

## Case Study

# Integrative Ayurvedic Intervention in Acne Nodularis: A Clinical Case Study

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### Abstract

**Background:** Nodulocystic acne is a severe, chronic form of acne vulgaris characterized by painful, inflamed nodules that are often resistant to conventional therapy. Ayurvedic medicine offers an integrative approach targeting systemic imbalance through personalized herbal formulations.

**Objective:** To evaluate the effectiveness of Ayurvedic treatment in managing a case of pimple nodularis in a young adult male.

**Case Presentation:** A 20-year-old male presented with painful nodular acne on the face, unresponsive to prior allopathic treatment. Based on Ayurvedic assessment, a phased regimen of internal and external therapies was administered over three months. Key interventions included *Phalatrikadi Kwatha*, *Manjisthadi Kwatha*, *Triphala Guggulu*, and herbal pastes.

**Results:** Marked clinical improvement was observed with reduction in nodules, inflammation, and post-inflammatory hyper pigmentation. Hematological parameters, including leukocyte count and ESR, normalized, indicating reduced systemic inflammation.

**Conclusion:** Ayurvedic therapy may offer a safe, effective alternative for managing severe acne with systemic involvement.

**Keywords:** Acne vulgaris, Acne nodularis, Ayurveda

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## Introduction

Acne vulgaris is a prevalent dermatological disorder involving chronic inflammation of the pilosebaceous units, leading to the development of comedones, papules, pustules, nodules, and in some cases, permanent scarring. Among its variants, nodulocystic acne represents a severe and recalcitrant form, characterized by deep-seated, inflamed nodules and cysts, often resistant to standard topical and systemic therapies.

Management of nodulocystic acne typically necessitates a comprehensive, multifactorial approach, incorporating retinoids, antibiotics, hormonal therapies, and in some cases, procedural interventions. However, limitations in efficacy, side effects, and recurrence after discontinuation have prompted interest in alternative and integrative treatment modalities.

In this context, Ayurvedic medicine has emerged as a promising adjunctive strategy, offering formulations with anti-inflammatory, detoxifying, and immunomodulatory properties. Traditional Ayurvedic interventions target the underlying dosha imbalances (*Kapha*, *Pitta*), *Rakta Dushti* (vitiation of blood), and *Meda Dhatu* (adipose tissue) implicated in acne pathogenesis. Several formulations, including *Gandhaka Rasayana*, *Triphala Guggulu*, *Arogyavardhini Rasa*, and topical lepas (pastes), have shown potential in managing chronic dermatological conditions such as *Yauvan Pidika* (Acne). Given the chronic and often resistant nature of nodulocystic acne, integrative approaches that combine evidence-based allopathic treatments with Ayurvedic therapeutics may enhance outcomes, reduce relapse, and improve patient compliance through holistic care.

This case report presents the successful

management of pimple nodularis—a severe, painful, nodulocystic acne condition—through a structured Ayurvedic protocol involving both internal and external treatment regimens. The documentation includes clinical progression from an active inflammatory state to significant resolution of lesions and improved skin texture.

## Case Presentation

A 20-year-old male patient presented to the outpatient department with complaints of multiple painful, erythematous, nodular eruptions localized predominantly over the right and left malar region, temporal area, and forehead since 1.5 year. The lesions had been progressively worsening over the preceding several months and were associated with pruritus, intermittent pus discharge, and considerable facial disfigurement. There was no history of fever, systemic illness, or previous similar episodes.

The patient had previously sought allopathic treatment and was advised topical KLM clean face wash and clear gel, which failed to provide significant clinical relief. The persistent and refractory nature of the condition prompted exploration of alternative therapeutic approaches, and the patient sought Ayurvedic consultation.

## General Examination

- **Height:** 175 cm (5'9")
- **Weight:** 75 kg
- **Blood Pressure:** 120/80 mmHg
- **Pulse Rate:** 86 beats/min
- **Addictions:** None reported
- **Appetite (Kshudha):** Reduced
- **Digestive power (Agni):** Sama (indicative of impaired digestion)
- **Bowel habits (Mala Pravritti):** Once daily,

hard stools

- **Urinary frequency (Mutra Pravritti):** 4–5 times during both day and night
- **Tongue examination (Jihva):** Sama (coated)

### Local Examination

On dermatological examination, multiple firm, tender, and erythematous nodules and cystic lesions were observed, especially concentrated over the right cheek and forehead. Several lesions showed evidence of post-inflammatory hyperpigmentation and early scarring. Active pustules were noted at the time of examination, though scarring and pigmentation suggested a chronic and severe inflammatory process.

### Ayurvedic Assessment

Based on classical Ayurvedic parameters and doshic involvement, the condition was diagnosed as *Yuvan Pidika* (acne vulgaris), with pre-

dominant vitiation of *Pitta* and *Rakta* doshas, and involvement of *Kapha* and *Ama*. The presence of nodular eruptions, itching, and discoloration supported the diagnosis of a severe Acne Nodularis variant.

The patient was managed with a combination of internal and external Ayurvedic therapies targeting *Dosha* pacification, blood purification, and tissue healing. The therapeutic regimen involved decoctions (*Kwathas*), herbal powders (*Churnas*), herbo-mineral formulations, and topical applications prepared from classical Ayurvedic ingredients.

### Treatment Protocol

The patient was treated using a structured Ayurvedic regimen comprising internal and external therapies over a total duration of three months. The therapeutic objective was to pacify vitiated *Pitta* and *Rakta* doshas, detoxify the system, and promote healing of the chronic nodulocystic lesions.

**Table 1: Phase I Initial 1 Month**

Internal medication		
Formulation	Dose	Timing
<i>Phalatrikadi Kwatha</i>	10 g	Morning, on empty stomach
<i>Manjisthadi Kwatha</i>	10 g	Evening, on empty stomach
<i>Guduchi Churna</i>	2 g	Twice daily after meals
<i>Amalaki Churna</i>	2 g	Twice daily after meals
<i>Gandhaka Rasayana</i>	250 mg	Twice daily after meals
<i>Arogyavardhini Rasa</i>	250 mg	Twice daily after meals
<i>Khadir Churna</i>	2 g	Twice daily after meals
<i>Vidanga Churna</i>	2 g	Twice daily after meals
<i>Nimba Churna</i>	1 g	Twice daily after meals
<i>Triphala Guggulu</i>	2 tablets × 3 times/ day	After meals, chewed with water
External applications- Twice daily		
<i>Panchavalakal Kwatha</i>	q.s.	Used as facial wash
<i>Su. Tankan Bhasma</i>	Added to above	Mixed with <i>Panchavalakal Kwatha</i>
<i>Lodhra Churna</i>	3 g	Mix all this and add water and apply locally
<i>Vacha Churna</i>	1 g	
<i>Yasthimadhu Churna</i>	3 g	

**Table 2: Phase 2 Following 2 Months**

Internal medication		
Formulation	Dose	Timing
<i>Manjisthadi Kwatha</i>	10 g	Once daily, on empty stomach
<i>Guduchi Churna</i>	3 g	Twice daily after meals
<i>Khadir Churna</i>	3 g	Twice daily after meals
<i>Vidanga Churna</i>	1 g	Twice daily after meals
<i>Triphala Guggulu</i>	2 tablets × 3 times/day	After meals, chewed with water
External Applications – twice daily		
<i>Panchavalakal Kwatha</i>	q.s.	Used as facial wash
<i>Su. Tankan</i>	Added to above	Mixed with <i>Panchavalakal Kwatha</i>
<i>Lodhra Churna</i>	2 g	Mix all this and add water and apply locally
<i>Nagakesara Churna</i>	2 g	
<i>Arjuna Churna</i>	2 g	
<i>Triphala Churna</i>	2 g	

**Table 3 : Phase 3 Modified External Application (After 1 Month)**

Formulation	Dose	Mode of Use
<i>Nagakesara Churna</i>	1 g	Mix all this and add water and apply locally
<i>Vacha Churna</i>	1 g	
<i>Amalaki Churna</i>	3 g	

**Table 4: Hematological and Biochemical Parameters (Before and After Treatment)**

Parameter	Before Treatment	After Treatment	Reference Range
<b>Hemoglobin (Hb)</b>	12.8 g/dL	13.6 g/dL	13.0 – 17.0 g/dL
<b>Total Leukocyte Count</b>	10,500 /mm <sup>3</sup>	7,800 /mm <sup>3</sup>	4,000 – 10,000 /mm <sup>3</sup>
<b>Neutrophils</b>	72%	62%	40 – 75%
<b>Lymphocytes</b>	20%	30%	20 – 40%
<b>Eosinophils</b>	4%	3%	1 – 6%
<b>Monocytes</b>	3%	4%	2 – 10%
<b>Basophils</b>	1%	1%	0 – 1%
<b>ESR</b>	30 mm/hr	12 mm/hr	< 20 mm/hr
<b>Fasting Blood Sugar</b>	96 mg/dL	92 mg/dL	70 – 100 mg/dL
<b>Postprandial Sugar</b>	124 mg/dL	118 mg/dL	< 140 mg/dL
<b>CRP</b>	6.2 mg/L	2.1 mg/L	< 5.0 mg/L

**Discussion:**

Acne vulgaris is a multifactorial chronic inflammatory disorder of the pilosebaceous units, characterized by comedones, papules, pustules, nodules, and cysts, with potential for scarring and pigmentary sequelae. Nodulocystic acne represents one of the most severe forms and is often refractory

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to conventional therapies such as topical retinoids, antibiotics, and systemic isotretinoin, which carry notable side effects including mucocutaneous dryness, hepatotoxicity, and teratogenicity. , .

In this case, an integrative Ayurvedic approach was employed for the management of nodular acne (*pimple nodularis*), based on classical descriptions of *Yuvan Pidika*, wherein vitiation of *Pitta*, *Rakta*, and *Kapha* doshas play central roles. The patient demonstrated significant clinical improvement through a phased administration of polyherbal formulations and external applications targeting *dosha shamana* (pacification), *raktashodhana* (blood purification), and *shotha hara* (anti-inflammatory action).

The formulations utilized in **Phase 1** were aimed at detoxification and initial dosha pacification. *Phalatrikadi* and *Manjisthadi Kwatha* are traditionally prescribed for their hepatoprotective, blood-purifying, and anti-inflammatory properties. *Guduchi* (*Tinospora cordifolia*) and *Amalaki* (*Emblia officinalis*) have established immunomodulatory and antioxidant effects, aiding in tissue repair and detoxification., *Gandhaka Rasayana*, a herbo-mineral formulation, is known to enhance skin health and possess antibacterial properties, while *Arogyavardhini Rasa* supports liver function and systemic detoxification. (Table 1)

In **Phase 2**, continued use of *Manjisthadi Kwatha* and increased doses of *Guduchi* and *Khadira* (*Acacia catechu*) were employed to sustain *raktashodhana* and reduce residual inflammation. *Triphala Guggulu* and *Vidanga* (*Embelia ribes*) provided further anti-inflammatory, detoxifying, and antimicrobial action, aligning with the traditional concept of eliminating *ama* (toxins) and correcting *Agni* (digestive/metabolic function) . (Table 2)

The external applications—including *Panchavalakal Kwatha* wash and herbal pastes composed of *Lodhra*, *Vacha*, *Yasthimadhu*, *Nagakesara*, and *Arjuna*—were selected for their astringent, anti-inflammatory, and wound-healing properties. *Panchavalakal* decoction is classically indicated for cleansing oozing or inflamed lesions, while *Lodhra* (*Symplocos racemosa*) and *Nagakesara* (*Mesua ferrea*) are known for their *lekhana* (scraping), *rookshana* (drying), and *krimighna* (antimicrobial) properties.,

The **Phase 3** modification was designed to enhance post-inflammatory healing and pigmentation control using *Amalaki* and *Vacha*, both of which contribute to *Rasayana* (rejuvenative) actions and aid in tissue regeneration., (Table 3)

From a hematological perspective, the patient initially presented with mildly elevated total leukocyte count and erythrocyte sedimentation rate (ESR), indicative of underlying systemic inflammation likely related to chronic nodulocystic acne. A slightly reduced hemoglobin level suggested either suboptimal nutritional status or chronic low-grade inflammation. Notably, fasting and postprandial blood glucose levels were within normal limits, consistent with the patient's age and absence of metabolic disorders. Following the Ayurvedic intervention, significant improvements were observed. A marked reduction in both leukocyte count and ESR pointed to the resolution of systemic inflammation. Hemoglobin levels also showed improvement, which may reflect enhanced digestive function (*Agni*) and better nutrient assimilation as a result of the treatment. Blood sugar levels remained stable throughout, indicating maintained metabolic homeostasis and the non-disruptive nature of the Ayurvedic formulations on glycemic balance. These findings further support the systemic benefits of the Ayurvedic regimen

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beyond dermatological outcomes. (Table 4)

The notable clinical outcome observed in this case—including resolution of nodules, reduced scarring, and improved skin tone—highlights the potential efficacy of structured Ayurvedic management in chronic and refractory dermatological conditions. Importantly, no adverse effects were reported, underscoring the safety of the formulations used. Further controlled clinical studies are warranted to validate these findings.

### **Conclusion**

This case highlights the successful management of severe nodulocystic acne using a structured Ayurvedic regimen. Significant improvement was observed in lesion reduction, inflammation control, and skin healing, with no adverse effects. The outcome suggests that Ayurvedic therapy may offer a safe and effective alternative for chronic, treatment-resistant acne. Further clinical studies are recommended to validate these results.

### **Conflict of Interest**

The authors declare no conflicts of interest.

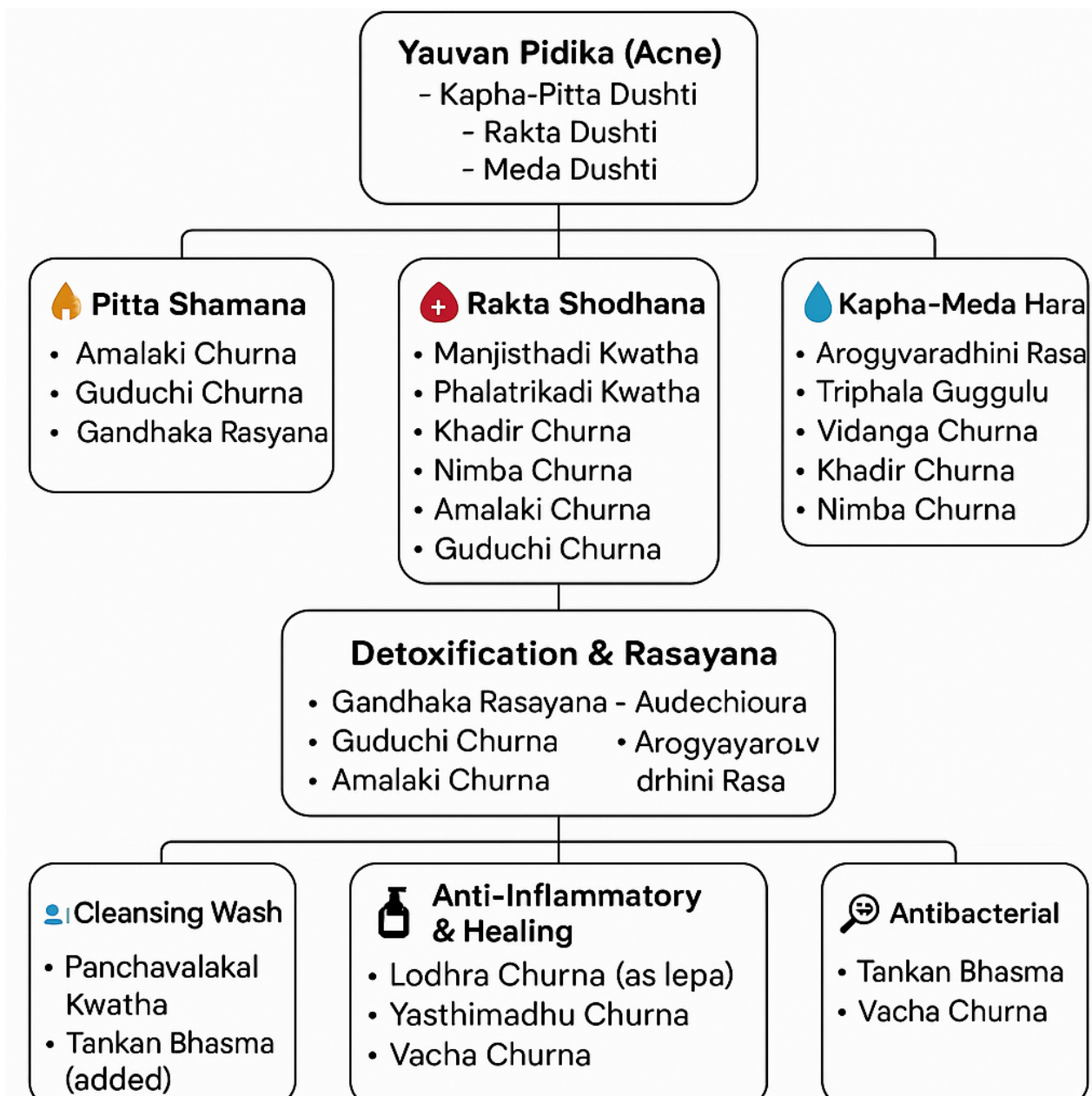
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### **Ethical Approval**

Not applicable as this article is a Case study.





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