Novelties in the field of treatment of Vitiligo: DHA, caramel and Rattany that acts even as UV screen

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ABSTRACT

In this study we propose a gélée made of DHA, Rattany and caramel to attempt to defeat Vitiligo (at diverse percentage of depigmentation of the whole body) in 9 volunteers. The revolutionary approach is that we had previously treated the same 9 volunteers using the single ingredient (idest: only DHA, only Rattany, only caramel) for an entire month, before to treat them with the gélée we had created. We have observed that time of remission was one month for all the 9 cases. One volunteer was a black woman: her results were really amazing.

Key words: Vitiligo; DHA; Rattany; Caramel; Self tanning products

Vitiligo is a long-term skin condition characterized by patches of the skin losing their pigment. The patches of skin affected become white and usually have sharp margins [1]. Generally the patches begin on areas of skin that are exposed to the sun. It is more noticeable in people with dark skin [2]. Vitiligo may result in psychological stress and those affected are often stigmatized [3].

The exact cause of vitiligo is unknown [1,4]. It is believed to be due to genetic susceptibility that is surely evoked by an environmental factor such as an autoimmune disease [1,2,5]. All this yields to the destruction of skin pigment cells. Risk factors include a family history of the condition or other autoimmune diseases, such as hyperthyroidism, alopecia areata, and pernicious anemia [2]. It is not contagious. There is no known cure for vitiligo. For those with light skin, sunscreen and makeup are all that is typically recommended. Another treatment is phototherapy to darken the light patches [1,6]. Alternatively, efforts to lighten the unaffected skin, such as with hydroquinone or methylhydroquinone, may be tried especially in black people [2]. Globally about 1% of people are affected by vitiligo. In India and circumstant lands people affected

by vitiligo show rates as high as 2–3% [7,8]. Vitiligo has been described since ancient history [1,9].

Too often vitiligo may be mistaken for other malaises as: Pityriasis alba; Tuberculoid leprosy; Tinea versicolor; Albinism; Piebaldism (the syndrome of the bald eagle); Progressive macular hypomelanosis; Primary adrenal insufficiency [10-11].

The efficacy of Dihydroxyacetone (DHA) was discovered in early 50s of XX century in Germany, when it was administered as artificial sugar to diabetic children.

Effectively too many young patients could not bear the disgusting flavor of the synthetic sugar, regorged it and just puked their skin resulted dark and hyperpigmented.

In 60s DHA began to appear in manifold cosmetic items for self tanning, even skin showed a vermilion nuance and even the artificial tanning (camouflage) was never uniform and homogenous and then its employ was progressively abandoned at all.

In this study we want to propose a gélée made of: Dha; Krameria Triandra Root Extract; Caramel.

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Rhatany (or rattany), plant native to Perù' and other countries of Latin America is extremely rich in anthraquinones as emodin and chrysophanol that reveal a magnificent sunscreen activity especially against UVB rays.

The biological action of rhatany is caused by the astringent rhataniatannic acid, which is similar to tannic acid. Infusions have been used as a gargle, a lozenge, especially when mixed with cocaine as a local hemostatic and remedy for diarrhea [12]. When finely powdered, the dried roots furnished a frequent constituent of tooth powders. The powdered roots have also served, especially in Portugal, to color wines ruby red. The root bark contains an almost insoluble free red substance called ratanhia red.

Caramel is a typical routinary ingredient for manifold self tanning cosmetics all over the world, but it is always employed alone with no other ingredient which may reveal self tanning function.

It does not bespeak satisfactory and replicable results, even in the same person's skin.

MATERIALS AND METHODS

Our experience is based on the treatment of 9 (a,b,c,d,e,f,g,h,i) volunteers suffering from Vitiligo, at diverse percentages of incidence, till 30% of depigmentation of the whole body, treating:

A,b,c with only DHA

D,e,f with only Krameria triandra

G,h,i with only Caramel

For an entire month of cure.

It must be considered that Case G is a black woman, and this undoubtedly plays a role in the experimentation.

After this previous treatment, all of them were prayed to use our combinaison:

DHA, Rattany and caramel together.

And we have recorded and thus plotted all the times of remission of the single cases.

We kept on account the % of depigmentation, in order to be more scrupulous.

Table 1: The times necessary for each case to show a complete tanning of the areas affected by Vitiligo are scored

Case	% of depigmentation the entire body	Ingredient used to treat Vitiligo	Colour of skin patches after 3 days	Colour of skin patches after 9 days	Colour of skin patches after 14 days	Colour of skin patches after 21 days	Colour of skin patches after 31 days
A	22	DHA	Pink	Coral	Reddish	Vermillon	Crimson
B	18	DHA	Pink	Pink	Light red	Vermillon	Scarlet
C	11	DHA	Coral	Light red	Burgundy red	Amaranth	Pigeon blood ruby
D	9	Rattany	Magenta	Bordeaux	Cherry	Cherry	Light falun red
E	20	Rattany	Pink	Pink	Sangria	Terracotta	Sienna's hearth
F	17	Rattany	Pink	Pink	Rust	Cardinal red	Crimson
G	14	Caramel	Rose félicité parmentier	Rose félicité parmentier	Rachel	Rachel	brownish
H	8	Caramel	Rose félicité parmentier	Café crème	Café crème	Valentine red	Garance (Alkanna)
I	16	Caramel	Rose queen of denmark	Rose reine victoria	Rose reine victoria	Rachel	Light red

Table 2: The colour the depigmented areas of the body assume at 3rd, 9th, 14th, 21th, 31th days, administering our combinaison of DHA, Rattany and caramel

Case	Colour of skin patches after 3 days	Colour of skin patches after 9 days	Colour of skin patches after 14 days	Colour of skin patches after 21 days	Colour of skin patches after 31 days
A	Pink	Rachel	Marc' spirit	Flesh color	Flesh color
B	Rachel	Rachel	Rachel	Shocking pink	Flesh color
C	Cherry	Cherry	Marc'spirit	Flesh color	Flesh color
D	Vermillion	Vermillion	Marc'spirit	Flesh color	Flesh color
E	Pink	Shocking pink	Flesh color	Flesh color	Flesh color
F	Pink	Pink	Pink	Rachel	Flesh color
G	Rose tea	Rose tea	Vermillion	Brown	Dark brown
H	Rose félicité parmentier	Rose félicité parmentier	Vermillion	Light red	Flesh color
I	Pink	Pink	Pink	Rose bourbon	Flesh color

We prayed the volunteers to expose to summer sun rays almost one hour pro day at the same hour, that is at midday, when UVA, UVB, UVC and IR rays are concomitant (as we have stressed before *Krameria triandra* root extract exhibits a noticeable action against harmful sun rays).

RESULTS

In Table 1 the times necessary for each Case to show a complete tanning of the areas affected by Vitiligo are scored, when all volunteers were treated with: Only DHA; Only Rattany; Only Caramel. The colour the depigmented areas of the body was presented in table 2.

CONCLUSION

It is suggestive to notice that the volunteers presenting a high percentage of depigmentation, show a slower decrease of pigmentation using our combinaison (A,E,I).

In the volunteers who show a lower percentage of depigmentation, we have stated the depigmentation begins at the 3rd and it is faster day after day.

In any case a flesh color is always reached in all cases at the end of treatment (generally after the 27th day of cure).

Case G is very intriguing, as since the very first days patches assume a pinkish color, growing dark brown at the end of the month of treatment.

Black people, we could assert, are more amenable to our self tanning combinaison.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

Statement of Informed Consent

Informed consent was obtained from all patients for being included in the study.

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