

## MANAGEMENT OF NODULOCYSTIC ACNE USING JALAUKAVACHARANA: A CASE STUDY

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### ABSTRACT

**Background:** Cystic acne is a severe, inflammatory variant of acne vulgaris that commonly affects adolescents and young adults, often resulting in pain, cosmetic disfigurement, and permanent scarring. Despite the widespread use of antibiotics and topical retinoids, recurrence and treatment resistance remain as challenges. Ayurveda offers holistic and sustainable therapeutic approaches with minimal side effects, particularly valuable in chronic dermatological conditions. Acne vulgaris significantly impacts self-esteem and social interactions, further emphasizing the need for effective and safe treatment options. In Ayurveda it can be correlated with *Youvana pitaka*. **Aim:** To evaluate the clinical efficacy of *Jalaukavacharana* (leech therapy) combined with minimal Ayurvedic internal medication in the management of nodulocystic acne. **Materials and**

**Methods:** A 22-year-old female was presented with nodulocystic acne and treated with *Jalaukavacharana* at outpatient department level with minimum internal medicines and the severity was assessed using GAGS (Global acne grading system), Cardiff Acne Disability Index (CADI) and Investigator's Global Assessment (IGA) score. **Result:** The result obtained suggests that leech therapy is safe and effective in dermatological manifestations like cystic acne.

**KEYWORDS:** Cystic acne, *Youvana pitaka*, *Jalaukavacharana*, GAGS, CADI.

## INTRODUCTION

Young adults and adolescents increasingly exhibit heightened concern regarding physical appearance, often leading to the frequent use of various cosmetic products to enhance self-esteem. Among dermatological conditions affecting this population, acne and acneiform eruptions remain particularly prevalent. These disorders primarily arise from dysregulation of the pilosebaceous unit. Cystic acne represents one of the most severe phenotypes of acne vulgaris, characterized by deep, inflamed nodules and cyst formation. Globally, acne has been reported to have a prevalence of approximately 9.4%, ranking it among the most common dermatological diseases worldwide.<sup>[1]</sup> Cystic acne, also referred to as nodulocystic acne, is characterized by the presence of deep, inflamed, and painful nodules or cysts. Its pathogenesis involves excessive sebum production, abnormal follicular hyperkeratinization, and a pronounced inflammatory response, often accompanied by the proliferation of *Cutibacterium acnes*.<sup>[2]</sup> These lesions frequently progress to permanent scarring. The aetiology of cystic acne involves a multifactorial interplay of genetic predisposition, hormonal influences, microbial activity, and various environmental contributors. Dietary patterns, particularly those high in glycaemic load along with dairy consumption and the use of occlusive cosmetic products have been identified as significant exacerbating factors. Nodulocystic acne corresponds in Ayurvedic literature to *Yauvanapitaka*, classified under *Kshudra Kushta*, based on comparable clinical features.<sup>[3]</sup> The condition is described as arising from the vitiation of *Kapha*, *Vata*, and *Rakta dosha*.<sup>[4]</sup>

Leech therapy is a renowned classical therapy indicated for the detoxification of vitiated blood and removal of impurities from the body. Bloodletting is considered a major therapeutic modality in conditions of *Rakta dushti*, and leech therapy is specifically advocated for delicate individuals and for localized inflammatory conditions such as nodulocystic acne.<sup>[5]</sup>

Here in this case leech therapy is given along with internal medicine (*Samana chikitsa*) focuses on anti-inflammatory, anti-microbial action.

## CASE REPORT

A 22-year-old female presented with recurrent and persistent multiple painful pustules on both cheeks, chin, nose and chest on 15/03/2025. The condition was recurrent for past 3 yrs despite the previous treatment with the antibiotics and topical retinoids. 6 months before the

condition got worsened. She has no other co morbidities like thyroid dysfunction, diabetes and any known allergy.

### **Personal History**

Diet: Mixed (oily food, junk food, *Madhura rasa pradhana* (sweet))

Appetite: Reduced

Sleep: Sound

Bowel: Regular

Micturition: 6-7 times per day

Addiction: Nil

### **General examinations**

Temperature: 98.7°F

B.P: 110/80 mm of Hg

P.R: 76/ min. No pallor, icterus, clubbing and cyanosis

Menstrual cycle: Regular cycles of 6/28-30

Obstetric history: Not applicable

### **Physical Examination**

#### **Systemic Examination**

Cardiovascular system: S1, S2 heard normally, no murmur

Respiratory system: No dyspnea, wheezing, cracking

Central nervous system: Patient is well oriented to place, time and person

Gastrointestinal system: Centrally placed inverted umbilicus no abnormal bowel sound heard

#### **Integumentary System Examination**

Erythematous multiple papules, pustules and nodules over the cheek, chin, nose and chest.

Nodular lesion was firm in consistency and associated with tenderness (++). The fore head and upper back is not affected with

Site: cheek, chin and nose

Number of nodules: 4

Size: 5 mm (nodular swelling)

#### **Laboratory Investigations**

Complete blood count: Found with in normal range

CT- 5 min 30 sec

BT – 3 min 30 sec

### **Samprapthi (Pathogenesis)**

Nodulocystic acne can be understood as a *Kapha Vata pradhana Tridoshaja vikara* with *Rakta Dushti*, comparable to severe *Yauvanapitaka*.<sup>[4]</sup> Indulgence in *Snigdha* (unctuous), *Guru* (heavy), and *Abhishyandi ahara* along with lifestyle factors aggravates *Kapha* and *Pitta*, leading to vitiation of *Rakta*.<sup>[6]</sup> *Kapha* causes *Srotorodha* (blockage of channels) at the level of *Romakupa* (hair follicle), while obstructed *Vata* produces painful, deep-seated nodules. Vitiating *Rakta* and *Pitta* contribute to inflammation and suppuration. Involvement of *Rasavaha* and *Raktavaha Srotas* with localized *Doshadushya sammurchana* manifests clinically as inflammatory cystic lesions with a tendency for scarring.

### **Therapeutic Intervention**

**Table No: 1 Therapeutic Intervention.**

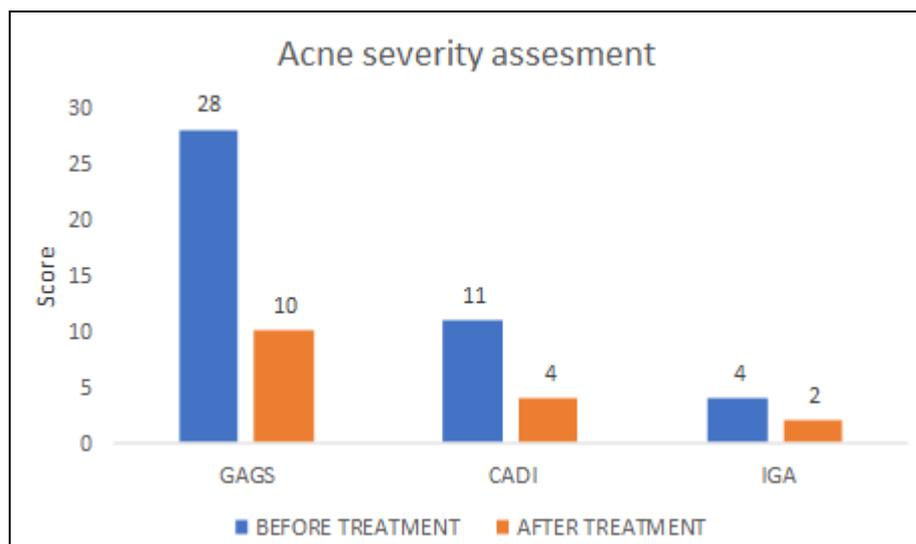
Date	Medicine	Route of administration	Dose
15/03/2025- 29/03/2025	<i>Triphala guggulu tab</i>	Oral	1 BD Before food
	<i>Vara churna</i>	Externally-for Prakshalana	Boiled 2 tsp powder in 1 liter water
23/03/2025	<i>Jalaukavacharana</i>		
23/03/2025- 30/03/2025	<i>Triphala guggulu tab</i>	Oral	1 BD Before food

**Table no: 2 GAGS: Before treatment (15/03/2025).**

Location	Type of lesion	Factor	Grade	Score	GAGS Score
Forehead	No lesion	0	0	0	28
Cheek	Nodule	2	4	8	
Chin	Nodule	1	4	4	
Nose	Nodule	1	4	4	
Upper back	Papule	3	2	6	
Chest	Papule	3	2	6	

**Table no: 3 GAGS: After treatment (30/03/2025)**

Location	Type of lesion	Factor	Grade	Score	GAGS Score
Forehead	No lesion	0	0	0	10
Cheek	No lesion	0	0	0	
Chin	Comedo	1	1	1	
Nose	No lesion	0	0	0	
Chest	Papule	3	2	6	
Upper back	Comedo	3	1	3	



**Fig. No: 1 Graphical Representation of Acne Severity Assessment.**

### OUTCOMES

Following completion of the therapeutic intervention, marked clinical improvement was observed, as evidenced by a substantial reduction in nodular lesions. Quantitative outcome measures demonstrated a decrease in the Global Acne Grading System (GAGS) score from 28 at baseline to 10 at post-treatment evaluation (table number 2 and 3, figure number: 1). The Cardiff Acne Disability Index (CADI) score declined from 11 to 4, and the Investigator's Global Assessment (IGA) score for acne improved from Grade 4 to Grade 2 (fig no:1). Collectively, these findings indicate a significant reduction in overall disease severity and associated psychosocial impact (fig no: 2,3 and 4).



**Fig no: 2 and 3 During *Jalaukavacharana*.**



**Fig no: 4 After treatment.**

## DISCUSSION

Nodulocystic acne represents a severe inflammatory pathology involving deeper dermal structures. In Ayurvedic parlance, the clinical presentation closely resembles *Yauvanapitaka*, described under *Kshudra Roga* (minor diseases) in Susruta Samhita and also included under *Raktapradoshaja vikara* (diseases caused by vitiation of blood) by Acharya Charaka. Bloodletting is mentioned as the best treatment of choice in such conditions.<sup>[5]</sup> Also, Acharya Vagbhata opines that *jalaaukavacharana* can be done in *grathitavastha*.<sup>[7]</sup>

During the first visit, *Triphala Guggulu* was administered internally considering its *kleda-shoshana*, *shothahara*, and anti-inflammatory properties. *Triphala Guggulu*, traditionally recommended in Chakradatta for *vraṇasotha* and cited in the Sarngadhara Samhita for disorders such as *Arsa* (hemorrhoids), *Bhagandara* (fistula-in-ano), *Gulma* (abdominal masses), and *Sotha* (inflammatory conditions), has been extensively investigated in modern research.<sup>[8]</sup> Experimental and clinical studies have validated its anti-inflammatory and antimicrobial properties, while additional evidence highlights its wound-healing potential, aligning well with its classical therapeutic applications.<sup>[9]</sup>

To complement this, *Prakshalana* with *Vara Churna* was advised externally to reduce local inflammation and promote cleansing of the affected area. After one week, the patient reported minimal symptomatic relief. Hence, the treatment plan was revised and the patient was posted for *Jalaaukavacharana*, considering the involvement of *Rakta dushṭi* (vitiation of blood). A total of two leeches were applied in a single sitting. The procedure was completed uneventfully.

Leech therapy (hirudotherapy/*jalaukavacharana*) is more used as adjunct treatment in dermatology due to its anti-inflammatory, analgesic and antimicrobial activity. The anticoagulant found in leech saliva enhances the blood circulation ensuring that nutrients reach the skin while waste products are efficiently removed. The reduction in swelling and redness associated with the acne can be attributed to the anti-inflammatory property of hirudin. Wound healing property aids in reducing the acne scars and lesions.<sup>[10]</sup>

Following *Jalaukavacharana*, the patient experienced a marked reduction in pain. The same internal medications were continued, and after one week a significant improvement was noted, with substantial reduction in erythema, nodular swelling, and tenderness.

## CONCLUSION

Nodulocystic acne, a severe inflammatory variant of acne vulgaris, closely corresponds to *Yauvanapitaka*. This case highlights the potential efficacy of *Jalaukavacharana* as an adjunct to internal *Samana Chikitsa* in the management of nodulocystic acne. Substantial reduction in inflammatory lesions, pain, and objective severity scores suggests meaningful clinical improvement. The therapeutic approach appears to address underlying *Rakta dushti* and *doshic* imbalance while exerting anti-inflammatory and wound-healing effects.

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