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TOOLS FOR PRACTICE

PEER PATIENTS EXPERIENCE EVIDENCE RESEARCH

Facing the Evidence in Acne, Part I: Oral contraceptives and spironolactone in females

CLINICAL QUESTION

How effective are combined oral contraceptives (COC) and spironolactone for treating acne of at least mild-moderate severity in females?

BOTTOM LINE

At ~24 weeks, ~80-90% of females report improvement in their acne with COCs, compared to 50-80% placebo, and 30-50% will have clear-almost clear skin versus 10-40% on placebo. Efficacy appears similar between individual COCs. Spironolactone, typically added to topical agents, has similar outcomes. Discontinuations due to adverse events appear comparable to placebo.

EVIDENCE

- COC: Two systematic reviews[1,2] (19-31 randomized controlled trials [RCTs]; 6199-12,579 patients, 11 different COC combinations) in females aged 14-49 with at least mild to moderate acne. At ~24 weeks:
    - Versus placebo:
        - Patient-assessed improvement: ~80-90% versus 50-80% (placebo).[1] Number needed to treat (NNT)=4-7.
        - Clinician assessed clear-almost clear skin: 30-50% versus 10-40% (placebo), NNT=6-9.
        - Adverse event discontinuations:[1] Usually similar to placebo. When different, number needed to harm (NNH)=25-50
    - Versus COC:[1]
        - No consistent statistical differences in 17 comparisons.
        - Adverse event discontinuations: Usually not different.

- Spironolactone: One double-blind RCT (410 females, mean age 29),[3] spironolactone 100mg daily versus placebo (~70% using topicals concurrently) for 24 weeks:
    - Patient-assessed improvement: 82% versus 63% (placebo) (NNT=6).
    - Patient-assessed clear-almost clear skin: 32% versus 11% (placebo) (NNT=5).
    - Quality of life (30-point scale, higher=better, baseline=13): Increased 8.0 versus 4.5 points (placebo), difference likely clinically meaningful.[4]
    - Any adverse events: 64% versus 51% (placebo); example: headache 20% versus 12% (placebo).
    - Adverse event discontinuations: No difference.
    - Other RCT added spironolactone to topical benzoyl peroxide found slightly greater benefit, but benefits possibly exaggerated as smaller, shorter RCT (63 patients, 12 weeks).[5]

- Limitations: Most COC RCTs unblinded, many COC RCTs prohibited concurrent topical agents, no RCTs comparing COCs to topical agents, many industry-funded.

CONTEXT

- Guidelines support adding COC if hormonal contraception desired, or when standard treatments (example: topical benzoyl peroxide or retinoid) inadequate. No clear recommendations for spironolactone (all published prior to recent RCT).[6-8]
- Two small RCTs (170 patients) found no statistical difference between COC and oral antibiotics.[1,2]
- Potassium monitoring with spironolactone generally unnecessary unless patient otherwise at risk (example: on angiotensin-converting enzyme inhibitors).[6]

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AUTHORS

Sasha Katwaroo, PharmD candidate
Brianne Desrochers, PharmD candidate
Allison Paige, MD CCFP
Jamie Falk, PharmD

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