

## A COMPARATIVE STUDY OF CLINICAL EVALUATION OF LEUKOD TABLET & LEUKOD OINTMENT (BOTH KALPITAYOGAS) IN THE MANAGEMENT OF SWITRA ROGA W.S.R. TO VITILIGO

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### ABSTRACT

**Background:** The disease concerned to “Switra” (compared with Vitiligo) a common depigmentary disorder of great medico social significance among dark races. Moreover, where somatic disturbance lies in the loss of defense against solar radiation mainly by UVR causing sunburns, skin cancer, solar keratosis and premature aging, the psychic disturbance being major problem lies in non adjustment in the society and even in the family fear of spread, cosmetic problem and suicidal tendency, especially in girls, is a setup like India creates a big psychological complex among the whole family. The need of study is because the modern treatment employed for vitiligo is unsatisfactory. **Aim:** To evaluate the *Switra Roga* as elaborated various Ayurvedic texts in the modern light and *Leukod* tablet & ointment in the management of *Switra Roga* with special reference to vitiligo on various scientific subjective & objective parameters. **Material and Method:** The study was conducted in 30 clinically diagnosed patients of vitiligo were divided into three groups of ten each. Patients were treated with *Leukod* ointment in the term of topical administration twice daily and *Leukod* tablet 2 tablets (500mg) orally thrice in a day with lukewarm water for 3-6 months. Results were analyzed using Symptoms Rating Scale devised by Sharma et al. for subjective parameters and for assessment of objective parameters paired *t*-test was adopted. **Results:** At the end of study, drugs has shown beneficial effect in patients of *Switra*(Vitiligo) by providing highly significant clinical improvement in chief complaints, associated symptoms. It has also improved quality-of-life (QOL) of the patients. Mild and moderate improvement was observed in 45.0%, 71.8% and 89.24% of the patients of group 1<sup>st</sup>(Ointment group), 2<sup>nd</sup>(Tablet group) and 3<sup>rd</sup>group(mixed group) respectively. **Conclusion:** *Leukod* ointment along with *Leukod* tablets has produced highly significant results on clinical features of *Switra Roga* and hematological recovery in the patients of *Switra* Vis-à-vis Vitiligo.

**Keywords:** Vitiligo, Dermatology, Switra, Leukod Tablet&Ointment.

### INTRODUCTION

In general vitiligo known as ‘Phuleri’ or ‘Sunbehri’ in India, while in Ayurvedic classics “Switra” or “*shveta kusta*” is the name given to it. Ayurvedic medicine has at-

tracted the interest of whole medical fraternity towards it because of its holistic approach, safe medications and a range of unique therapeutic modalities. Today world expects and

wants to verify, the most ancient medicinal system, the Ayurveda for various ailments. There has been amazing resurgence of interest about Ayurveda throughout the world and gradually Ayurveda is becoming a global scientific medic discipline and serving the mankind. Modern civilization has absolutely changed the concept of diet and life style, adding to our day-to-day comfort but leading to various disagreeable acute and chronic ailments. Disease is an inseparable companion of human life, started from the beginning of the human race. In Ayurveda more and more stress is laid over the principle of socio-biological codes of promotion of positive health of masses. For this purpose various types of modalities and regimens viz *Dincharya* (day to day life), *Ratricharya* (life style in night), *Ritucharya* (life according to season), *Sadvritta* (good habits), *Achara Rasayana* (good manners), *Ahar Vidhi* (mode of intake of food), concept of *Virudha Ahara* (incompatibility) etc. were described in various Ayurvedic classics. Due to frequent indulgence in *Mithya Ahara-Vihara*(life style in wrong way), *Virudha Ahara* (incompatibility) and *prajyaparadha* (life style in wrong way ) the incidence of various psychosomatic disequilibria including dermatological diseases like *Kustha* (skin disease), *Kilasa* (a type of skin disease) are increasing very rapidly, which are not only disturbing the physical health but also producing the mental trauma by cosmetic disfigurement.

In “Ayurvedic Dermatology” a number of skin disease have been described in *Kustharogad-*

#### Constituents of Leukod Tablet

Constituents	Latin name	Amount
<i>Bakuchi Ghansatva</i>	<i>Psoralia corylifolia</i>	3Kg
<i>Kutki Ghansatva</i>	<i>Picrorhiza kurroa</i>	500gm
<i>Chitrakamool Ghansatva</i>	<i>Plumbago zelanica</i>	500gm
<i>Pippali Ghansatva</i>	<i>Piper longum</i>	500gm
<i>Nimba beeja Ghansatva</i>	<i>Azadirechta indica</i>	500gm

*hikara, Kshudrarogadhikare* mainly and with other diseases in a scattered pattern. The disease concerned to “Switra” is a *Tridoshaja Vyadhi* and a common depigmentary disorder of great medicosocial significance among dark races, described in the chapter of “*Kustha*”. Moreover, where somatic disturbance lies in the loss of defense against solar radiation mainly by UVR causing sunburns, skin cancer, solar keratosis and premature aging, the psychic disturbance being major problem lies in non adjustment in the society and even in the family fear of spread, cosmetic problem and suicidal tendency, especially in girls, is a setup like India creates a big psychological complex among the whole family. The modern treatment employed for vitiligo is unsatisfactory. An ideal drug should cure particular disease without creating any problem. Ayurveda has a lot to offer in the direction of the treatment of *switra* with its herbals treasures, animal products and *Rasa Aushadhi* combination. This principle intended me to work with *switra* by the help of an indigenous formation (Kalpita Yoga) Leukod used both topically and orally. Various drugs, which are *yakritauttejaka, shrotoshodhaka, rakta-ranjaka, pitta-virechaniya* and *pitta-virajniya*, are likely to arrest the progress of the disease and may produce good results in the form of restoration of the normal texture of the skin. Both tablet & ointment posses multifold properties indicated in *switra chikitsa* and due to property to pacify vitiated *Doshas* in *Twak* and *Dhatu* it was considard useful to evaluate its efficacy clinically on specific parameters.

Amalaki Ghansatva	<i>Emblica officinalis</i>	500gm
Lal Chandana Ghansatva	<i>Pterocarpus santalinus</i>	500gm
Bhringaraja Ghansatva	<i>Eclipta alba</i>	500gm
Khadira Shara Ghansatva	<i>Acacia catechu</i>	500gm
Tamra Bhasma		500gm
Swarna Makshica Bhasma		500gm
Kasisa Bhasma		500gm

#### Constituents of Leukod Ointment

Constituents	Latin name	Amount
Bakuchi beeja	<i>Psoralia corylifolia</i>	550gm
Tulsi beeja	<i>Ocimum sanctum</i>	550gm
Chakramarda	<i>Cassia tora</i>	550gm
Pippali	<i>Piper longum</i>	550gm
Ankol beeja	<i>Alangium salvifolium</i>	550gm
Daruharidra	<i>Berberis aristata</i>	550gm
Chitrakamoola	<i>Plumbago zelanica</i>	550gm
Eranda beeja	<i>Ricinus communis</i>	550gm
Karanja beeja	<i>Pongamia pinnata</i>	550gm
Gunja	<i>Abrus precatorius</i>	550gm
Tutha		550gm
Kasisa		550gm
Haritala		550gm
Mustard Oil		550gm
Go Mutra + Hastimutra		88litres

#### Aims and objectives

- Conceptual evaluation of *Switra Roga* as elaborated various Ayurvedic texts in the modern light and clinical evaluation of *Leukod tablet & ointment* in the management of *Switra Roga* with special reference to vitiligo on various scientific parameters.

#### Materials and Methods

Patients fulfilling the criteria for the diagnosis of the disease were registered for the present study irrespective of age, sex, religion, occupation etc., a total of 30 patients in three groups each of 10 patients suffering from *Switra* (vitiligo) were selected from OPD and IPD wing of Kayachikitsa National Institute of Ayurveda, Hospital, Jaipur on the basis of a specific proforma prepared according to sign

and symptoms as described in *Charaka Samhita* for *Switra* (Ch.S.Chi.7/174), *Sushruta Samhita*(Su.S.5/17) and various sign and symptoms of vitiligo as described in modern texts.

#### Criteria for selection of patients

##### Inclusion Criteria

The diagnosis of these patients was confirmed on the basis of signs and symptoms described in Ayurveda of *Switra* and modern text as follows:-

- Colour of patches
- *Shveta* (white)
- *Tamra* (copper colour)
- *Raktabh* (reddish)
- *Daha* (burning sensation)
- *Kandu* (itching)
- *Romashatana* (lose of hair)

- *Atisweda* (oiling touch)
- *Rukshata* (roughness)
- White hair on the patches
- Percentage of affected area according to “Nine of Rule” of burn.

All the patients were examined and assessed by detailed history, through clinical examination and relevant laboratory investigations to establish final diagnosis.

#### **Exclusion Criteria**

- The Vitiligo cases, which have been diseases more than ten years.
- The Vitiligo cases accompanied with Tuberculosis, Malignancy or any other major chronic illness.

#### **Laboratory investigations**

- Hemoglobin gram percentage (Hb%).
- Erythrocyte Sedimentation Rate (ESR) rate in mm. for 1<sup>st</sup> hour.
- Total Leukocyte Count (TLC) per cu.mm.
- Differential Leukocyte Count (DLC) per cu.mm.

These investigations were done in all the patients before treatment and after completion of treatment.

#### **Criteria for assessment**

Assessment was done by considering change in the subjective as well as the objective parameters before the treatment and after the treatment. Patients were assessed clinically every 7days for evaluation of improvement for a period of 30days. The changes observed in the signs and symptoms were assessed by adopting suitable scoring method and the objective signs by using appropriate clinical tools.

- Subjective Parameters (Ayurvedic): Signs and symptoms of *Switra Roga*,
- Objective Parameters: Hb gram %, ESR in mm for 1<sup>st</sup> hour, TLC per cu.mm., DLC per cu.mm..

#### **Fallowed up study**

After the completion of 21weeks of the treatment, all the patients were kept under observation for 1- month. During the follow-up study, further improvement or deterioration or no change in the signs and symptoms was recorded.

#### **Plan of treatment**

Thirty clinically diagnosed patients of vitiligo were randomly divided into three groups of ten each. First group was given only *Leukod* ointment in the term of topical administration twice daily for 3-6 months, second group was given orally administration of *Leukod* tablet in the dose of 2 tablets (500mg) T.D.S. in a day with lukewarm water for 3-6 months. Third group was treated with both, administration of *Leukod* tablet and *Leukod* ointment of affected parts together in the dose and schedule as mentioned above.

#### **Drugs detail**

All the raw drugs of *Leukod* ointment and tablet were procured from Pharmacy, National Institute of Ayurveda, Jaipur. The correct identity and authenticity of raw materials were confirmed by studying its organoleptic and powder microscopy then comparing them with the characters mentioned in Ayurvedic Pharmacopoeia of India (API). Later, subject experts of Pharmacognosy Department further confirmed identification.

#### **Observations**

For the current research work 30 clinically diagnosed patients of Switra (Vitiligo) were selected and randomly divided in following three groups of ten patients each. The present study has shown higher incidence of Switra (Vitiligo) in 2<sup>nd</sup> decade of life persons of vatapittaja, vatakaphaja and pittakaphaja prakriti with rajas temperaments. Males dominated the series. The incidence of Switra (Vitiligo) was significantly high in the patients of middle group of socio-economic status having vegetarian habits. The disease runs a chronic

course. Educated people were found to be in high number, madhyama and kroora kostha with.....On clinical evaluation it was indicated that there was a considerable improvement in subjective parameters. Majority of the patients demonstrated a significant increase in well being after the therapy in all the three groups - more in third group. There was statistically significant improvement on certain clinical parameters in all the three groups. On intra group comparison there was 43.33% improvement in clinical parameters in group 1<sup>st</sup>(Leukod ointment group), 64.70% improvement in group 2<sup>nd</sup>(Leukod tablet group) and 73.52% improvement in clinical parameters in group 3<sup>rd</sup>(combined group). It was general observations that although there was statistically clinical improvement in all the three groups, but the rate of improvement was moderate (significant) in 1<sup>st</sup> group and maximum improvement (highly significant) was noticed in 2<sup>nd</sup> and 3<sup>rd</sup> groups.

### Results

At the end of study, drugs have shown beneficial effect in patients of *Switra* (Vitiligo) by providing highly significant clinical improvement in chief complaints, associated symptoms. It has also improved quality-of-life (QOL) of the patients. *Leukod* ointment therapy when employed in the treatment of *Switra* produced significant improvement in clinical manifestations. *Leukod* tablet when used in new and uncomplicated cases of *Switra* produced highly significant clinical improvement. When *Leukod* ointment and *Leukod* tablet respectively were used simultaneously it showed highly significant results than the other two groups. Overall percentage of improvement was observed 45.0%, 71.8% and 89.24% improvement of the patients of group 1<sup>st</sup>(Ointment group), 2<sup>nd</sup>(Tablet group) and 3<sup>rd</sup>group (mixed group) respectively.

### DISCUSSION

*Switra* is a *Tridoshaja Vyadhi*. As stated earlier that in the process of development of *Switra* vitiated *Doshas* attacks all over skin of body leading to clinical manifestations like *Twaka vaivarnya* (white patches). This clinical entity is termed as *Switra*. In addition certain other manifestations are also seen in *Switra*, which include *Kandu*, *sravabhava*, *daha*, *paridhvanshi* and *parushya*. *Switra* is described in various Ayurvedic texts briefly. The line of management of *Switra* is exactly like principles of management of *Kustha* in Ayurveda. It is important to understand while deciding the prognosis of *Switra* it depends on several factors. If the number of patches involved is very less, patches are thin and newly born : patches are isolated one, patches with black hair, the onset of disease is not of long standing and if the patient is of young age then the management of *Switra* on Ayurvedic principles will yield good results. On the other hand if patches are long standing, many, collapsed together, lesions due to burn and lesion of private parts then the prognosis of *Switra* is not good. *Leukod* tablet is a potent compound preparation. It is worth mentioning here that this compound contains potent *Tridosh Shamaka Prabhava*. *Leukod* tablet has specific properties to pacify the vitiated *Doshas* in *Twaka* leading to arrest of the pathogenesis and progress of the disease *Switra*. The *Leukod* ointment is also a potent compound preparation used in the form of local application, in *Switra*. This is improving the blood supply and activates the local metabolic processes, which are responsible for regimentation in affected area of *Switra*.

### CONCLUSION

*Leukod* ointment is an effective remedy in uncomplicated and new cases of *Switra Roga* (Vitiligo), but it has play limited role in the

management of chronic cases of *Switra Roga* (Vitiligo). *Leukod* tablet has shown much better result in patients of *Switra Roga* (Vitiligo) in comparison to *Leukod* ointment. Patients of *Switra Roga* (Vitiligo) when treated with *Leukod* ointment, *Leukod* tablet and mixed therapy have shown mild, moderate and maximum responses respectively. The administration of *Leukod* ointment along with *Leukod* tablets has produced highly significant results. The management of patients of *Switra Roga* (Vitiligo) with *Leukod* ointment and *Leukod* tablet has shown highly significant clinical and hematological recovery without any serious complications. Therefore it can be concluded that *Leukod* ointment along with *Leukod* tablet is a very potent remedy for the management of *Switra Vis-à-vis* Vitiligo.

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