alternatives may be more appropriate depending on patients' tolerability, etc. The formulary is also simply a guideline. Ultimately, clinicians should prescribe what is felt best for patients.

## References

- 1) Primary Care Dermatology Society (PCDS). Acne vulgaris [webpage] and Acne – Primary Care Treatment Pathway. Accessed from: <http://www.pcds.org.uk/clinical-guidance/acne-vulgaris>
- 2) Dawson, A. L. and Dellavalle, R. P. Clinical Review – Acne vulgaris. BMJ 2013; 346: 2634 (Published online 8 May 2013).
- 3) Williams, H. C., Dellavalle, R. P., and Garner, S. Acne vulgaris. Lancet SO140-6736 (11) 60321-8 (Published online 30 August 2011).
- 4) Zouboulis C. C., and Bettoli, V. Management of severe acne. British Journal of Dermatology 2015; 172 (Suppl. 1): 27-36.
- 5) NICE Clinical Knowledge Summaries. Acne vulgaris, Last revised September 2014. Accessed from: <http://cks.nice.org.uk/acne-vulgaris>
- 6) NHS Scotland. SMC/SAPG Long term antibiotic use for acne, rosacea and other dermatology conditions. November 2015. Accessed from: [http://www.scottishmedicines.org.uk/files/sapg/Advice on antibiotic use in acne and rosacea November 2015.pdf](http://www.scottishmedicines.org.uk/files/sapg/Advice%20on%20antibiotic%20use%20in%20acne%20and%20rosacea%20November%202015.pdf)

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