EVALUATION OF EFFICACY, COSMETIC QUALITIES AND TOLERABILITY OF A LOTION FOR HAIR PHYSIOLOGICAL REGROWTH AND REINFORCEMENT

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Summary

The aspect of hair, both for men and women, is an important element in characterizing the physical appearance of a person, contributing to criteria of beauty and youth imposed by modern society. Today many principals, both pharmaceutical and cosmetic, are available, functional for hygiene and keeping healthy hair; in particular the fastest growing sector is the one that works on prevention and treatment of hair loss, one of the most common imperfections of the Western population, both male and female. There are many forms of alopecia, most of which are acquired, while the few congenital forms are related to rare syndromes. The most common form of alopecia is androgenetic (it represents about 70% of total cases).

The described study assessed the efficacy and tolerability of a cosmetic lotion for physiological regrowth and increased thickness of hair.

Given the results of the study, we can say that this lotion showed a good cosmetic efficacy in facilitating the physiological regrowth of hair and promote the increase in the thickness.

Riassunto

L'aspetto della capigliatura, sia per gli uomini che per le donne, è un elemento importante nel caratterizzare la fisicità della persona, contribuendo ai criteri di bellezza e giovinezza imposti dalla società moderna. Ad oggi sono disponibili molti presidi, sia farmaceutici che cosmetici, utilizzabili per l'igiene e la conservazione in buona salute dei capelli; in particolare il settore maggiormente in
La prevenzione e il trattamento della caduta dei capelli, essendo questo uno degli inestetismi più diffusi nella popolazione occidentale sia maschile che femminile.

Esistono varie forme di alopecia, la grande maggioranza delle quali sono acquisite, mentre le poche forme congenite sono legate a sindromi rare. La forma di alopecia più diffusa, (rappresenta il 70% circa del totale dei casi) è quella androgenetica. Il trattamento dell’alopecia androgenetica prevede, secondo gli stadi, l’uso di farmaci specifici (minoxidil, finasteride etc.) che solitamente vengono affiancati a trattamenti cosmetici più o meno efficaci tra i quali il paziente si trova a scegliere, spesso spinto da pubblicità e informazioni non sempre corrette.

Lo studio che descriviamo ha valutato l’efficacia e la tollerabilità di una lozione cosmetica per la ricrescita fisiologica e per l’aumento dello spessore dei capelli.

Sulla base dei risultati ottenuti nel corso dello studio è possibile affermare che questa lozione ha dimostrato una buona efficacia cosmetica nel coadiuvare la ricrescita fisiologica dei capelli e favorirne l’aumento dello spessore.
INTRODUCTION

The aspect of hair, both for men and women, is an important element in characterizing the physical appearance of a person, contributing to criteria of beauty and youth imposed by modern society.

Since ancient times, a lot of products for hair health and wellness were formulated, and cosmetic industry in last years improved in this field with increasingly specialized and diversified products to answer to specific needs of the consumer.

Today many principals, both pharmaceutical and cosmetic, are available, functional for hygiene and keeping healthy hair; in particular the fastest growing sector is the one that works on prevention and treatment of hair loss, one of the most common imperfections of the Western population, both male and female.

There are many forms of alopecia, most of which are acquired, while the few congenital forms are related to rare syndromes. The most common form of alopecia is androgenetic (it represents about 70% of total cases). It develops from puberty, and it causes a diffuse hair loss with different phenotype in the two sexes – see Hamilton and Ludwig classification in Fig. 1 and it recognizes a hormonal cause as well as a genetic predisposition.

More rare forms of alopecia are the alopecia areata, the scarring alopecia, the telogen effluvium, the alopecia caused by drugs, nutritional deficiencies, surgical stress, endocrine, infectious, autoimmune diseases.

MATERIALS AND METHODS

Product In Study

The described study assessed the efficacy and tolerability of a cosmetic lotion for physiological regrowth and increased thickness of hair*.  

* Trade name: Crescina Forte, formulated by Labo Cosmophar AG - Switzerland.
ned subjects had not skin diseases of the scalp, allergies or skin reactivity that could interfere with test results.

The cosmetic activity of the product has been evaluated:
- with the technique of phototrichogramma, performed at time of inclusion, after 60 and 90 days of treatment;
- with pull-test, performed at time of inclusion in the study, after 30, 60 and 90 days of treatment;
- with the measurement of the diameter of the hair shaft, performed on 10 hair cut during phototrichogramma, performed at time of inclusion, and after 90 days of treatment;
- with a subjective evaluation of volunteers participating in the experimental study, who have expressed their opinion in relation to the following statements:
  - The product promotes new hair regrowth
  - The product induces an increase in the thickness of hair
  - The product induces a reduction of hair loss
  - The product induces a faster regrowth of hair
  - The product strengthens hair.

Cosmetic qualities have been tested:
- with a subjective evaluation of volunteers participating in the experimental study, who have expressed their opinion, after 30, 60, 90 days of treatment, in relation to the following statements:
  - The product has a pleasant smell
  - The product is easy to apply
  - The product does not grease the hair
  - the product does not weigh the hair
  - The product makes hair soft
  - The product makes the hair easy to comb.

Cutaneous tolerability has been tested:
- with dermatologic control at time of start, after 30, 60, 90 days of treatment;
- with subjective evaluation of volunteers participating in the experimental study, who have reported any side effects in a daily diary provided at time of inclusion.

This study was performed in single blind, the experimental conditions adopted (skin test area, amount of product applied, frequency and duration of application) have reproduced the normal conditions of use of the real treatment, and the opinion of volunteers was considered because it could reflect the view of potential consumers.
In the 10 days before the start of the study, volunteers have used a delicate shampoo without specific activity; this shampoo has been used 2-3 times a week to wash the hair and scalp.
In this period the volunteers have not used other products to wash their hair and scalp (shampoo, lotions etc)
The same delicate shampoo was used during the 90 days of the study.
The lotion was applied in the amount of 3,5 ml, drop by drop, on sparse areas of the scalp, in the evening every other day for 90 consecutive days, without washing the hair after application of the product.
Concerned volunteers did not apply any other cosmetic product on hair and scalp, and they have not changed their hygiene habits and were not exposed to the sun or UVA rays during the period of treatment.

RESULTS

With regard to cosmetic activity of the lotion, results obtained after 90 days with the technique of phototrichogramma showed that this product induces an increase of 2,61% of the total number of hair, an increase of 9,32% in the number of hair in the anagen phase (the growth phase of hair), with 6,75% increase in the percentage of hair at this stage, and a decrease of 8,54% in the number of hairs in telogen phase, (the stage of hair loss), corresponding to a reduction of 11,11% as a percentage of hair in telogen phase (see graphs 1, 2, 3, 4, 5).
EXPERIMENTAL PROCEDURE

TAB. I
Characteristics of the 25 volunteers included in the study

<table>
<thead>
<tr>
<th>N.</th>
<th>Age</th>
<th>Sex</th>
<th>Correspondence to Alopecia degree*</th>
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Legend: /=no  x=yes

* according to Hamilton scale for men and Ludwig scale for women
Graph 1: Complexive number of hair

Graph 2: Number of hair in anagen phase
Graph 3: Number of hair in telogen phase

Graph 4: Percentage of hair in anagen phase
The pull-test showed that the lotion induces a decrease of 18.28% after 30 days, of 27.24% after 60 days and of 44.03% after 90 days of treatment, in the number of hair extracted by this technique, indicating an increase in resistance to the levy in pulling the hair. The results are visible in the following graph 6.
The measurement of the diameter of the hair shaft showed that the product induces, after 90 days of treatment, an increase of 2.41% of the diameter of hair shaft. The results, expressed in mm, are represented in the following graph 7.

In relation to subjective evaluation of cosmetic activity, after 90 days of treatment, the 68% of volunteers reported that the product promotes the regrowth of new hair and the same percentage reported an increase in the thickness of hair. 80% of the volunteers said that the lotion induces a reduction of hair loss, and 72% of them said that it induces a faster hair regrowing. At last, 92% of subjects said that the lotion strengthens the hair.

For each parameter, the percentage of satisfied volunteers is represented in following graph 8.
About the lotion cosmetic qualities, after 90 days of treatment, 84% of volunteers expressed satisfaction about the pleasantness of smell, 88% about ease in application, 84% about the fact that the product does not grease the hair, 76% about that it does not weigh. Furthermore, 60% of subjects reported that the product makes hair soft, 68% that it makes the hair easy to comb. About each assertion, the percentage of satisfied volunteers is represented in following graph 9.

Regarding the cutaneous tolerability of the lotion, there was no skin reaction due to the product concerned at dermatologic control of the specialist, and no volunteer reported the appearance of side effects during the trial.
CONCLUSIONS

Given the results of the study, we can say that this cosmetic lotion showed a good cosmetic efficacy in facilitating the physiological regrowth of hair and promote the increase in the thickness. Indeed, at the end of the study, it was noted an increase of the diameter of hair shaft, while the results of phototrichogramma showed an increase in the number of hair in anagen phase (+9,32%), and a decrease in the number of hair in telogen phase (-8,54%), indicating a good activity of this product. This activity was confirmed by the results of pull-test, that showed an increase of resistance to the levy in pulling the hair.

The volunteers’ opinion about the cosmetic efficacy confirmed this results; in particular the lotion was appreciated because it promotes new hair regrowth (reported by 68% of subjects), it induces an increase in the thickness of hair (reported by 68%) and it strengthens hair (reported by 92%).

Furthermore the product was appreciated for his cosmetic qualities, especially for his pleasant smell, because it is easy to apply and it does not grease the hair.

At last, under the experimental conditions adopted in this trial, on the basis of the dermatologic control and the subjective evaluation of volunteers, this cosmetic lotion showed an excellent cutaneous tolerability.
References


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