
Subject: SPIRO CREAM VERSUS SPIRO SOLUTIONS

Posted by [kkoo](#) on Wed, 19 Apr 2006 16:15:41 GMT

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weil mich das interessiert hat. die studie ist erstens schon was älter (u. sicherlich bekannt), und zweitens arg klein, und drittens mit (für meine begriffe) seltsamen resultaten (siehe schluss). vielleicht alles irreführend? oder nur anzeichen, dass man sich doch nicht zu viele hoffnungen machen sollte?

(ist von bryan aus dem hairlosstalkforum)

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SPIRO CREAM VERSUS SPIRO SOLUTIONS: WHICH IS BETTER?

What originally got me interested in this subject is Chapter 18 of the book "Clinics in Dermatology", Volume 6, No. 4, October-December 1988, with the title: "Topical Antiandrogens in the Treatment of Male-Pattern Baldness". It was written by Roger S. Rittmaster, MD. He is the same doctor associated with Glaxo's dutasteride research, and other notable hairloss investigations.

The whole thing is rather lengthy, but I'm going to quote in full the relevant section, including the two tables which list all the data:

Antiandrogens and Hirsutism

"The pathogenesis of hirsutism in women is similar to that of male-pattern baldness. While monitoring small changes in hair growth in the balding scalp can be difficult, if not impossible, weighing shaved hairs in hirsute women provides a sensitive means of quantitating hair growth. Thus, hirsutism provides an excellent model for assessing the efficacy of topical antiandrogen preparations.

"Spironolactone is a potent antiandrogen with an affinity for human androgen receptors almost as great as dihydro-testosterone. Numerous studies have demonstrated the effectiveness of oral spironolactone in reducing hair growth in hirsute women. Spironolactone, however, is rapidly converted by the liver to canrenone, a weaker anti-androgen. Oral spironolactone also has frequent side effects including nausea, fatigue, menstrual disturbances in women, and impotence and gynecomastia in men. In order to avoid systemic side effects while attempting to deliver high local

concentrations of spironolactone, we used the topical route to treat hirsutism in women. An initial study using a canrenone cream suggested that this approach would be successful.

"In a pilot study, nine women with idiopathic hirsutism entered a randomized, double-blind, crossover trial using either 1% spironolactone in a cream base alone (59.4% water, 13% propylene glycol, 7.5% mineral oil, 6% stearyl alcohol, 5.5% white petrolatum, 3.2% cetyl alcohol, 2.7% sodium lauryl sulfate, 2.6% spermaceti, and 0.1% potassium sorbate). After 3 months, patients were switched to the alternate therapy for an additional 3 months. The patients were instructed to apply the cream to a predetermined area of excess facial hair growth three times daily. Hair growth rates (mg/day) were assessed by weighing shaved hairs. The patients were instructed to use no cosmetics on the days when they were shaved. The skin was washed with an alcohol-soaked gauze and then dry-shaved with a previously unused safety razor, and the hair discarded. The same area was shaved 2-7 days later, and the hair weighed. The time between shavings remained constant for each individual. Initially, each woman had two hair growth rate determinations; the percent coefficient of variation determined from the initial shavings was 17%. The percent change in the hair growth rate was determined for each treatment period by comparing hair growth immediately before and after each period.

Table 18-2. Hair Growth During Topical Spironolactone (SP) and Placebo (PL) Therapy in Hirsute Women

Patient No.	% Change*	
	3-month	6-month
1	+16 (PL)	+12 (SP)
3	+34 (PL)	- 3 (SP)
5	+30 (PL)	-13 (SP)
7	+39 (PL)	-48 (SP)
Mean (+/- SE)	+30 +/- 4	-13 +/- 13
2	-73 (SP)	+113 (PL)
4	-29 (SP)	+ 36 (PL)
6	-13 (SP)	+ 42 (PL)
8	-40 (SP)	- 8 (PL)

9	-27 (SP)	- 61 (PL)
Mean (+/- SE)	-36 +/- 10	+49 +/- 20

*The percent change refers to the difference in hair growth weights (mg/day) immediately before and after each treatment period.

"The changes in hair growth rates during spironolactone and placebo therapy are shown in Table 18-2. Combining the results after 3 and 6 months, hair growth decreased by 26 +/- 8.5% (SE) during spironolactone treatment compared with a 40 +/- 11% increase during placebo treatment (P<0.005 using the paired Student's t-test). The five patients who used spironolactone during the first treatment period, in which hair growth decreased by 36%, had a 49% increase in hair growth during the second (placebo) treatment period. When the data from the placebo treatment period in these five patients were omitted, a significant difference in hair growth persisted (P<0.005 using the unpaired Student's t-test). Five of the nine patients correctly identified the treatment period during which spironolactone was given. Three of the others were uncertain, and one patient (#8) felt she had improved on placebo but not on spironolactone.

"These results were encouraging but certainly preliminary. One disturbing feature was that the hirsutism became worse during the 3 months when the cream base was used. The cream caused skin dryness if used to excess, and it was slow to vanish. Because of these features, a long-term follow-up study was undertaken in a separate group of hirsute patients using 1% spironolactone in an alcohol-based vehicle (Neutrogena Vehicle/N Mild: 41.5% ethyl alcohol, water, 6.0% isopropyl alcohol, Laureth-4).

Table 18-3. Hair Growth During Topical Spironolactone (SP) and Placebo (PL) Therapy in Hirsute Women

Patient No.	% Change*	
	3-month	6-month
2	- 19 (PL)	-19 (SP)
9	- 14 (PL)	DO (SP)
10	+ 47 (PL)	+24 (SP)

4	+ 48 (SP)	DO
5	+140 (SP)	+93
6	- 32 (SP)	-48
8	- 8 (SP)	- 5
11	- 17 (SP)	-38

DO = dropped out of study.

*The percent change refers to the difference in hair growth weights (mg/day) before entering the study and at the end of the treatment period. Patient #1 (PL), #7 (PL), and #3 (SP) dropped out of the study prior to the first observation.

"In this second randomized, double-blind study, hirsute patients initially received the spironolactone solution or the vehicle alone for the first 3 months, after which all patients recieved the spironolactone solution. The patients were instructed to apply the solution liberally to the affected area (either the face or the lower abdomen) three times daily. Hair growth rates were determined as described above, except that three determinations were made every 3 months. The results of the study are shown in Table 18-3. At best, there was only a modest improvement with spironolactone, and some patients actually became worse. There was no statistical difference between spironolactone and placebo during the first 3 months. Subjective response was equally poor, and the dropout rate was high.

"The long-term effectiveness of topically applied spironolactone for hirsutism remains a question. The differences observed between the alcohol-based spironolactone solution and the cream based medication may relate to the vehicle or perhaps small sample size."

Well, there you have it! The cream version seemed to perform better. In fact, the alcoholic version may not have performed AT ALL! What's interesting is that they used a spiro concentration in both vehicles of only 1%; and what's very strange is the fact that the cream vehicle made the hirsutism WORSE. That's food for thought.

Bryan
