



Journal Homepage: - www.journalijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI: 10.21474/IJAR01/3803
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/3803>



RESEARCH ARTICLE

CERTAIN WORKS DONE ON SHWITRA (VITILIGO) BY AYURVEDIC MANAGEMENT: A BRIEF REVIEW.

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Manuscript Info

Manuscript History

Received: 20 February 2017
 Final Accepted: 11 March 2017
 Published: April 2017

Key words:-

Ayurveda, Review, Shwitra, Vitiligo

Abstract

In Ayurveda, *Shwitra* has been listed to be the worst amongst *Kushtha* to cause disfigurement of the body. *Shwitra* is considered as one of the varieties of *Kushtha* in the *Ayurvedic* Classics, caused vitiation of *Tridoshas* and *Dhatus* like *Rakta*, *Mansa* and *Meda*. Based on Symptoms, *Shwitra* can be correlated with Vitiligo. Vitiligo is the problem described in the modern medicine as auto immune disease which manifest as white spot on the skin. *Ayurveda* has incorporated this condition into the broad heading of *Shwitra*. The *Shwitra* is the group of symptoms which manifest as the spot on the skin and causes cosmetic imbalance body which ultimately leads to many socialized psychological stigma in life of the patient. Considering the significance of therapeutics, a number of studies of different levels have been carried-out in the various PG Departments of various colleges of universities. Total ten studies were screened, which compiled the impact of classical and clinical guidelines, safety issues and therapeutic utilities in the management of *Shwitra* (Vitiligo).

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Introduction:-

Ayurveda emphasizes on maintenance of positive health and alleviation of the diseases engulfing human kind^[i], among which skin diseases are one, which are visible and agonizing the individual psycho-somatically^[ii]. With the increase awareness and global acceptance, it is a need of time to work on individual *Karma* with different formulation in different diseases in a scientific manner. Vitiligo is such a common chronic and progressive skin disease characterized by the lack of melanin pigments producing skin patches with sharp and often hyper pigmented edges. This disease affects approximately 1% of the world-wide population^[iii]. Vitiligo is the problem described in the modern medicine as auto immune disease which manifest as white spot on the skin. *Ayurveda* has incorporated this condition into the broad heading of *Shwitra*. There are two main line of treatment chiefly described in the classics. These are *Shodhana* (bio-purification) and *Shamana* (palliative therapy)^[iv]. *Shodhana* (*Panchakarma*) are unique therapies of *Ayurveda*, which attract the attention of the suffering people for the satisfactory treatment of various chronic, autoimmune, degenerative, hormonal and metabolic disorders on one side and on the other side, it is gaining global reorganization for its preventive and primitive aspects^[v]. *Shodhana* therapy is superior to the

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Shamana therapy as the former removes the ailment permanently. The *Shodhana* therapy not only cures the diseases but also makes the body more immune and so fulfils both the aims of *Ayurveda*^[vi]. Three hypotheses are prevailing about the etiology of the disease like self-destruction theory, neurological theory and autoimmune theory. None of them is satisfactory yet most of scientist has considered Vitiligo as autoimmune. One popular theory is that melanocytes are the target of a cell-mediated autoimmune attack and why only focal areas are affected that remains unexplained^[viii].

Materials and Method:-

Works carried-out in the various departments of various colleges of universities at PhD and PG levels during 2001-2015 were compiled and screened to provide rational of Ayurvedic therapeutics.

Results and Observations:-

Tiwari S.K. (2001)^[viii]: Under the title Evaluation of the efficacy of *Dhatrayadi Yoga* (Internal) and *Avalgujadi lepa* (external) along with and without *Shodhana* (*Vamana*) in *Shwitra* (with special reference to Vitiligo) is said to have efficacy in relation to regulate *Shwitra* i.e. Vitiligo. Out of 30 patients all satisfied with the treatment schedule and expressed normalcy both symptomatic and on patch colour index. The P value shows high significance as $P < 0.001$. The result is as follows. 60% of patients got cured and 40% have remarkable relief without showing any kind of adverse effects.

Venkaraddiyavar B.H. (2006)^[ix]:-

The present study was under taken to evaluate the effect of *lepa* along with *shamanoushadhi* in the management of *Shwitra*. The complete cure was observed, 6.66% i.e.2 patients, who are having small lesion and recent onset. The remaining patients were also relieved moderately, from their symptoms. Clinical and statistical analysis reveals that the systemic corrections can be done with internal preparation and the local stimulation by synthesis of melanin through external application may be effective in the management of *Shwitra* vis-à-vis Vitiligo.

Manisha Goyal (2008)^[x]:-

Total 44 patients were registered for the clinical trial of *Karpanpatru Taila*. Patient having classical sign and symptoms of *Shwitra* were selected and randomly divided into three groups from the O.P.D. & I.P.D. of I.P.G.T. & R.A., Gujarat Ayurved University, Hospital, Jamnagar. Group A and B contains 15 patients in each group out of these 12 patients were completed their course while 3 patients were LAMA. In Group C 14 patients were registered. Here 12 patients were completed their course and 2 patients were LAMA. Group A- *Karpanpatru Taila* prepared by *Gomutra*, Group B- *Karpanpatru Taila* prepared by *Kanji* and Group C- *Karpanpatru Taila* prepared by *Takra* was applied externally. *Karpanpatru Taila* (Q.S.) applied once/day followed by exposure to sunlight for 5 minutes in the morning for 8 weeks and 4 weeks of follow up period. *Karpanpatru Taila* prepared with *Takra* (Group B) as liquid media showed better result in clinical study than other groups i.e. Group A and Group C.

Jayawardana C. T. (2009)^[xi]:-

When comparing two different treatment groups i.e. *Bakuchi Haritala Yoga* group and *Bakuchi Thailaya* group with each other, the higher relief of the symptoms was observed in *Bakuchi Haritala Yoga* group. Probable mode of action of *Bakuchi Haritala Yoga* was proved in *Ayurvedic* concept of *Varnotpatti* (formation of colour) and *Guna* (properties), *Karma* (action) theory. A least effect on *Shwitra* was shown by *Bakuchi Thailaya* when compared to *Bakuchi Haritala Yoga*.

Mittalakod K.S. (2009)^[xii]:-

The study was single blind prospective clinical trial and carried out by single group method. Clinical trial was conducted over 30 patients with confirmed diagnosis of *Shwitra*. Each patient was given 65mg of *Shwitrari rasa* once with honey, per day 65 mg is increased up to 60 days and *Shwitra lepa* is given for external application along with *Jala* for 30 days with 15 days of follow up period. The complete cure was observed, 6.66% i.e 2 patients who are having small lesion and recent onset. The remaining patients were also relieved moderately; from their symptoms. The result reveals that *Shwitrari rasa* and *lepa* has got good result against *Shwitra*. *Shwitrari rasa & lepa* has shown better zone of inhibition of *Shwitra* compared to modern drugs.

Deepika Tyagi (2010)^[xiii]:-

For present study 20 patients who fulfilling the clinical criteria for diagnosis of *Shwitra* were randomly selected and subdivided into two groups, 10 in each group. In both groups *Haritakyadi Shodhana Yoga* (prior to *Shamana Chikitsa* for *Shodhana*). Group A: *Khadiradi Yoga* (internally) 6gms thrice & *Khadiradi Taila* (externally) accord to patch. Group B: *Kakodumbara Vati* (internally) 6gms thrice & *Kakodumbara Taila* (externally) accord to patch. In both group *Taila* is use for external application with sun exposure for 10-15 min. The treatment was continued for 2 months and patients were advised to follows a specific diet restriction. Regarding overall effect of both therapies, Moderate improvement was seen in 40% of patients of group A and 60% of patients of group B. 60% of patients were found under Mild improvement in group A and 40% of patients in group-B. Complete remission was not seen in any patient of both groups.

Bhagyesha K. (2011)^[xiv]:-

The present double blind placebo control clinical study designed on 4 groups randomly in 40 patients (10 each) to assess the efficacy of real drugs (*Ankolakadi capsule* and *lepa*) and level of impact of placebo on *Shwitra* which is considered to be influenced by the psychosocial factors. Each group consisting of 10 patients were treated with both *abhyantara* and *bahyaprayoga*. Internal *Yogas* are in the form of capsules are advised in 500mg, 6 capsules in 3 divided doses per day. *Churna* is advised to apply over lesion with warm water and exposure to sunlight for 30 min. Group (Zx) treated with internal *Ankolakadi yoga* and *Bahya prayoga* with placebo. Group (Tx) treated for internal placebo and *Bahya prayoga* with *Ankolakadi lepa*. Group (Xx) treated with internal *Ankolakadi yoga* and *Bahya prayoga* with *Ankolakadi lepa*. Group (Ox) treated with internal Placebo and *Bahya prayoga* with placebo. Effective results showed in medicine groups are (Group Tx and Group Xx). All the groups are responded equally for Hamilton anxiety scale, all group shows significant results.

Patel N. L. (2013)^[xv]:-

In this study total 30 patients of *Shwitra* were registered and randomly divided in two groups by Simple Random Sampling method (Coin toss method). Group A: *Virechana* group - 15 Patients of *Shwitra* were treated with classical *Trivritadi yoga Virechana Karma* followed by internally *Dhatryadi Kwatha* for 6 weeks and externally *Manahshiladi lepa* up to the blister formation or max. 2 months. Classical *Virechana Karma* includes *Dipana, Pachana, Snehapana, Abhyanga & Svedana*, administration of *Samshodhana Kalpa* and *Samsarjana Krama*. Group B: *Shamana* group - 15 patients of *Shwitra* were treated with *Dhatryadi Kwatha* internally for 6 weeks along with *Manahshiladi lepa* up to the blister formation or max. 2 months for local application. The result of both therapies were statistically highly significant with their *Pitta* reducing effect but the results of the *Virechana* as a *Shodhana* therapy are better compare to those obtained in *Shamana* Drug. It emphasizes the importance of *Shodhana* in *Shwitra* (Vitiligo).

Pandurang I.P. (2014)^[xvi]:-

30 patients having clinical features of *Shwitra* (Vitiligo) willingly participated in study were randomly divided in two groups from S D M *Ayurveda* Hospital, Hassan. Out of a total 30 patients taken for the study, six dropped out in middle and did not continue treatment. The left out 24 patients constituted of 11 in placebo and 13 in treated group. *Trikatu Churna* 1gram thrice daily with *Ushnodaka* was administered before food for two days prior to *Snehapana* for *Pachana* and *Agnideepana*. Starting from 30 ml per day *Moorchita Goghruta* was administered for *Snehana* by increasing it by another 30ml per day until the appearance of *Kosta Snigdha Lakshanas*. *Abhyanga* was then carried out with *Moorchita Tilataila* daily followed by *Sarvanga Swedana* (for five minutes) for three days. 20 gram of *Aragvadha Phala Majja* was then administered with warm *Ksheera* on third day after *Abhyanga* and *Swedana*, in the morning in empty stomach. 1 gram of *Khadirasara* was mixed with 100ml of drinking water and was advised for drinking by both groups of patients. After this, patients of both the groups were advised to apply the placebo daily in the morning on the Vitiligo patches with *Ewe's milk* and were advised to expose the patches to the sunlight for 15 minutes and trial drugs given to them daily once for two months. After treatment, there was significantly increased number of black spots in the lesion on an average by 31% and improved colour of patches towards the normal on an average by 38.33% while there was 19% reduction in size of patches in treated group patient. Overall the placebo had no effect on any of the criteria taken in the present study. Overall trial drug is found to be more effective in altering the colour of the patch.

Jadav H.R. (2014)^[xvii]:-

Total 55 patients of *Shwitra* were registered and randomly divided in two groups with the help of computer generated random selection method viz. Group A- *Apamarga Kshara Yoga Lepa* (*Apamarga Kshara* and

Manahshila with in *Gaumutra*) and Group B- *Apamarga Kshara Yoga* Ointment (prepared by same as *Lepa* but added *Siktha Taila* as a base for Ointment was used) in Quantity sufficient for local application in both the groups and *Rasayana churna* 3 gm with *Madhu* and *Ghrita*. The study was cleared by the institutional ethics committee (PGT/7-A/2012-2013/1964/23 dated 21/09/2012). The trial was register in Clinical Trial Registry of India (CTRI) (CTRI/2012/11/003157 dated 30/11/2012). Clinically *Apamarga Kshara Yoga Lepa* (Group A) exhibited significant result in comparison to *Apamarga Kshara Yoga* ointment (Group B). Comparison in between the groups is insignificant. So both drugs are effective in treating *Shwitra* (Vitiligo). No any another side effects have been reported by the patients during the study or in follow up time.

Raghwani H.U. (2014)^[xviii]:-

In this study total 92 patients of *Shwitra* were registered and randomly divided in three groups by lottery Random Sampling method. Group A, Group B & Group C. Group A- Classical *Vamana Karma* was given. Group B- Classical *Virechana Karma* was given. In both of these groups; oral administration of *Darvigomootra Ghanavati* 6gm/day with the *Apamargkshara Lepa* for duration of 8 weeks were given after *Shodhana*. Group C- Oral administration of *Darvigomootra Ghanavati* 6gm/day with the *Apamargkshara Lepa* for duration of 8 weeks.

Darvigomootra Ghanavati: Prepared with *Darvi* (*Berberis aristata*) and *Gomootra* (Cow Urine) by the classical method of *Ghana Kriya*.

Apamargkshara Lepa: Prepared with *Apamargkshara* and *Gomootra*.

Study was registered in Clinical Trial Registry of India with no. CTRI/2014/09/005004. The result of both *Shodhana* therapies were statistically highly significant though no significant difference was found between *Vamana* & *Virechana* therapy, hence *Virechana Karma* can better management of *Shwitra*. Only *Virechana* group provided marked improvement and it is easy to perform with less complication and it emphasizes the importance of *Shodhana* in *Shwitra*.

Shingadiya R. (2015)^[xix]:-

In this study, total 60 patients of *Shwitra* were registered, 52 completed and randomly divided in two groups, Group A and Group B with the help of computer generated random selection method viz., Group A (n=24): Treated with *Savarnakara Lepa*^[xx] prepared by using equal quantity of *Ashuddha Haratala* and *Bakuchi* with in *Gaumutra* (cow's urine). Group B (n=28): Treated with *Savarnakara* Ointment prepared by same ingredients as *Lepa* but added *Siktha Taila* as a base for Ointment was used. *Kanakabindvarishta* was administered internally in both groups. Dose of External Drug: Quantity sufficient for local application in both the groups and for Internal Drug: *Kanakabindvarishta*^[xxi] -20 ml twice a day with equal quantity of water. The study was Randomized open trial study cleared by the institutional ethics committee (PGT/7-A/Ethics/2013-2014/1767). The trial was register in Clinical Trial Registry of India (CTRI) (CTRI/ 2013/12/004232). Clinically *Savarnakara Lepa* (Group A) and *Savarnakara* ointment (Group B) are equally effective in Cardinal Symptoms (Colour, Number, Area and Size of patches) and associate Symptoms (*Mandalottapatti*, *Rukshata*, *Saparidaha*, *Bahalatva* and *Kandu*) of *Shwitra* (Vitiligo). Due to having very short duration of treatment (2 months) and smaller sample size (52); no patients reported in complete cure group.

Discussion:-

The skin is the largest and most visual organ of the human body. *Shwitra* is most blemishing disease compared to other dermatological problems. The condition which has white colour vitiated in skin is called '*Shwitra*'. *Acharya Charaka* has listed the *Shwitra* under the *Rakta Pradoshaja Vikara*^[xxii]. *Ayurveda* emphasized diet as an important etiological factor. Because *samyak yojita Ahara* leads to *indriya prasadana* and *varna prasadana*. But *Asamyak yojita Ahara* leads to several diseases. Hence *Twak* is also influenced by *Aharaja Nidana*, recent studies have been shown significant role of food as possible etiological factor in cause the disease. *Viruddha Ahara* i.e., incompatible diet is mentioned as the prime causative factor of *Kushta* in general and *Shwitra* in particular. These incompatible foods are responsible for the formation of *Ama* (endogenous antigen source). *Ama* may interfere with absorption nutrients which accepted as one of the etiological factor for Vitiligo as prolonged consumption of diet poor in protein and cupromineral was thought to be contributory factor for Vitiligo^[xxiii]. *Charaka* also opines that the *papakarma*, *guruninda*, unlawful acts, are also causes *Shwitra*. There is no logic which can be put forth regarding involvement of these *Nidana*.

Vitiligo is a condition in which only active (melanin-producing) melanocytes destroyed and the inactive melanocytes in the outer root sheath (ORS) of normal hair follicles are preserved and serve as the only source for the re pigmentation Recovery of Vitiligo is initiated by the proliferation of these inactive melanocytes, followed by the upward migration of inactive melanocytes to the nearby epidermis to form peri-follicular pigment islands^[xxiv]. The *Bakuchi* and *Kakodumbara* contain active principle psoralens and reaches at the inactive melanocytes getting concentrated into the cytoplasm which then increases the photosensitivity of the inactive melanocytes. Further this helps in synthesis of melanin pigment which is deficient in Vitiligo. Exposure to sunlight was advised to follow after the local application early in the mornings to patients because both the Psoralens and sunlight stimulate tyrosinase enzyme which is responsible for the melanin synthesis. The sunlight being radiant energy it may potentiates the action of external application. Thus may results in perfect permeability of drug through epidermis and which result in perfect stimulation of the melanocytes for their normal function melanogenesis. This increases the production of facultative melanin.

Acharaya Charaka has mentioned *Shodhana* therapy especially as a line of treatment of in *Shwitra*^[xxv]. According to *Harita Samhita* the specific line of treatment *Virechana* is given^[xxvi]. According *Charakacharya Svitra* has been considered under one of the *Rakta Pradoshaja Vikara*. So following line of treatment can be taken for consideration^[xxvii]. Diseases having blood as causative factor line of treatment is one pacifying *Rakta* and *Pitta*. Also, *Virechana*, *Upavasa* and *Rakta mokshana* can be given^[xxviii].

For any disease to manifest *Dosha-Dushya Samurchana* is must, that is nothing but what we say as *Samprapti*. This having maximum attention as *Samprapti vighatan* itself is the basic thought of treatment in any disease. So to understand probable mode of action of yoga we have to think how the quality of individual drugs of the yoga will act against the *Samprapti ghatakas*. *Shwitra* is a *Tridoshaj Vyadhi*. The ingredients of various internal *yogas* act over *tridoshas* and pacify them. External application i.e. lepa, ointments etc. having *ushana*, *teekshana* and *srotoshodaka* properties^[xxix]. The *veerya* of them reaches the *siramukha* of *swedavaha srotas* and reach the deeper layer *twaka* and it act locally to relive the *sanga*. By this the *samapurana* of *Bhrajaka pitta* takes place and hence normal function is noticed.

Conclusion:-

Above various studies on *Shwitra* conclude that better significant results can be achieved by *Shodhana* therapy (bio-cleansing) followed by *Shamana* (palliative) therapy and also with altered preparation of external application made by different medias. Those combine treatments may play major role in the management of *Shwitra* (Vitiligo).

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