

## Role of *Virechana Karma* and *Yavadi Lepa* in the Management of *Mukhadushika* (Acne Vulgaris) : A Case Study

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### ABSTRACT:

*Mukhadushika*, also known as Acne vulgaris, is a prevalent skin condition that can have considerable physical and psychological effects, especially in young adults. Acne vulgaris is a chronic inflammatory disorder involving the pilosebaceous follicles on the face and back region. It manifests as blackheads, papules, pustules, and cysts, and can result in scarring after healing. In *Ayurvedic* texts, a collection of skin diseases is extensively described under *Kushtha* and *Kshudrarogas*, with *Mukhadushika* or *Yuvanpidika* reflecting symptoms similar to acne vulgaris, such as thorn-like lesions, pain, burning sensation, and discoloration, hard eruptions filled with *Meda*. *Ayurveda* classics provide detailed treatment methods, including *Shodhana*, *Shaman chikitsa* and various topical preparations. This study is aimed to evaluate the effectiveness of *Ayurvedic* treatments in treating *Mukhadushika*. A 26 year old female patient reported to *Panchakarma* OPD having clinical sign and symptoms of *Mukhadushika* (Acne vulgaris) like papules, pustules, nodules and cysts over face region. The treatment protocol followed was *Shodhana chikitsa* by *Virechana karma* and then application *Yavadi lepa* for 20 days. The treatment approach of using the combination of *Shodhana* through *Virechana karma*, followed by the external application of *Yavadi lepa*, has demonstrated significant effectiveness in managing *Mukhadushika*. This combination has been shown to substantially reduce the signs and symptoms associated with the condition.

**KEYWORDS:** Acne Vulgaris, *Mukhadushika*, *Panchakarma*, *Virechana Karma*, *Yavadi Lepa*.

Received: 24.08.2024

Revised: 04.09.2024

Accepted: 15.09.2024

Published: 21.09.2024



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### INTRODUCTION:

The health of skin serves as the reflection of one's body and mind. The disease "*Yauvana Pidika*" or "*Tarunya pidika*" is aptly called "*Mukhadushika*" because it causes disfigurement both physically and

psychologically by affecting the facial skin, which is the most prominent part of the body. <sup>[1]</sup> *Ayurvedic* texts describe *Mukhadushika* under the category of *Kshudraroga*, which develops due to the imbalance of *Vata*, *Kapha* and *Rakta*. This imbalance leads to the

appearance of *Shalmalikantak* like *Pidika*, or eruptions on the face resembling thorns of *Shalmali* (*Salmalia malabarica*/silk cotton tree)<sup>[2]</sup>. According to the *Acharya Vagbhatta*, there is involvement of *Meda dhatu* also, in the pathogenesis of *Mukhadushika* which leads to symptoms like *Medogarbhavatva* (filled with sebum) and *Saruja* (accompanied by pain)<sup>[3]</sup>. The signs and symptoms of *Mukhadushika* can be compared to Acne Vulgaris from a modern perspective. Acne vulgaris is a one among the common skin conditions that develops during puberty and youth, the prime years when individuals are most concerned about their appearance.<sup>[4]</sup> It results in an unattractive appearance and potential permanent facial disfigurement, which can lead to an inferiority complex and sometimes social isolation. Acne vulgaris involves the development of comedones, pustules, papules, nodules or cysts due to the blockage and inflammatory responses in the pilosebaceous units.<sup>[5]</sup> This includes symptoms like pain, erythema and tenderness<sup>[6]</sup>. The management of Acne vulgaris in modern medicine is somewhat limited, often relying on cortico-steroids, antibiotics, and anti-inflammatory drugs.<sup>[7]</sup> While these medications provide quick relief, they frequently fail to prevent recurrence and may cause significant side effects. In contrast, *Ayurveda* offers a variety of treatments for this condition, including topical applications like *Lepa*, surgical techniques which are non-invasive, para-surgical procedures like *Raktamokshan* and various *Panchakarma* procedures like *Vaman*, *Virechana* & *Nasya*.<sup>[8]</sup> According to *Ayurvedic* principles, this disease involves *Vata*, *Kapha*, and *Rakta*<sup>[9]</sup>, thus necessitating treatment with *Shodhana* (purification) properties. The most common treatment methods for this disease include *Shodhana* therapies such as *Vaman* (emesis), *Virechana* (purgation), and *Raktamokshan*

(bloodletting), along with various medicinal preparations for *Shamana* (pacification).<sup>[10]</sup> Additionally, topical treatments like *Mukh Prakshalana* (face cleansing), *Mukh Abhyanga* (face massage), and *Lepa* (herbal paste application) are also beneficial. *Virechana* (purgation) is chosen as a comprehensive *Shodhana* procedure.<sup>[11]</sup> *Acharya Sushruta* also mentions *Virechana* for skin disorders in the *Kushtha* section.<sup>[12]</sup> *Vamana Karma* (emesis) is more complicated and has higher risks. Since most *Mukhadushika* patients have a *Sukumar* (delicate) constitution and are often teenagers or students, *Raktamokshan* (bloodletting) and *Virechana* are more suitable *Shodhana* procedures for them.<sup>[13]</sup> *Virechana* is a safer, less complicated, and nearly painless method in comparison to other methods. Consequently, it is advisable in *Mukhadushika* management and is widely used as a routine *Shodhana* procedure. Besides its popularity and acceptability, *Virechana Karma* is considered the best treatment for excessive and morbid *Pitta Dosha* and is particularly effective in curing diseases arising from vitiated *Pitta Dosha*.

According to different *Acharyas*, the role of external application of drugs in *Mukhadushika* is as important as internal medication. *Acharya Sushruta* mentioned treatment of *Yuvanpidika* as *Vamana karma* and *Lepa*.<sup>[14]</sup> *Acharya Charaka* has described *Lepa* as *Sadyah Siddhi Karaka*.<sup>[15]</sup> *Lepa* as a treatment regime in *Mukhadushika* is mentioned in *Ashtang hridaya*<sup>[16]</sup>, *Sharangdhara sambhita*<sup>[17]</sup>, *Bhavprakash*<sup>[18]</sup> and *Yogratnakar* also<sup>[19]</sup>. This is the reason, *Lepa* is most commonly chosen as a treatment regime in skin diseases to provide direct local effect in lesser time and without any complications.

## PATIENT INFORMATION:

### History of present illness:

The presented clinical case is of a 26 years old female patient who reported in *Panchakarma* OPD

on 30 September, 2023. The chief complaint of the patient was multiple red-white eruptions over whole face region since 4-5 years. The onset of disease was gradual. The associated symptoms were itching, redness, pustular discharge and burning sensation.

**History of past illness :** Patient had no medical history of any major illness like diabetes /hypertension or thyroid dysfunction. No history of past infection or any hormonal imbalance or any drug sensitivity. She had regular menstrual history.

**Drug history:** Patient gave history of previously used OTC topical preparations but there was reduction in no. of eruptions for only a shorter period of time and no significant improvement in associated symptoms like itching and burning sensation was observed by the patient. There was recurrence of eruptions within 1-2 months and scarring persisted.

**Personal history:** Patient's occupation was student. The bowel habits and urinary habits of the patient were normal and no addictions. Patient's appetite was slightly poor and sleep was not sound. She had mixed dietary habits including both vegetarian and non-vegetarian foods but she used to take junk /outside food averagely once or twice a week. Patient's lifestyle was stressful and moderately sedentary. Patient's menstrual cycles were normal.

### CLINICAL FINDINGS:

**General findings:** Vitals of the patient like BP, PR and temperature were in normal range. Built was average and average height. The body weight of the patient was 48 kg.

The systemic examination of cardiovascular, respiratory, nervous, locomotor and gastro-intestinal system of the patient revealed normal findings.

The local skin examination revealed following findings:

Type of lesions- multiple comedones,

papules, pustules, nodules and cysts present.

Site - Whole face, particularly forehead and both cheeks

Shape and size - Mostly round, and irregular size between 0.5 to 5mm

Associated symptoms - Moderate itching, burning sensation, scarring, and inflammation signs like pain, redness, swelling were present. There was red-black scarring present of healed lesions.

### DIAGNOSTIC ASSESSMENT

The diagnosis of disease was mainly relied on the clinical sign and symptoms of *Mukhadushika* (acne vulgaris) which are subjective parameters -lesions resembling *Shalmali kantak* (*Shalmali* thorns), *Kandu*(Itching), *Vedana*(Pain), *Daha*(Burning Sensation), *Vivarnata*(Discoloration), *Shotha*(Inflammation), *Srava*(Discharge) and the type of lesion (according to grade).<sup>[20]</sup> The objective parameter include Global Acne Grading System (GAGS)<sup>[21]</sup>(Table-1)

### THERAPEUTIC INTERVENTION:

After the examination and diagnosis of patient with 1<sup>st</sup> assessment(Figure-1), she was advised for *Virechana karma* for which firstly *Deepan-Pachana* was administered with *Chitrakadi vati* for 3 days. Then *Snehapana* with *Goghrita* given for 5 days and then *Abhyang sarvang* with *Brihat Marichyadi Tail* along with *Sarvang vashp swedan* advised for 3 days. *Virechana karma* given with *Trivrita avleha* and *Brihat Manjisthadi Kwath*. After *Samyak shuddhi*, *Sansarjan karma* advised for 5 days. Assessment of parameters was done on 18<sup>th</sup> day. Then application of *Yavadi lepa* was done for 20 days with 3<sup>rd</sup> assessment and 4<sup>th</sup> assessment done after follow up of 7 days.(Table -2)

### Intervention adherence and tolerability:

Patient strictly followed all the instructions given and treatment advised for 38 days and gave follow up on 45<sup>th</sup> day . The treatment was well tolerated by the patient only slight hesitation in taking ghee and had few symptoms like nausea , headache during the digestion of ghee.

**FOLLOW-UP AND OUTCOMES:**

Firstly , *Nirama Lakshanas* were assessed after administering *Deepana - Pachana* and then following *Snehapana*, daily observations and recordings were made to monitor *Sneha Jirna Lakshanas* (signs of proper digestion and metabolism of *Sneha*) which are *Vataanulomana*(proper flatulence), *Deeptagni*

(increased appetite) , *Anga laghva*(lightness in body) , *Gatra mardavata*(softness of body parts) , *Gatra Snigdhta* (smoothness of skin) and *Purish snigdhta* (softness of stools)<sup>[22]</sup>. Before administration of *Virechak aushadhi*, vitals monitoring of the patient was done .*Vegas* and *Upvegas* were observed for monitoring of the type of *Shuddhi*(Table -3) and *Sansarjana Krama* was advised accordingly. Assessment of parameters recorded after *Sansarjana Krama* (18<sup>th</sup> day) then after application of *Lepa* for 20 days(38<sup>th</sup> day) and then after follow up of 7 days at 45<sup>th</sup> day(Table -4 & Figure-2).

**Table 1: Diagnostic assessment with Grading before treatment**

Parameter	Assessment criteria	Grading criteria	Grade (0 day -Before treatment)
Lesions	Predominant pustules, nodules , cyst	No lesions -0 Comedones (occasional papules)-1 Papules, Comedones, few pustules -2 Predominant pustules, nodules, cyst -3 Widespread scars, comedones, pustule,papule, nodule -4	Grade-3
No.of lesions (No Lesions - 0 1-5 =1 6-10 =2 11- 15 =3 16-20 =4)	No. of comedones	11-15	Grade 3
	No. of papule	11-15	Grade 3
	No. of pustule	16-20	Grade 4
	No. of nodules	6-10	Grade 2
	No. of cyst	1-5	Grade 1
No.of scars	No scars -0,1-5 =1 , 6-10 =2 ,11- 15 =3 16-20 =4	11-15	Grade -3
Inflammation	No Inflammation =0 Mild =1 Moderate =2 Severe =3	Moderate	Grade -2

Pain	(Mild/Moderate/Severe)	Moderate pain , require local measure	Grade -2
Secretion	Pus discharge(Mild/Moderate/Severe)	Moderate	Grade -2
Itching	(Mild/Moderate/Severe)	Severe irresistible itching	Grade -3
Burning sensation	(Mild/Moderate/Severe)	Severe	Grade -3
GAGS	(Mild/moderate/severe/very severe)	38	Severe

**Table 2: Treatment schedule with timeline and therapeutic intervention**

Timeline	Procedure	Drug	Dose	Duration
1 <sup>st</sup> to 3 <sup>rd</sup> October,2023	<i>Deepana Pachana</i>	<i>Chitrakadi vati</i>	2 tablet twice a day after taking meal	3 days
4 <sup>th</sup> to 8 <sup>th</sup> October,2023	<i>Snehapana</i>	<i>Go ghrita</i>	30ml,60ml,90ml,120ml,150ml (in morning empty stomach after sunrise)	5 days (till <i>Samyak Snigdha Lakshanas</i> observed)
9 <sup>th</sup> to 11 <sup>th</sup> October,2023	<i>Sarvanga Abhyanga &amp; Swedana</i>	<i>Abhyanga with Bribat marichyadi taila (35min) and Sarvanga va shpa sn edan (10-15 min)</i>	As required	3 days
11 <sup>th</sup> October,2023	<i>Virechana Karma</i> (mornin g Pitta Kala)	<i>Virechaka Yoga- 1) Trivritta Arbela 2) B. Manjisthadi kwatha</i>	50gm 150ml	1 day
11 <sup>th</sup> to 15 <sup>th</sup> October,2023	<i>Sansarjana Krama</i>	Diet as per <i>Shuddhi peya vilepi etc.</i> (from the evening of <i>Virechana</i> day)	<i>Madhyam</i>	5 days
16 <sup>th</sup> to 4 <sup>th</sup> November, 2023	Application of <i>Lepa</i>	<i>Yavadi lepa</i>	Half thickness (approx 5 mm) <i>Angushtha</i>	20 days

**Table-3: Virechana assessment parameters**

Virechana assessment type	Score
No. Of Vega	21
No. Of Upvega	6
Type of Shuddhi	Madhyam
Antiki	Kaphant

**Table-4: Observations of assessment parameters before and after treatment**

Parameter	Assessment criteria	Grade			
		Day 0	Day 18	Day 38	Day 45
Lesions	Predominant pustules, nodules, cyst	Grade-3	Grade -3	Grade -1	Grade -1
No.of lesions	No. of comedones	Grade -3	Grade -3	Grade -1	Grade -1
	No. of papule	Grade -3	Grade -2	Grade -2	Grade -2
	No. of pustule	Grade -4	Grade -3	Grade -2	Grade -2
	No. of nodules	Grade -2	Grade -2	Grade -0	Grade -0
	No. of cyst	Grade -1	Grade -1	Grade -0	Grade -0
No.of scars		Grade -3	Grade -3	Grade -1	Grade -1
Inflammation		Grade -2	Grade -1	Grade -0	Grade -0
Pain		Grade -2	Grade -1	Grade -0	Grade -0
Secretion	Pus discharge	Grade -2	Grade -2	Grade -1	Grade -1
Itching		Grade -3	Grade -2	Grade -0	Grade -0
Burning sensation		Grade -3	Grade -2	Grade -0	Grade -0
GAGS	Mild/moderate/severe/very severe	Severe	Severe	Moderate	Mild

**Table-5-Contents of Yavadi lepa with properties:**

Content	Properties
Yava	Kapha-pitta shamaka, Varnya, Vranaya
Sarjarasa	Pitta Rakta and Kapha shamaka, Vrana Shodhana, Vrana Ropana
Lodhra	Kapha- Pitta Shamaka, Raktshodhak, Shothhara
Ushira	Kapha- Pitta Shamaka, Dahprashman, Twagdoshtar, Varnya
Madan(Chandan)	Kapha- Pitta Shamaka, Varnya, Dorgandhyahara
Madhu(Honey)	Kapha-Pittahara, Shodhan, Chedana
Ghrita	Tridoshaghna, Rasavardhaka, Svarya, Varnya
Guda(Jaggery)	Tridosha Shamaka, Raktashodhaka
Gomutra(Cow's urine)	Kaphavata Shamaka, Lekhana



Figure-1 : Images of patient before treatment(0 day)



Figure -2: Images of patient after treatment(45th day)

#### DISCUSSION:

*Virechana karma* or Purgation therapy, is a preferred method for *Shodhana* due to its wide applicability and comparatively simple with less risk of complications. In *Mukhadushika* disease, there is primarily *Rakta Dushti* due to *Pitta* and *Kapha*. In the case study presented, *Virechana Karma* was chosen as the treatment approach due to the predominance of *Pitta* and *Rakta* vitiation symptoms in *Mukhadushika*<sup>[23]</sup>. *Acharya Charaka* indicated *Virechana karma* in *Rakta-Dushti* with involvement of *Pitta dosha*<sup>[24]</sup>. *Virechana* have effects like *Srotosbodhana*, *Agni Deepana* and *Vata Anulomana*. As *Virechana karma* purifies

the vitiated *Pitta/Rakta*, it leads to reduction in inflammation signs, burning sensation, discoloration and also reduction in no. of pustules and cysts. This also detoxify the accumulated blood and pus which results in clearing of sebaceous channels(*Srotosbodhana*). This *Srotosbodhana* causes alleviation of *Kapha* dosha as well and further reducing symptoms like *Kandu/itching* and the no. of white comedones, papules and nodules. *Srotosbodhana* also causes the *Anulomana* of obstructed *Vata* which can be the reason for reduction in pain. As vitiated *Pitta(Bhrajak)* is responsible for abnormal colours of the skin<sup>[25]</sup> and the *Rakta dhatu* is responsible for

improved complexion.<sup>[26]</sup> Thus, *Virechana* have also effects like improved complexion and improved skin texture. *Virechana* has a systemic cleansing property (*Sarvadehika Shodhana*), which is why its impact was greater on widespread lesions like comedones and pustules. The drugs used in *Virechana* possess *Ushna Virya* and *Srotoshodhaka* properties, which help pacify the vitiated *Kapha* and similar tissues (*Meda*), leading to the resolution of comedones<sup>[27]</sup>. Their *Sukshma Guna* and *Vyavayi Guna* allow them to penetrate minute channels, clearing blockages (*Srotavarodha*) and facilitating the flow (*Vishyandana*) of *Kapha* and related tissues. This results in a reduction of *Kaphaja* lesions such as comedones and papules, as well as *Kaphaja* symptoms like inflammation and itching. The *Tikshna Guna* of the drugs likely aids in reducing the accumulation of *Kapha* and *Meda* within micro-pores, thereby decreasing the number of comedones, papules, and nodules.

#### **Probable mode of action - *Virechana Karma***

*Virechana Karma* removes the vitiated *Doshas* by drawing them toward the lower part of the body and expelling them through the rectum. The *Amashaya* is the primary site for *Pitta* and *Kapha* from where the accumulated *Doshas* are eliminated after *Snehapana*. The *Virechana* substances, characterized by their *Ushna*, *Tikshna*, *Sukshma*, *Vikasi* and *Vyavayi* properties, reach the *Hridaya* due to their potency.<sup>[28]</sup> They then circulate throughout the body via the channels, spreading through both large and small pathways and draws the *Dosha* towards *Koshtha*. *Virechaka dravya*, due to their properties, dominance of the earth and water elements (*Prithvi* and *Jala Mahabhuta*), and the specific influence of *Adhobhagabara*, help expelling the *Doshas* from the lower part of the body.<sup>[29]</sup> When the

excessive and vitiated *Doshas* are expelled from body, it leads to the pacification of disease.

Following the *Virechana Karma* procedure, a remarkable 60% reduction in symptoms was observed. Subsequently, on the 18th day after *Shodhana (Virechana)*, the next phase of treatment, application of *Yavadi lepa* was done. *Yavadi Lepa* was selected for external application after *Virechana karma* as *Shaman chikitsa*. It has been described by *Acharya Vagbhatta* in *Ashtanga Hridaya Uttarsthana*.<sup>[30]</sup> As it has been told earlier, that *Mukhadushika* involves vitiation of *Kapha*, *Vata* and *Rakta Doshas*, it is understood that the drugs should possess the *Kapha Vata* and *Pitta (Rakta) Shamaka* effects which are present in *Yavadi lepa*. (Table-5)

#### **Probable mode of action of *Yavadi Lepa*:**

The topical preparations when applied on skin breaks the local patho-physiology by its purifying and cleansing effect. *Lepa* provides *Raktashodhak*, *Twakprasadan* and *Varnya kar* effects. The active principles present in the materials of *Lepa* enter the root of hair follicles (*Romakupa*) and get absorbed in skin via *Swedanahi srotas*. This can be referred as pilo-sebaceous absorption. This can be understood as the two layers of epidermis acts in different ways to absorb and catabolyze the materials of *Lepa*. The outer epidermis absorbs the substances by diffusion and the viable epidermis does the catabolic degradation of the absorbed substances which further helps in alleviation of inflammation and related symptoms of skin disease.<sup>[31]</sup> In *Ayurveda*, it can be referred as *Pachana karma* of *Bharajakagni* which leads to proper functioning of *Bharajak pitta* and thereby removing *Doshas* from skin and improving skin lustre.<sup>[32]</sup>

## CONCLUSION:

*Virechana Karma* is most suitable treatment protocol in the *Pitta* and *Rakta dushti* and topical *shaman* treatments such as *Lepa* provides local and quick effects in management of skin diseases such as *Mukhadushika*, which is primarily associated with *Pitta*, *Rakta*, and *Kapha* imbalances. The adopted treatment plan in the presented case study was based on combining *Shodhana Chikitsa* (purification) with *Shamana* (palliative) in treating *Mukhdushika* (Acne Vulgaris). It provided significant relief as it turned the grading of Acne vulgaris from severe to mild by reducing no. of lesions like comedones, pustules, nodules and cysts along with symptoms like itching, burning sensation, pain and discoloration. Thus, it can be concluded that *Virechana karma* and application of *Yavadi Lepa* provided significant results by relieving sign and symptoms of *Mukhadushika* (Acne vulgaris).

**Informed consent:** The written informed consent has been obtained from patient for treatment and publication of data.

**Conflict of interest:** Author declares that there is no conflict of interest.

**Guarantor:** Corresponding author is guarantor of this article and its contents.

**Source of support:** None

## How to cite this article:

Bano R, Suman H, Katara PK. Role of *Virechana Karma* and *Yavadi Lepa* in the Management of *Mukhadushika* (Acne Vulgaris) – A Case Study. Int. J. AYUSH CaRe. 2024;8(3):341-350.

## REFERENCES:

1. Shashtri S. Madhav Nidan, Madhukosh commentary, Kushtha Nidan 49/8,9

,Chaukhamba Prakashan ,Varanasi :2009.Pp.186

2. Shastri A.D. ,Sushruta Samhita Ayurved Tatvasandeeepika, Kshudraroga nidan 13/38. Chaukhamba Sanskrit Sansthan,Varanasi:2014.Pp.372
3. Gupta K.A . Ashtang Hridaya ,Uttar Sthana 31/5. Chaukhamba prakashan ,Varanasi: 2022.Pp.765
4. Anthony S. Fauci, Eugene Braunwald, Dennis L. Kasper. Harrison's principle of internal medicine ,vol. 1,Part 2, Section 9,Eczema,psoriasis,cutaneous infections,Acne and other common skin disorders.Mcgraw Hill companies.USA .18th Edition 2008 , p.403
5. Gollnick HP. From new findings in acne pathogenesis to new approaches in treatment. J Eur Acad Dermatol Venereol 2015;29 Suppl 5:1-7.
6. American Academy of Dermatology. Skin conditions by the numbers, <https://www.aad.org/media/stats/conditions/skin-conditions-by-the-numbers>.
7. Rook A, Burton J ,Champion R . Textbook of dermatology .Oxford :Blackwell Science ;16<sup>th</sup> ed.2017,p.1717
8. Tripathi B. Astanga Hridayam, Uttarthana 32/3, Chaukhamba Sanskrit Pratishthan,Varanasi: 2009.Pp.1119
9. Shastri A.D. ,Sushruta Samhita Ayurved Tatvasandeeepika, Kshudraroga nidan 13/38. Chaukhamba Sanskrit Sansthan,Varanasi: 2014.Pp. 372.
10. Tripathi B. Astanga Hridayam, Uttarthana 32/3, Chaukhamba Sanskrit Pratishthan,Varanasi: 2009.Pp.1119
11. Trikamji Y.J.Charaka Samhita Chakrapaanidutta, Sutra Sthana 24/18. Chaukhambha Orientalia,Varanasi:2009. Pp. 617.
12. Shastri A.D. ,Sushruta Samhita Ayurved Tatvasandeeepika,Kushtha chikitsa 9/47 . Chaukhamba Sanskrit Sansthan,Varanasi. 2014.P p. 68.

13. Rademaker M, Garioch JJ, Simpson NB. Acne in school children: No longer a cause for concern for dermatologists. *Br Med J* 1989; 298: 1217-19.
14. Shastri A.D. ,Sushruta Samhita Ayurved Tatvasandeeepika,Kshudraroga Chikitsa 20/37 . Chaukhamba Sanskrit Sansthan,Varanasi. 2014. Pp. 118.
15. Shashtri P.K. Charaka Samhita, Chikitsa Sthana 7/53. Chaukhambha Orientalia,Varanasi:2009. Pp.257
16. Tripathi B. Astanga Hridayam, Uttarsthana 32/3, Chaukhamba Sanskrit Pratishthan,Varanasi: 2009.Pp.1119
17. Tripathi B .Sharangdhar Samhita ,Uttarkhanda 11/11; Chaukhamba surbharti Prakashan, Varanasi: 2008.Pp-392
18. Pandit B. & Mishra B.S. Bhavaprakasha, Madhya khanda 61/35; Chaukhamba Sanskrit Sansthana,Varanasi:2003. Pp-587
19. Shashtri LP. Yoga-Ratnakar, kshudrarogachikitsa 44/1. Chaukhamba Prakshan ,Varanasi:2012.Pp.282
20. Sharma L.,Srivastava A.K. Comparative evaluation of Virechana Karma and Jalaukavacharna in the management of Acne Vulgaris: A clinical study. *Int. J. Res. Ayurveda Pharm.* 2020; 11(1):52-59 <http://dx.doi.org/10.7897/2277-4343.110111>
21. Doshi A, Zaheer A, Stiller MJ. A comparison of current acne grading systems and proposal of a novel system. *Int J Dermatol* 1997;36:416-8.
22. Shastri K.N. Charaka Samhita Vidyotini, Sutra sthana 13/58. Chaukhamba Sanskrit Sansthan ,Varanasi:2012.Pp.189
23. Shastri A.D. ,Sushruta Samhita Ayurved Tatvasandeeepika, Kshudraroga nidhan 13/38. Chaukhamba Sanskrit Sansthan,Varanasi. 2014.P p. 372
24. Shastri K.N., Charak Samhita Sutra Sthana 24/18. Chaukhamba bharti academy,Varanasi;2012.Pp.445
25. Gupta K.A. Ashtanga Hridayam Sutrasthāna, 12/52. Chaukhamba Prakashana, Varanasi:2021.Pp 126
26. Shastri A.D.Sushruta Samhita Sutra sthana Doshadhatumalkshayavridhhi vigyaniya adhyaya 15/7. Chaukhamba Sanskrit Sansthan, Varanasi; 2014.P p.75
27. Shastri A.D .Sushruta Samhita Chikitsa Sthana 33/33. Chaukhamba Sanskrit Sansthan, Varanasi; 2014. Pp 181
28. Shastri K.N. Charak Samhita Kalpa sthana 1/5. Chaukhamba Bharti academy, Varanasi;2018.Pp.891
29. Shastri K.N. Charak Samhita Kalpa sthana 1/4. Chaukhamba Bharti academy, Varanasi;2018.Pp.890
30. Tripathi B. Ashtanga Hridayam kshudra roga pratishedhadhyaya 32/26 . Chaukhamba Sanskrit Pratishthan, Varanasi; 2019.Pp. 1122.
31. Anthony S. Fauci, Eugene Braunwald, Dennis L. Kasper. *Harrisons principle of internal medicine* ,vol. 1,Part 2, Chp 55 Cutaneous Drug Reactions.Mcgraw Hill companies.USA .18th Edition 2008 .Pp.432
32. Shastri A.D. Sushruta Samhita ,Ayurved Tatva sandepika Sutra sthana 21/10 .Chaukhambha Sanskrit Sansthan, Varanasi:2009, Pp.115.