Acne Vulgaris – Choosing a Treatment Option

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What treatment options are available? ¹

Acne Vulgaris

Mild to Moderate

OTC
- Benzoyl peroxide
  Effective when used daily
  No more than 2.5%
  May use in combination with Rx products
- Salicylic acid
  Effective when used daily
  May use in combination but may increase dryness & irritation

RX Topical Antibiotics
- Topical clindamycin
  Available as foam, gel, lotion
  Concentration: 1%
- Topical erythromycin
  Available as gel, ointment, pads, or solution
  Concentration: 2%

RX Topical Retinoids
- Adapalene
  Available cream, gel, lotion
  Concentration: 0.1%, 0.3%
- Tretinoin
  Available as cream, gel
  Concentration: 0.025%, 0.05%, 0.1%

Systemic Antibiotics
- Minocycline
  May be superior to doxycycline
  Patients 12 years and older
  Dose: 100mg PO BID
- Doxycycline
  Patients 12 years and older
  Dose: 100mg PO QD
- Bactrim
  Use when there is an allergy or intolerance to TCN class
  Dose: 800/160mg PO BID

Systemic Retinoids
- Isotretinoin
  For use in refractory, cystic acne where the benefits outweigh the risks of therapy
  PLEDGE program enrollment
  Dose: 0.5-1mg/kg/day PO in two divided doses for a 15 to 20 week course of therapy (severe scarring acne or truck acne may require a dose increase to 2mg/kg/day)
Mild to Moderate Acne

**OTC Topicals:** Benzoyl peroxide and salicylic acid

- Readily available OTC in a variety of formulations
  - Select a product that best suits patient’s needs
- Effective if used in combination, especially with the systemic antibiotics as resistance does develop

**RX Topicals:** The guidelines recommend either topical antibiotics or topical retinoids as first line prescription-strength therapies for acne.

<table>
<thead>
<tr>
<th>Table 1: Topical Abx Comparative Efficacy</th>
<th>↓ Inflammatory Lesions</th>
<th>↓ Non-Inflammatory Lesions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clindamycin 1.0%</td>
<td>59% reduction from baseline (~7 lesions)</td>
<td>39% reduction from baseline (~11 lesions)</td>
</tr>
<tr>
<td>Erythromycin 2.0%</td>
<td>62% reduction from baseline (~9 lesions)</td>
<td>43% reduction from baseline (~12 lesions)</td>
</tr>
</tbody>
</table>

- No one treatment is significantly better at improving acne
- Clindamycin > Erythromycin – cheaper and has fewer reports of treatment resistance over time

<table>
<thead>
<tr>
<th>Table 2: Topical Retinoid Comparative Efficacy</th>
<th>↓ Total Lesions</th>
<th>↓ Inflammatory Lesions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapalene 0.1%</td>
<td>28% reduction from baseline</td>
<td>32% reduction from baseline</td>
</tr>
<tr>
<td>Tretinoin 0.025%</td>
<td>22% reduction from baseline</td>
<td>17% reduction from baseline</td>
</tr>
<tr>
<td>Tazarotene 0.1%</td>
<td>“Similar to tretinoin”</td>
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</tr>
</tbody>
</table>

- Tazarotene is costly and just as effective as tretinoin → Not listed in treatment algorithm

Moderate to Severe Acne

**Systemic Antibiotics:**

- Minocycline > doxycycline – partly based on observational data
- Allergy to tetracyclines → sulfamethoxazole/trimethoprim DS
- Caution against using systemic erythromycin due to high rates of bacterial resistance (*P. acnes*)

**Systemic Retinoid:**

<table>
<thead>
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<th>Table 3: Systemic Retinoid Efficacy</th>
<th>Remission or Marked Improvement</th>
<th>Relapse Rates</th>
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<tr>
<td>Isotretinoin 0.5mg – 1mg/kg/day</td>
<td>84% in four months</td>
<td>28% (ANY cyst)</td>
</tr>
</tbody>
</table>

- None of the side effects reported were life-threatening. Reports of inflammatory bowel disease and psychiatric issues have been mentioned in case reports but do not present in clinical trials.

**Miscellaneous Therapies**

Hormonal therapy: estrogen containing oral contraceptives

- FDA approved for treatment of acne: Ortho Tri-cyclen and Estrostep
- Evidence to support other estrogen containing OCPs but no evidence to support vaginal rings, patches, etc.

Spironolactone: dosages of 50-200mg shown to be effective with average duration of therapy lasting 10 months

References