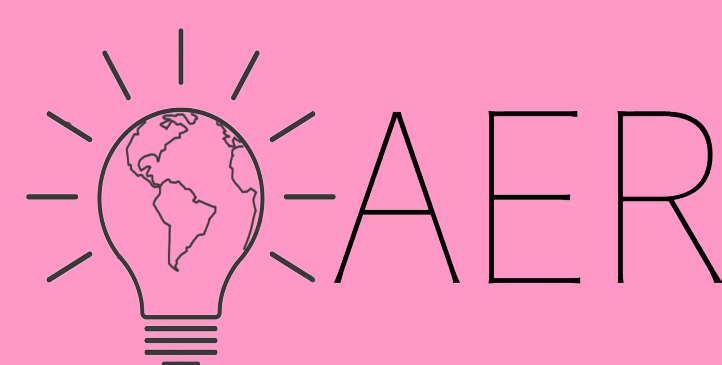




Winlevi v. Spironolactone in Female Patients

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INTRODUCTION

Acne is a very common skin condition that affects the majority of the population at some point in their lives. Acne comes in many forms and severities, and can result from various factors. This project will focus on hormonal acne in female patients by comparing spironolactone to Winlevi (clascoterone 1% cream). Both of these medications work by inhibiting androgens, thus reducing oil production in the skin. However, the two medications differ in that spironolactone is administered orally, while Winlevi is a topical cream.

RESEARCH METHODOLOGIES

This project employs a systematic review and meta-analysis to compare the efficacy of oral spironolactone and topical Winlevi (clascoterone 1% cream) in treating hormonal acne in female patients, analyzing published studies rather than conducting an experiment. Data was collected from PubMed, Google Scholar, and UpToDate, focusing on outcomes, dosage, and side effects.

The population consists of only female patients with hormonal acne, and the sample includes studies from the past ten years that examine spironolactone, Winlevi, or both. Data collected includes treatment details, acne reduction, redness, irritation, and side effects for low (50–100 mg/day) and high (150–200 mg/day) spironolactone doses and Winlevi (0.1%–1% clascoterone or use once/twice daily).

Analysis will combine numerical comparisons (average improvement, side effect rates) and qualitative themes (comfort, satisfaction), using peer-reviewed sources and cross-checking for accuracy. Ethical concerns are minimal since only secondary data is used, and all sources will be properly cited.

Additional observational data will come from blog and social media posts discussing user experiences, capturing real-world responses. All data has been placed into categories (improvement, no response, redness, irritation, dryness, sun sensitivity, tolerance), and repeated patterns across studies and social media have been considered most significant.

Unfortunately, not a lot of research has been done on Winlevi, especially regarding sun sensitivity, since it is a relatively new medication. Additionally, since acne medications are considered skin care products, there is not a lot of urgency to research these products, since they are considered unnecessary. Due to this, data may be slightly skewed.

DATA AND FINDINGS

	Spironolactone		Winlevi	
Dosage	High	Low	High	Low
Sun Sensitivity	Yes, high doses means more sun sensitivity.	Low dose still results in sun sensitivity, but more mild than high dose.	No.	No.
Redness / Irritation	Not a common side effect.	Not a common side effect.	Redness is very common side effect and irritation is less common.	(higher dose does not increase side effects)
Acne Severity	Works best on moderate to severe acne, higher dose works quicker.	Work best on moderate to severe acne.	Works best on moderate to severe acne, higher dose more effective.	Works best on moderate to severe acne.

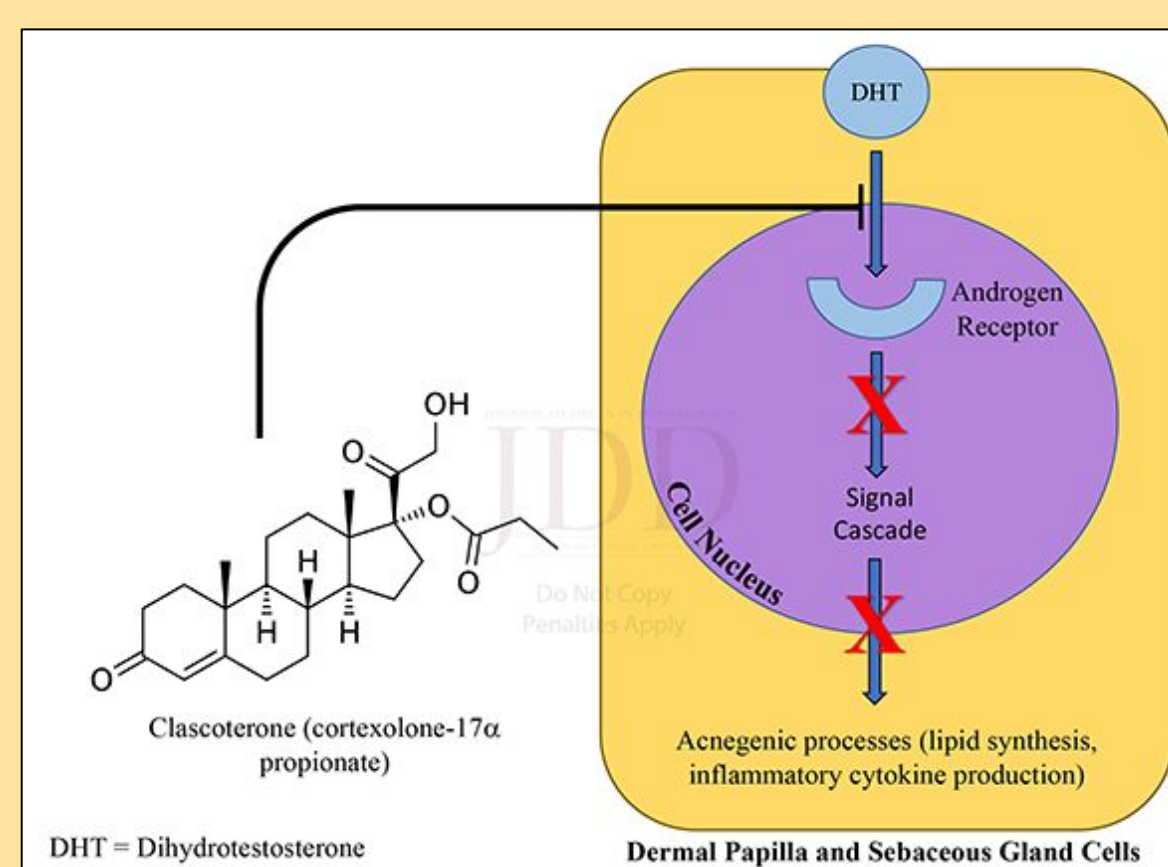
High visibility of side effect

Moderate visibility of side effect

Low/no visibility of side effect

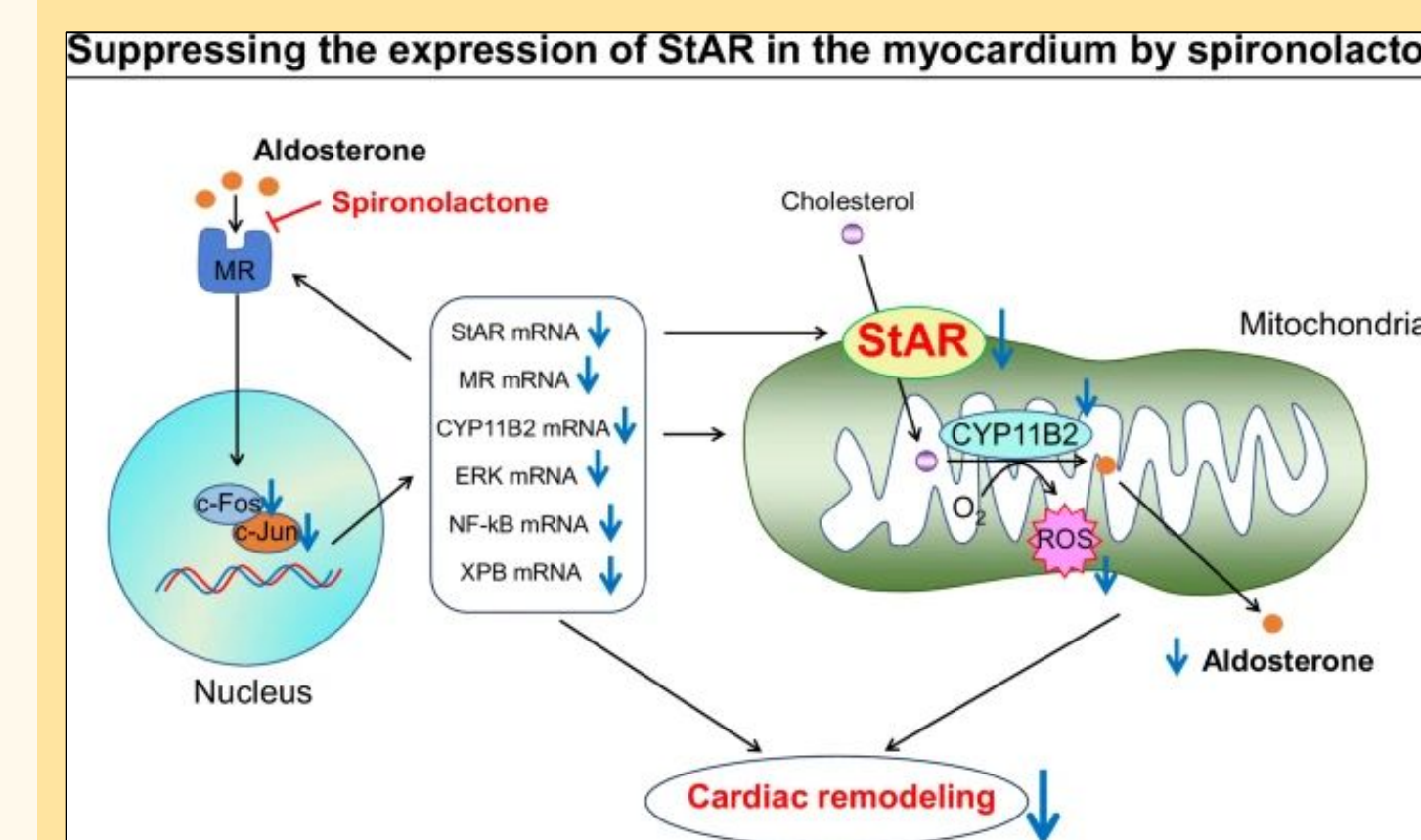
Most effective on moderate/severe acne, works quicker

Most effective on moderate/severe acne, works slower



Clascoterone/Winlevi targets acne by inhibiting DHA (Dihydrotestosterone - a type of androgen) expression by preventing it from binding to androgen receptors. This reduces sebum production, therefore reducing acne.

Spironolactone functions by preventing Aldosterone from binding to the mineralocorticoid receptor, which leads to StAR (Steroidogenic acute regulatory protein) not being expressed (StAR regulates the production of androgens).



DISCUSSION, ANALYSIS, AND EVALUATION

- Spironolactone causes sun sensitivity due to its chemical compound, and higher doses increase sun sensitivity. There is no evidence to support that Winlevi causes sun sensitivity, and unreliable sources claim it does not cause sun sensitivity.
- Redness and irritation is not a common side effect of spironolactone, but it is a sign of an allergic response (not dose dependent). Redness is a very common side effect of Winlevi, with irritation being less common, and dosage does not affect the prevalence of this side effect.
- Both Winlevi and spironolactone work best on moderate to severe acne, with higher dosages having quicker results.

CONCLUSIONS, IMPLICATIONS, AND NEXT STEPS

- Winlevi and spironolactone both have different benefits and downsides
- By weighing the pros and cons, one is able to identify the best treatment option for patients
- Personal preferences for skin related side effects may influence a patient's opinion of their treatment, viewing it as a success or a failure
- Additional side effects and health risks are present but not mentioned in this data which must be considered before administering

ACKNOWLEDGEMENTS / REFERENCES

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