

A COMPENDIOUS STUDY OF *ARJUNA* (*TERMINALIA ARJUNA* (ROXB.) WIGHT & ARN.) AND *LODHRA* (*SYMPLOCOS RACEMOSA* (ROXB.) WITH SPECIAL REFERENCE TO *VYANGA*

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ABSTRACT

It is competitive era; everyone wants to stand at top so that now a day's importance of beauty is increasing day by day. People are very much conscious for their personality & they are using various cosmetics not only for treatment purpose but these are essential part of their daily routine. Due to some Diseases natural beauty is getting spoiled, *Vyanga* is one of them. The *Vyanga* has very comprehensive meaning. It comprises all types of dark spot which occur on face we can't correlate only one disease in modern. In modern science many diseases can be included in *Vyanga*. Here we mainly emphasize the physical, nutritional and endocrinal hyper melanosis. "*Vyanga* is a painless

condition for body but it is painful for mind". In this research work, bark of *Arjuna* and *Lodhra* are used in the form of *Lepa* for external application and as *Churna* for internal use.

A clinical trial was conducted in total 30 patients in two groups. Findings of the study, efficacy and safety are quite impressive. Results observed on conclusion of the trial are fairly encouraging and useful.

INTRODUCTION

In the present scenario the people are very much conscious about their health as well as beauty also. Thus health and beauty are the two sides of the single coin. Face is the paramount important organ of the body. Face reflects the personality of a person. It is said that "*Face is the index of mind*". It reflects all the expressions e.g. joy, anger, sorrow, excitation etc. This most important and beautiful organ is affected by certain anomalies, amongst them *Vyanga* is one of them. *Vyanga* means any dark spot on the face. At present,

some diseases are quite challenging so as the Vyanga being one of them. It damages the the cosmetic value of the face.

Among the Ayurvedic amenities, Acharya Sushruta was the first and foremost to mention a whole group of such skin diseases which have an adverse effect on the appearance and personality of an individual. He named these maladies as Kshudra Roga. Almost Acharyas have considered Vyanga as a Khsudra Roga but Acharya Charaka has mentioned Vyanga as Raktadhatugata Vikara. Vyanga is a condition of localized hypermelanosis which affects only face. The word Vyanga has comprehensive meaning. It can be compared with physiological, physical, nutritional, metabolic and endocrinal spots.

Consequently, the cosmetic industry is booming with products. But either all these procedures are complicated technical ones which need expertise help or costly affairs which require a lot of time and money spending. We all read and hear a lot on all such kinds of remedies and procedures, amongst them a large number claim to be herbal in origin but we all know that these products do have some chemical adulterants which may have hazardous effects on skin. So these products need to be standardized. in these products. Therefore, present study has been undertaken to get rid of hidden hazards of beauty products and to examine the potential of the drugs of Indian medicine.

In the present study I have selected very well known ayurvedic plants drugs *Lodhra* and *Arjuna* for their effects on *Vyanga*. It is widely used in skin care products by the cosmetic companies and is traditionally used in skin disorders since long time but this aspect of these drugs still need to be explored in the field of *Ayurveda*.

Arjuna (*Terminalia arjuna* (Roxb.) Wight & Arn). a very old remedy for heart diseases, wounds, ulcers, acne vulgaris It is also a tonic, astringent, antioxidant and anti-inflammatory. While *Lodhra* (*Symplocos racemosa* Roxb.) is very well known ayurvedic drug which is used in various diseases like diarrhoea, dysentery, oedema, eye diseases, inflammation spongy gums and leprosy. It has various properties like astringent, purgative, digestive, blood purifier and appetizer Their Vyanganashak effect have been mentioned in various texts of *Ayurveda*. However, no work has been done regarding their Vyangahar potential.

Thus keeping this in mind, the present study was planned to evaluate the vyangahar properties of these two medicinal plants.

AIMS AND OBJECTIVES

- To study the aetiopathogenesis i.e. Nidan Panchaka and prominence of Doshas in disease Vyanga.
- To evaluate the efficacy of Arjuna and Lodhra in treatment of vyanga.
- To find out a economic and effective drug therapy for this disease.

MATERIALS AND METHODS**Selection of Patients**

For the present study, the volunteers fulfilling the clinical criteria for diagnosis of Vyanga were randomly selected irrespective of their age, sex, religion, occupation etc. from the OPD and IPD section of Dravya Guna department of *National Institute Of Ayurveda Jaipur*.

Inclusion Criteria

- Volunteers willing to participate in the trial.
- Males and females between 20 to 50 years of age are taken.

Exclusion Criteria

- Volunteers below 20 and above 50 years of age.
- With present or past history of any skin disease i.e. psoriasis, atopic dermatitis etc.
- Extremely fair and dark complexions.
- Any fungal or bacterial infections or under medication with antibiotics or antifungals.
- Pregnant and lactating women.
- Immunodeficiency state.
- History of hypersensitivity.
- Viral infections like Herpes.
- Autoimmune skin disorders.
- Patient Suffering from Constipation(internal drug administration)

Discontinuation Criteria

- Any sort of allergy caused by drug.
- Unable to follow the trial schedule.

Diagnostic Criteria

All the Volunteers were diagnosed & assessed thoroughly on the basis of Ayurvedic classical signs and symptoms & were examined on the basis of specially prepared proforma. A detailed history was taken.

Plan of Study

Total 30 Volunteers were registered. They were randomly distributed in following groups.

Group A 15 Volunteers of this group is managed by Lepa.

Group B 15 Volunteers of this group is managed by Lepa as well as Churana Orally

Duration of trial - 30 days.

Dose – Churna-1.5gm (twice daily) with lukewarm water

Laboratorial Investigations Hb%, TLC, DLC, ESR

Others Assessment Photographs of volunteers before treatment & after treatment

Clinical Assessment: (Criteria for Assessment)

During the trial the patients were assessed on the following parameters -

General observations

Various demographic parameters viz. Age, Marital status, Religion, Socio-economic status, Education etc. along with specific features of *dasha vidha pariksha* viz. *prakrti*, *sattva*, *Ahara shakti* etc were analyzed in the present trial.

Subjective Assessment

The improvement by the therapy was assessed on the basis of classical signs & symptoms. All the features were assigned score depending upon their severity to assess the effect of the drugs objectively. The detail of which is shown below.

1. Shyavata (Darkening of the skin)

Stages	Score
Normal	0
Mild	1
Moderate	2
Severe	3

2. Parush Sparsha

Stages	Score
Normal	0
Mild	1
Moderate	2
Severe	3

3. Tamra Nila

Stages	Score
Normal	0
Mild	1
Moderate	2
Severe	3

4. Sausha (Chimchimahat)

Stages	Score
Normal	0
Mild	1
Moderate	2
Severe	3

5. Kandu (Itching)

Stages	Score
No itching	0
Mild (Occasional itching but does not disturb routine activity)	1
Moderate (Frequent itching disturbs routine activity but doesn't disturb sleep)	2
Severe (Frequent itching that disturbs routine activity as well as sleep)	3

6. Dry Skin (Rukshata / Kharata)

Stages	Score
Normal	0
Mild Dryness (Not seen but felt by touch)	1
Moderate Dryness (Stretching of the skin that person feels)	2
Severe Dryness Visible dryness (chapping & hardness of the skin)	3

7. Oily Skin (Snigdhata)

Stages	Score
Normal	0
Mild Oiliness (Not seen with naked eye Oiliness feels by touch, no need to wash face frequently (Only 1-2 times a day)	1
Moderate oiliness (Oiliness is visible on skin) Need to wash face frequently (3-4 times a day)	2
Severe Oiliness (Excessive Oiliness) Formation of Acne Need to wash face more frequently (>4 times a day)	3

8. Size

Stages	Score
0-2 cm	1
2.1-4 cm	2
4.1-6 cm	3
> 6 cm (When lesions or patches are multiple the size of the largest lesion is taken into consideration.)	4

9. Colour

Stages	Score
Light Brown	1
Brown	2
Dark Brown	3
Black	4

STATISTICAL ANALYSIS

Effect of therapy was assessed in the term of mean, SD, SE and t test was carried out at p-values.

CLINICAL IMPROVEMENT

Table No. 1 Effect of Trial drug on Subjective Parameters in 15 patient of Group A

Sr. No.	Parameters	Mean Score			% of relief	± S.D.	S.E.	T	p	Result
		BT	AT	D						
1	Shyavata	1.5	0.625	0.875	58.33	0.88	0.22	3.95	<.01	S
2	Parush Sparsh	2.1875	0.125	2.0625	94.28	0.85	0.21	9.66	<.001	HS
3	Tamranila	1.75	0.5625	1.1875	67.85	0.83	0.20	5.69	<.001	HS
4	Saush / Chimchimahat	0.0625	0	0.0625	100	0.25	0.0625	1	>.05	IS
5	Kandu	0	0	0	0	0	0	0	>.05	IS
6	Size	3.25	1	2.25	69.23	1	0.25	9	<.001	HS
7	Color	2.875	0.875	2	69.56	0.51	0.12	15.49	<.001	HS
8	Oily Skin	1.1875	0	1.1875	100	1.04	0.26	4.53	<.001	HS
9	Dry Skin	0.25	0.1875	0.0625	25	0.44	0.11	0.56	>.05	IS

Table No.2 Effect of Trial drug on Objective Parameters in 15 patient of Group A

Sr. No.	Parameters	Mean Score			% of Change	± S.D.	S.E.	T	p	Result
		BT	AT	D						
1	Hemoglobin	11.68	12.15	-0.46	4.0↑	0.99	0.24	1.89	>.05	IS
2	RBC	3.88	4.1	-0.21	5.4↑	0.33	0.08	2.51	<.05	S
3	TLC	85.26	87.2	-1.93	2.27↑	4.65	1.16	1.66	>.05	IS
4	Neutrophil	57.81	59.5	-1.68	2.91↑	3.36	0.84	2.0	>.05	IS
5	Eosinophil	0	0.1875	-0.18	0	0.75	0.1875	1	>.05	IS
6	Basophile	0	0	0	0	0	0	0	>.05	IS
7	Monocyte	0.68	1.125	-0.43	63.64↑	1.26	0.31	1.38	>.05	IS
8	Lymphocyte	41.5	39.18	2.31	5.57↓	4.61	1.15	2.0	>.05	IS
9	E.S.R.	20.06	18.5	1.56	7.78↓	8.88	2.22	0.70	>.05	IS

Table No. 3 Effect of Trial drug on Subjective Parameters in 15 patient of Group B

Sr. No.	Parameters	Mean Score			% of relief	± S.D.	S.E.	T	P	Result
		BT	AT	D						
1	Shyavata	1.56	0.3125	1.25	80	1.06	0.26	4.69	<.001	HS
2	Parush Sparsh	2.37	0.125	2.25	94.73	0.68	0.17	13.17	<.001	HS
3	Tamranila	1.75	0.5	1.25	71.42	1.06	0.26	4.69	<.001	HS
4	Saush / Chimchimahat	0	0	0	0	0	0	0	>.05	IS

5	Kandu	0.375	0	0.375	100	0.80	0.20	1.86	>.05	IS
6	Size	3.43	0.93	2.5	72.72	1.15	0.28	8.66	<.001	HS
7	Colour	2.68	0.625	2.0625	76.74	0.57	0.14	14.38	<.001	HS
8	Oily Skin	1.375	0	1.375	100	0.95	0.23	5.74	<.001	HS
9	Dry Skin	0.562	0.187	0.375	66.66	0.71	0.17	2.086	>.05	IS

Table No. 4 Effect of Trial drug on Objective Parameters in 15 patient of Group B

Sr. No.	Parameters	Mean Score			% of Change	± S.D.	S.E.	T	p	Result
		BT	AT	D						
1	Hemoglobin	10.81	10.96	-0.09	0.86↑	0.89	0.22	0.41	>.05	IS
2	RBC	3.737	3.725	0.0125	0.33↓	0.23	0.05	0.21	>.05	IS
3	TLC	83.88	84.12	-0.24	0.29↑	5.86	1.46	0.16	>.05	IS
4	Neutrophil	56.93	58	-1.06	1.86↑	2.51	0.62	1.6	>.05	IS
5	Eosinophil	0	0.625	-0.0625	0	0.25	0.625	1	>.05	IS
6	Basophile	0	0.125	-0.125	0	0.34	0.08	1.46	>.05	IS
7	Monocyte	1.0625	0.875	0.1875	17.64↓	0.75	0.18	1	>.05	IS
8	Lymphocyte	42	41	1	2.38↓	2.55	0.63	1.56	>.05	IS
9	E.S.R.	23.81	21.75	2.06	8.66↓	8.17	2.04	1.00	>.05	IS

Effect of Trial Drug on Subjective Parameters

58.33% relief of **Shyavata** was observed in Group A, which was significant. Similarly 80% relief was observed in Group B, which was also significant. On **Parush sparsh** Group A showed 94.2% relief which was highly significant and in group B it was reduced by 94.73%. On **Tamranila** Highly significant results were obtained in both groups. Tamranila is the feature of Pitta & Rakta Prakopa. Both drugs pacify Pitta & Rakta due to its Kashaya Rasa & Ruksha Guna. On **Sausha** 100% result was observed in Group A, Which was insignificant; the symptom Saush / Chimchimahat was not found in Group B. Sausha / Chimchimahat is the symptom of Pitta, Rakta Prakopa. Both drugs allivates Sausha / Chimchimahat due to Sheeta Veerya. **Kandu** was not found in Group A. The % of relief in Group B 100% but all are insignificant. Both drugs alleviate Kandu because of Kashaya Rasa and Laghu Ruksha Guna. In group A **Size of Lesion** was reduced by 69.23%, Group B showed 72.72% relief in size. The results are statistically highly significant. It is reduced by Kashaya Rasa and Rogashamakata. Statistically highly significant results were observed in both groups on **Colour of Lesion**. Both drugs are Kapha Pittashamak. Shyavata & Tamranila is the basic feature of Pitta. The % of relief on **Dry skin** in group A 25% and group B showed 66.66%,. All results are insignificant. The 100% was observed on **Oily skin** which was highly significant in both groups. both the drugs are kashya rasa & ruksha guna it removes extra oil.

Effect of Trial drug on Objective Parameter

In group A **Hemoglobin** percentage was increased by 4.01% and in group B it was increased by 0.86%. All were insignificant. **Total leucocytes count** increased by in Group A 2.27%, it is increased in Group B 0.29%,. All results were insignificant. **RBC count** increased by 5.46% in group A & it is decreased by in Group B observed 0.33%. **Neutrophil** was increased by 2.91% in group A and Group B showed 1.86% increase All results were insignificant. Statistically insignificant results were observed on **Eosinophil**. The results were insignificant in all groups on **Basophile**. **Monocyte** was increased by 63.64% in group A decrease in group B. All were insignificant. Statistically insignificant results were observed on **Lymphocyte**. **ESR** is decreased by 7.78% in group A and group B is decreased by 8.68%.

Overall effect of therapy

Similarly group A (Lepa) 64.91% and Group B (Lepa & Churna) 73.58%. So we can say that external (Lepa) with internal administration (churna) of drug perform better result than only external application of Lepa. Because Vyanga is the Raktaj Vikara. Lepa with Churna (internally) is more effective than only Lepa.

Probable mode of action of drug

The Rasa of both drugs are Kashaya. Vyanga is occurring due to aggravation of Vata Pitta. Pitta is getting aggravated by anger and exertion they get localized in the face and give rise to a patch on the skin, which is painless, thin and blue-black in color. So Kashaya Rasa subdues the Pitta which is the main cause of the disease.

- The Guna of Both drugs are Laghu-Ruksha. Ruksha Guna alleviates the Snigdha Guna of Pitta. It breaks the etiology of Vyanga by subsiding Pitta.
- Both drugs have Sheeta Veerya which is also beneficial influence for skin.
- Both drugs have Katu Vipak. Though Vipak is taken part in least role in the topical application. Because Vipak has come out after Jatharagni Pak.
- Both drugs are acting as astringent. So it is included in Kashaya Skandha. These drugs come many times for the treatment of Vyanga in various Ayurvedic classical texts. So this is the surprising fact no any research has been done on this topic.

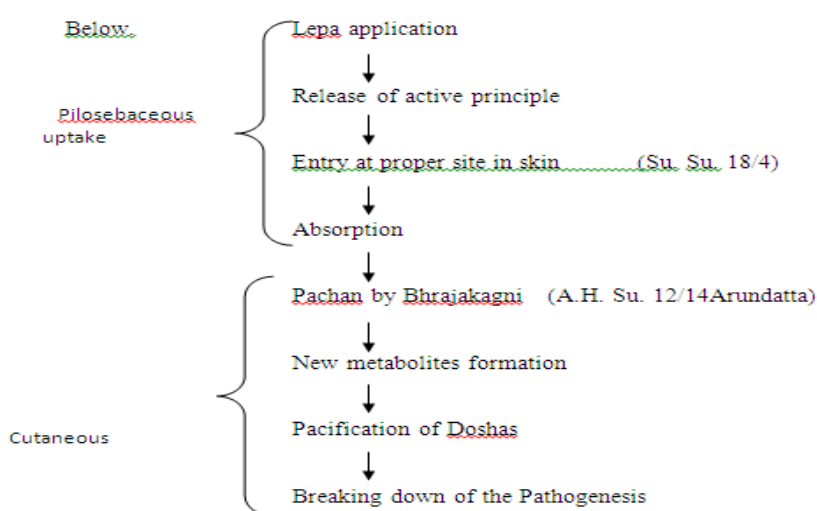
Churna of Both drugs (internally)

- Both drugs are Laghu in guna. So they are Srotoshodhaka, easily digestible, and Agnidipaka.

- Veerya of both drugs are Sheeta. They subside pitta. Sheeta virya is Prasadana, Kledana and jivaniya. It promotes tissue firmness.
- According to ayurvedic text Arjuna is vishghna, varnaropak, raktadoshahar, shothhar and dahahar And Lodhra is utsadan, vishhar, raktadoshahar, shonitsthapan, varnarropak, varnashodhak.
- In modern aspect Arjuna has cooling, astringent, haemostatic, anti-inflammatory, and anti-oxidant effect. Lodhra has cooling and astringent property. so they both are useful for skin diseases externally as well as internally.

Hypothetical mode of Action (Lepa)

The probable mode of action of Lepa can be described in two steps as given



CONCLUSION

- ❧ *Arjuna* and *Lodhra* gives the anti vyanga effect on skin.
- ❧ Lepa of *Arjuna* and *Lodhra* when used along with Churna of the same is more effective than the lepa alone.
- ❧ *Arjuna* and *Lodhra* can also give the reducing effects on scars, pimples, freckles and complexion.
- ❧ The volunteers with oily skin are more benefitted than the other types.
- ❧ *Arjuna* and *Lodhra* when used in regulated doses do not give any side effects. It is safe, economic, convenient and easily available.

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