# A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF MATULUNGADI LEPA AND JATIPHALADI LEPA IN YAUVANA PIDIKA (ACNE VULGARIS)

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## ABSTRACT

Human face expresses and represents their personality and wisdom. Everyone and mostly youngsters are most cautious about the beauty. Acne leads to unattractive look and permanent disfigurement, which may result in inferiority complex and sometimes isolation in the social life. In modern treatment use of chemical formulations and UV radiations etc gives temporary relief and side effect. Hence safe with good results is required in this fast-growing era. **Aim and Objective:** A comparative clinical study to evaluate the efficacy of *Matulungadi Lepa* and *Jatiphaladi Lepa* in *Yauvan Pidika.* **Methodology:** A total 20 patients in each group who fulfilled inclusion criteria were selected. Group A and B with duration of 28 days. **Result:** Group A *Matulungadi Lepa* with Group B *Jatiphaladi Lepa* study showed within the group there is statistically and clinically significant results and statistically insignificant results seen in between the Group but *Matulungadi Lepa* showed clinically significant results compared to *Jatiphaladi Lepa*.

**Keywords:** *Yauvan Pidika*, Acne, *Matulungadi Lepa, Jatiphaladi Lepa*

## INTRODUCTION

According to *Ayurveda* among the 56 *Upangas* face is at the top so everyone and mostly youngsters are most cautious and careful about the beauty of face. *Yauvan Pidika* (Acne vulgaris) is one of the most common dermatoses, which develops at puberty and young age, which are the wonder years of an individual's life and when they are more conscious about the beauty. Acne is a common chronic inflammatory condition of skin with significant cutaneous and psychological disease burden [1]. Acne affects both males and females, al-

though males tend to have more with onset of puberty. Across the globe, according to the Global Burden of Disease (GBD) study, acne affects 80% of individuals between pubescence and 30 years of age. Many research studies have reported acne in 79-95% in the age group of 16-18 years. In India, research studies have reported acne in 50.6% of boys and 38.13% of girls in the age group of 12-17 years [2,3]. Though, acne is not a life-threatening condition, the complications of acne such as permanent scarring effects on the

quality of life and emotional well-being of person. In *Ayurveda Samhitas*, there is a brief description available about *Yauvan Pidika*. In all *Samhitas Kapha, Vata*, & *Rakta dushti*[4] is considered as causative factor of the disease. The *Shaalmali* thorn like hard painful eruption, impregnated with *Meda,* are found on the face of adolescent are called as *Yauvan pidika*. It is also called as *Mukhdushika* as *Pidika* destroys the beauty of face. It's a chronic inflammation condition of the pilosebaceous follicles on the face and upper trunk. It is characterized by the development of comedones, papules, pustules and cyst which may leave a pitted scar[5]. Many different treatment modalities in modern which includes oral and topical antibiotic gels, ointments, face wash, soaps and retinoid[6-7]. These having transient effect and has number of side effects so there is need for search of a safe treatment. A great demand from the *Ayurveda* in the field of cosmetology has been established due to its unique concept. In *Samhitas*, various treatments of *Yauvana pidika* have been described but all can be concluded into two groups – 1) *Shodhan Chikitsa* that is purification of body it includes *Vaman Karma, Nasya Karma & Raktamokshana*. 2) *Shaman Chikitsa* that is conservative treatment by oral & tropical medicines it includes *Lepa, Upnaha & Kshara Karma*[8]. In this article aetiology, pathogenesis & management of *Yauvana Pidika* have been elaborated & discussed with special reference to Acne vulgaris. As no comparative study has been conducted previously to see the effect of *Jatiphaladi lepa*[9] and *Matulungadi Lepa*[10, 11, 12] So to fill this lacuna this study was conducted.

## MATERIALS AND METHODS

a) **Source of Data:** 20 patients in each group coming under inclusion criteria approaching the OPD and camps conducted by of Shri J.G.C.H.S *Ayurveda* and Hospital Ghataprabha.

b) **Diagnostic criteria:**

A. **Subjective parameter:**

Patients presenting with symptoms of *Yauvan Pidika*

1. *Shalmali Kantaka Samana* (thorn like appearance)
2. *Kandu* (itching)
3. *Vedana* (pain)
4. *Raga* (redness)

B. **Objective parameter:**

1. Inflammatory lesion:

White heads, Black heads, Papules, Pustules, Nodules

c) **Inclusion criteria:**

1. Patient presenting with the signs and symptoms of *Yauvan Pidika* was selected.
2. Age: 14 years to 35 years
3. Sex: Either the sex
4. Patient fit for *Lepa Karma*

d) **Exclusive criteria:**

1. Pregnant women and lactating mothers.
2. Patients suffering from Thyroid dysfunction.
3. Patient suffering from other systemic infectious disease like HIV, HbsAg etc.
4. Acne Vulgaris other than face and other *Kshudra Rogas* and *Kushtha Roga.*
5. *Pidikas* produced due to side effect of any drugs applied earlier.
6. Other than androgenic hormones related acne.

e) **Study Design:** It is a randomized single blind comparative clinical trial. Irrespective of their socio-economic status, education status and caste.

Study type – interventional, Allocation – permuted block randomization method., End point classification – efficacy study, Interventional model – parallel assignment, Primary purpose – for purpose of treatment efficacy.

f) **Withdrawal criteria:** None of the patients showed any kind of irritation and complication systemically and locally during treatment

g) **Sample size:** Total number of patients taken for the study - 40 Patients was assigned into two groups.

1) Group A – In this group 20 patients were treated with *Matulungadi Lepa.*
2) Group B –In this group 20 patients were treated with *Jatiphaladi Lepa.*

h) **Duration of treatment:** For 28 days:

i) **Follow up:** Every week during and after treatment.

j) **Statistical analysis**

Statistical analysis will be made using unpaired students "t" test.

## Materials and method

### (A) TRIAL GROUP:

**Table 1(a):** Composition of the *Matulungadi Lepa*

| Sr. No. | Sanskrit Name | Botanical Name | Part Used | Proportion |
|---|---|---|---|---|
| 1 | *Matulunga Jata* | Citrus Medica | Root | 1 part |
| 2 | *Sarpi* | | | 1 part |
| 3 | *Shodhita Manashila* | Realgar | | 1 part |
| 4 | *Goshakrit Rasa* | | | Q. S. |



a) *Matulunga Jata*     b) *Goshakrut*     c) *Shodhita Manashila*     d) *Sarpi*

### (B) CONTROL GROUP:

**Table 2 - (a):** Composition of the *Jatiphaladi Lepa*

| Sr. No. | Sanskrit Name | Botanical Name | Part Used | Proportion |
|---|---|---|---|---|
| 1 | *Jatiphala* | Myuistica fraguans Houtt | Nutmeg (Phala) | 1 part |
| 2 | *Raktachandana* | Pterocarpus Santalinus | Kand | 1 part |
| 3 | *Maricha* | Piper nigrum | Seed | 1 part |



a) *Rakta Chandana*     b) *Jatiphala*     c) *Maricha*

**Table 3:** Intervention chart

| Groups | TYPE OF MEDICINE | QUANTITY AND TIME | DURATION |
|---|---|---|---|
| Group A | *Matulungadi (Lepa)* | ½ *Angula* thick[13] in the Morning | 28 Days |
| Group B | *Jatiphaladi (Lepa)* | ½*Angula* thick[13] in the Morning | 28 Days |
| | Follow up | | Every week during and after treatment. |

**Preparation of *Lepa*:**

**(a) Preparation and Method of *Matulungadi Lepa*:**
*Matulunga Jata, Sarpi* and *Shodhita Manashila* are mixed in equal proportion with *Goshakrit Rasa.*

*Manashila* purified by- 7 times *Bhavana* done with *Agastya Patra Swarasa.*

**(b) Preparation and Method of *Jatiphaladi lepa*:**
*Jatiphala, Raktachandana* and *Maricha* are taken in powder form and mixed in equal proportion.

## RESULTS

### GROUP – A – BEFORE TREATMENT AND AFTER TREATMENT

**Table 4:** Effect of therapy on subjective and objective parameters before treatment ("BT") and after treatment ("AT") by showing their mean score values.

| Parameters | Mean Score | | | % | SD | | SE | | "t" Value | P |
|---|---|---|---|---|---|---|---|---|---|---|
| | BT | AT | BT-AT | | BT | AT | BT | AT | | |
| Pain | 2.10 | 0.20 | 1.90 | 90.48% | 0.72 | 0.41 | 0.16 | 0.09 | 10.78 | < 0.0001 |
| Redness | 0.75 | 0.00 | 0.75 | 100.00% | 0.44 | 0.00 | 0.10 | 0.00 | 7.55 | < 0.0001 |
| Itching | 1.85 | 0.45 | 1.40 | 75.68% | 0.88 | 0.51 | 0.20 | 0.11 | 7.09 | < 0.0001 |
| Thorn like appearance | 1.95 | 0.50 | 1.45 | 74.36% | 0.22 | 0.61 | 0.05 | 0.14 | 9.45 | < 0.0001 |
| Inflammatory Lesion | 0.60 | 0.00 | 0.60 | 100.00% | 0.50 | 0.00 | 0.11 | 0.00 | 5.34 | < 0.0001 |
| Comedones – White Heads | 0.55 | 0.05 | 0.50 | 90.91% | 0.51 | 0.22 | 0.11 | 0.05 | 4.36 | 0.0003 |
| Comedones – Black Heads | 0.20 | 0.05 | 0.15 | 75.00% | 0.41 | 0.22 | 0.09 | 0.05 | 1.83 | 0.0828 |
| Number of *Pidika* before and after treatment | 1.75 | 1.00 | 0.75 | 42.86% | 0.44 | 0.32 | 0.10 | 0.07 | 7.55 | < 0.0001 |

### GROUP – B – BEFORE TREATMENT AND AFTER TREATMENT

**Table 5:** Effect of therapy on subjective and objective parameters before treatment ("BT") and after treatment ("AT") by showing their mean score values

| Parameters | Mean Score | | | % | SD | | SE | | "t" Value | P |
|---|---|---|---|---|---|---|---|---|---|---|
| | BT | AT | BT-AT | | BT | AT | BT | AT | | |
| Pain | 1.70 | 0.35 | 1.35 | 79.41% | 0.86 | 0.49 | 0.19 | 0.11 | 7.26 | < 0.0001 |
| Redness | 0.85 | 0.05 | 0.80 | 94.12% | 0.37 | 0.22 | 0.08 | 0.05 | 7.55 | < 0.0001 |
| Itching | 1.50 | 0.30 | 1.20 | 80.00% | 0.76 | 0.47 | 0.17 | 0.11 | 7.80 | < 0.0001 |
| Thorn like appearance | 1.90 | 1.00 | 0.90 | 47.37% | 0.31 | 0.46 | 0.07 | 0.10 | 5.10 | < 0.0001 |
| Inflammatory Lesion | 0.70 | 0.05 | 0.65 | 92.86% | 0.47 | 0.22 | 0.11 | 0.05 | 4.36 | 0.0003 |
| Comedones – White Heads | 0.30 | 0.05 | 0.25 | 83.33% | 0.47 | 0.22 | 0.11 | 0.05 | 1.83 | 0.0828 |
| Comedones – Black Heads | 0.50 | 0.15 | 0.35 | 70.00% | 0.51 | 0.37 | 0.11 | 0.08 | 2.52 | 0.021 |
| Number of *Pidika* before and after treatment | 2.00 | 0.90 | 1.10 | 55.00% | 0.65 | 0.55 | 0.15 | 0.12 | 6.47 | < 0.0001 |

## DISCUSSION

In group A parameter of pain showed 90.48% of relief occurred where as in Group B pain parameter is 79.41%. Both drugs showed good results but Group A showed best results compared to Group B. Redness in Group A showed 100% of relief where as in Group B showed 94.12%. Group A showed good results compared to Group B. Itching in Group A showed 75.68% of relief where as in Group B showed 80.00% in this Group B showed good results compared to Group A. Thorn like appearance in Group A showed 74.36% of relief where as in Group B showed 47.37% in this parameter Group A showed good results compared to Group B. Inflammatory lesion in Group A showed 100% of relief where as in Group B showed 92.86% in this Group A showed good results compared to

Group B. White heads in Group A showed 90.91% of relief where as in Group B showed 83.33% in this Group A showed good results compared to Group B. Black heads in Group A showed 75.00% of relief where as in Group B showed 70.00% in this Group A showed good results compared to Group B. Number of *Pidika* in Group A showed 42.06% of relief where as in Group B showed 55.00% in this Group B showed good results compared to Group A.

**Mode of action** *Matulungadi Lepa: Matulunga Jata* (roots) – Antifungal and anti-microbial activity is found and its best *Varnanasaka, Vata-Pitta-Kaphahara* by its *Karma.* Root, leaf and bark extracts inhibited S. aureus, E. faecalis and P. vulgaris with maximum inhibition by root extract comparable to standard antibiotic, which helps in reducing infection and kills micro-organism. *Shodhita Manashila – Lekhana, Kandu* and *Varnya* by its *Karma. Manashila* purified by *Agashthya patra swarasa* (Leaf juice of Sesbania grandiflora) according to the classical reference was subjected to antibacterial and antifungal activity. *Go Ghruta* – best on *Twacya, Vayasthapana* and *Vata pitta prashamana*. It contains antioxidants like Vitamin E and beta carotene (600IU) besides other nutrients like phospholipids, diglycerides and triglycerides. *Go Shakrut Rasa* – Cow dung possesses antiseptic and disease preventive properties. Cow dung can act as skin tonic. When mixed with crushed neem leaves and smeared on skin, it proves good for boils and heat rashes.

**Mode of action of** *Jatiphaladi Lepa*: *Raktachandana* – Anti-inflammatory, analgesic and antioxidant activities seen in wood. In addition to their role in acute inflammation. *Raktachandan* of *Jatiphaladilepam* acts as, "*Shothhar*" to the skin; it also acts as, *Dahprashaman* and reduces to the diseases of skin. *Marica – Guna* of *Marica* is *Lagu, Ruksha, Tikshna* and *Usna Virya. Karma* is *Chedana, Slesmahara, Pittakara, Kaphavatajit. Maricha* it acts as, *Jantughna* and *Vednasthapan* and *Vrynya, Swedal, Kandughna, Kushthghna* and reduces the all types of diseases of Skin. *Jatiphala – Sita Virya, Karma- Pittahara, Kaphahara, Recana*. Wound healing inflammation modifying action of this plant. The inflammation re-

sponse Fibroblast, Proliferation, Collagenisation and Epithelisation were better with *Jatiphala*.

*Jatiphaladilepam* acts as *Vranshodak, Ropak, Shothhar, Dahprashamak, Jantughna, Vednasthapan, Vranya, kushthghna, Swedal, Kandughna, Vranadhawan* to skin.

## CONCLUSION

In *Ayurvedic* texts very brief description about *Yauvana Pidika* is available. It is observed and confirms in applied clinical study that aggravated *Kapha* and *Vata Dosha* along with vitiated *Rakta Dhatu* are mainly responsible for the actual manifestation of disease, which affects almost all individuals in their life time. *Nidana parivarjana* should be done along with treatment. The treatment consists of *Shodhana, Lepa* and *Shaman Aoushadhis*. Modern science also gives the treatment comprising of oral and topical antibiotics and retinoids, corticosteroids. But no treatment is so far found to be effective or with minimum side effects. *Matulungadi Lepa* showed over all 81.16% of relief and *Jatiphaladi Lepa* showed 75.27% of relief. There is no much difference between the results of groups. *Matulungadi Lepa* i.e. Group A showed statistically and clinically good results compared to *Jatiphaladi Lepa* i.e. Group B, both groups have shown approximately same results.

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