



Case Study

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PANCHANIDANATMAK ADHYAYANA OF STEVENS-JOHNSON SYNDROME: A CASE STUDY

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ABSTRACT

Stevens-Johnson syndrome (SJS) is a medical emergency which is characterized by skin and mucosal reaction to the use of certain drugs. It is a minor form of toxic epidermal necrolysis, with less than 10 % body surface area (BSA) detachment. The purpose of reporting this case report is to study Stevens-Johnson syndrome in Ayurvedic perspective and correlate it with Ayurvedic Twacha vikara on the basis of samprapti adhyayana. A pre-diagnosed case of Stevens - Johnson syndrome by dermatologists was studied according to Ayurvedic diagnostic parameters i.e., Nidanapanchaka theory. The etiology and clinical features of Stevens-Johnson syndrome were correlated with twak-vikaras described in Samhitas. On clinical evaluation, the etiological factor found to be hypersensitivity to antibiotic drugs Azithromycin and Amoxicillin. It has been correlated as Asatmya-sevanahetu of Visarpa. The clinical symptoms were found correlated with Pittaja-Visarpa. Stevens-Johnson syndrome is a rare, emergency disorder of skin and mucous membrane that occurs secondary to use of certain drugs. The patient was told by the dermatologist about the prognosis of his condition and also became aware of the disadvantages of corticosteroid from some other sources. Hence, it is important to study such rare diseases in ayurvedic perspective to develop diagnostic and curative protocols to overcome limitations of contemporary medical science.

Keywords: Stevens - Johnson syndrome, Panchanidanatmak adhyayana, Pittaja-Visarpa, Anukta vyadhi.

INTRODUCTION

Stevens-Johnson syndrome (SJS) is a type IV (subtype C) hypersensitivity reaction that typically involves the skin and the mucous membranes. Although several classification schemes have been reported, the simplest classification breaks the disease down as follows¹:

1. Stevens-Johnson syndrome: A minor form of toxic epidermal necrolysis, with less than 10% body surface area (BSA) detachment
2. Overlapping Stevens-Johnson syndrome/Toxic Epidermal Necrolysis (TEN): Detachment of 10-30% of the BSA
3. Toxic epidermal necrolysis: Detachment of more than 30% of the BSA

It is a rare but serious systemic disorder- severe morbidity and even death affecting 7.1 per million people each year². Stevens-Johnson etiology is mainly a reaction to medication. More than 80% of cases of SJS/TEN are drug related and 95% of TEN cases. Several drugs have been identified during the last decade as a triggering cause³:

- NSAIDs, especially ibuprofen
- Anticonvulsants (phenytoin, valproic acid, phenobarbital, carbamazepine)
- Antibiotics (sulphonamides, aminopenicillins, quinolones, cephalosporin, tetracycline, imidazole antifungal agents)
- Allopurinol
- Corticosteroids

In Ayurveda, allergic manifestation is mentioned under the concept of *satmya-asatmya*⁴. It manifests due to exposure to *asatmya ahara-vihara* and contact with different poisonous materials (allergens). The factors are causing damage and disturbing *dosha* (*dosha prakopa*); which give displeasure or uneasiness to the body, are known as '*asatmya*'.

Whenever the body comes in contact with any sort of *asatmya* regarding *ahara*, *vihara* or *aushadha* those result in manifestation of various diseases. The list of such *asatmya hetujanya vyadhis* also includes *Visarpa*. *Visarpa* is an acute inflammatory dermatological manifestation. It spreads very quickly like snake in various directions⁵. It is characterized by clinical features such as *Aashu- anunnatashopha* (quickly raised and subside), *Daha* (burning sensation), *Jwara* (fever) and *Vedana* (pain). The nature of *Sphotas /Pidika* (vesicles) is so specifically described as *Agnidagdhatav* (with intense burning sensation).

In the present case, etiology as well as symptoms of drug induced Stevens-Johnson syndrome was thoroughly studied, and efforts has been made to understand the condition in Ayurvedic perspective.

Objectives

1. To study Stevens - Johnson syndrome (SJS) in Ayurvedic perspective – Panchanidanatmak Adhyayana.
2. To correlate SJS with Ayurvedic Twacha vikara.
3. To establish Ayurvedic diagnostic criteria for modern dermatological diseases.

Case report

Chief complaints

Complaints of macular rash all over body, blisters over lips, burning sensation all over body since last 2 days

Associated complaints

Patient was having complaints of Fever, Cough and Headache for 8 days.

History of Present illness

A 23 years old male patient working in pharmacy, of Vata- pittaja prakriti was admitted in one of the private hospitals at Nagpur with complaints of Burning sensation all over body, Blisters over lips, Macular rash all over body for last 2 days. Initially, he had felt slightly unwell for a few days and developed fever, cough, headache and generalized weakness for 8 days for which he took some medicines such as Azithromycin, Paracetamol, Acetaminophen, and Chlorpheniramine Maleate and Dextromethorphan, but did not get relief and the severity of fever and cough has increased. Then again, he consulted to general practitioner where he was prescribed with Amoxicillin, Levocetirizine, Montelukast and Ambroxol, Levosalbutamol, Guaifenesin combination.

While continuing the treatment for fever and cough, suddenly he noticed pinkish-red rash over trunk. There was severe burning sensation. Then the rash progressed over limbs including both palm and soles. Next day he observed there were blisters over his lips. The blisters gradually suppurred and burst. There was bleeding from burst blisters. The fever persisted, burning sensation increased, progression of rash increased.

History of Past Illness

No history of any major illness. No history of hypersensitivity to any drug.

Family History

No trait of any major illness in family.

Personal history

- Ahara- Vegan diet, 3 times /day, Sarvarasatmya
- Vihara- Standing work, exposure to AC
- Nidra- Prakruta before the onset of symptoms and disturbed since few days

RESULT

Table 1: Ashta sthana Parikshana findings

Ashta sthana Pariksha	Findings
Naadi	Pittaja, Mandukagati
Mala	2-3 time /day, Alpamatra, Alpadravamala
Mutra	5-6 vega/Day, Pita varna,
Jihwa	Sama
Shabda	Deenavaak
Sparsha	Ushna Sparsha
Druk	Prakrut
Akriti	Heenakaya

Table 2: Dashavidha Parikshana findings

Dashavidha Pariksha	Analysis
Prakriti	Vata-Pitta
Vikriti	Pitta Pradhana Tridosha Vikriti
Satwa	Madhyam
Sara	Heena
Samhanana	Heena
Ahara Shakti	Abhyavaharana Shakti: Heena; Jarana Shakti: Heena
Vyayama Shakti	Heena
Satmya	Madhyama
Pramana	Heena kaya, Weight: 52 kg, Height: 162 cm, BMI: 19.8
Vaya	Yuvavastha

General Examination

- General Condition- Moderate, Conscious, Alert
- Pallor- Present
- Icterus- Absent
- Cyanosis- Absent
- Clubbing- Absent
- Oedema- Absent

Vital examination

- Pulse rate- 120/min
- Respiratory rate- 22/min

- Blood pressure- 120/80 mm of Hg
- Temperature- 101°F

Ayurvediya Twacha Roga Parikshana

1. Varna- Tamra
2. Vistara- Mahavastu
3. Sthana- Sampurna Bahya Sharira Twacha
4. Swarupa- Mrudu, Sphutana, Tanu
5. Pidaka- Raktavarni, Raktapurita on Oshtha
6. Sparsha- Ushna, Swedana, Tivra Daha
7. Vedana- Satata, Todavata
8. Srava- Alpa Raktasrava

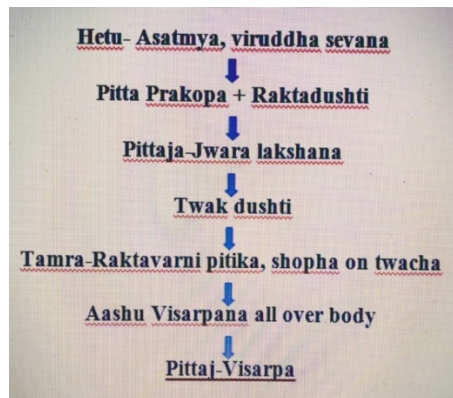
9. Gandha- Visragandhi
10. Kandu- Alpa, Dahottara Kandu
11. Anya Lakshana- Swedana- Alpa sweda
Angapatana- Absent
Romaharsha- Absent
Avastha- Nava, Ashukari

Inspection of lesion

- A. Morphology
 - 1) a) Primary lesion – Maculer Erythematous Rash
 - b) Secondary lesions – Redness, Blisters, Erosion over both lips
 - 2) Shape – Slightly raised, Diffused
 - 3) Color – Pinkish spots with center Red
- B. Distribution– All over body – Trunk, All four Extremities, Lips
- C. Configuration– Scattered
- D. Other- Severe burning with Pain

Table 3: Panchanidanatmak Adhyayana of Stevens-Johnson syndrome

Nidana-panchaka	Lakshana
Hetu	Asatmya (samyogaviruddha) dravya sevana ⁶ (combine intake of different antibiotic drugs at once i.e., drug induced SJS- Azithromycin + Augmentin + Dolokind)
Purvarupa	Fever (Jwara) Cough (Kasa)
Roopa	Fever (Jwara) Macular rash (Pitika) Tamra-Rakatavarniyapitika Burning Sensation (Daha) Pain (Shoola)
Upashaya	Cold Sponging by Shitajala (Shitavatavaritarsho)



Samprapti Flow chart

Table 4: Samprapti Ghataka Adhyayana in present case

Vikriti Pariksha : Samprapti Ghataka	
Dosha	Pitta Pradhana tridosha
Dushya	Rasa, Rakta
Agni	Mandagni
Agni dushti	Rasadhatwagni-mandya
Srotas	Rasavaha, Raktavaha
Srotodushti	Sanga, Vimargagaman
Udbhavasthana	Madhya Sharir
Vyaktasthana	Sarvasharira-Twacha
Sancharasthana	Sarvasharira
Rogamarga	Bahya
Rogaswabhaba	Ashukari
Sadhya- Asadhyata	Kashtasaddhya

Table 5: Correlation of Stevens-Johnson syndrome and Visarpa

SJS	Visarpa		
	Charaka ⁷	Sushruta ⁸	Vagbhata ⁹
The skin symptoms begin on the face and chest, and then spread to other parts of the body.	Vividham Sarpatiiti Adhah-Urdhwa- Tiryak Sphota Shophadibhih Prasarati	Twak Mamsa Shonitagatah Sarvangasarinam Asthit Atmaligka Vistruta- Anunnata- Ashushopham Sarvato Visaranat	Prakopaneih Prakupita Visheshena Vidahibhih Dehe Shighram Visarpanti

Table 6: Correlation of Stevens-Johnson syndrome and Pittaja Visarpa

S. No.	SJS	Charaka ¹⁰	Sushruta ¹¹	Vagbhata ¹²
1	Begins with fever	Jwara	Jwara	Jwara
2	Body aches	Angabheda	-	-
3	Headache	Shiroruja	-	-
4	Tiredness, general ill feeling	Chakshusho Akulatvam Aswapna	-	-
5	Pinkish, reddish or purplish rash	Tamra-Krushna-Raktavarni Utsedha Srava	-	Atilohita
6	Rapid progression	-	Drutagati	Drutagati
7	Burning sensation all over body	Ati Antardaha	Daha Bahula	-
8	"Raw" areas of skin those are painful.	Sambhedana	Prabheda Bahula	-
9	Skin begins to blister and peel (detach)	Sphotaka	Sphota Bahula	-
		Achirapaki	Paka Bahula	-

DISCUSSION

During Ayurveda practice we have to deal with many pre-diagnosed cases of contemporary medicine, which can be considered as 'anuktavyadhi'. Clinical assessment of these anuktavyadhi should be done on the basis of Ayurvediya Siddhanta and Parikshana paddhati for samprapti-parakadhyayana as well as chikitsa vinishchaya. In Ayurveda, hypersensitivity or allergic manifestation is mentioned under the concept of Satmya-asatmya. It manifests due to exposure to Asatmya ahara-vihara-aushadha and contact with different poisonous materials (allergens). Acharya Charaka has clearly mentioned the etiopathogenesis behind the manifestation of Asatmya ahara-viharajanya vyadhi¹³. Almost all the Samhitas of Ayurveda support to the fact that pradnyaparadha is the root cause for manifestation of any kind of disease. As Acharya Vagbhata says heena/ati/mithya yoga of Shareerika, Vachika and Manas karma along with Asatmyasanyoga and kala is responsible for dosha prakopa to take place in the body¹⁴.

Here, effort has been made to establish a standard naidanik protocol for studying such anuktavyadhi by correlating vyadhi ghataka. The knowledge of hetu-linga, Upashaya along with chikitsa of any disease can be elaborated on the basis of chikitsa sutra. The chikitsa sutra for anuktavyadhi clearly emphasizes that chikitsa of such vyadhis should be done according to dosha, ling observed¹⁵. Therefore, any of the disease should be diagnosed on the basis of vrudhhi-kshaya lakshana of vitiated dosha and doshapratyanika chikitsa should be implemented. Also elicitation of detail history about hetu sevana would be beneficial in execution of hetupratyanika chikitsa and early control on disease. On the basis of Purvarupa and rupa observed in the patient vyadhipratyanika chikitsa should be adopted.

CONCLUSION

Stevens-Johnson syndrome is a rare, emergency disorder of skin and mucous membrane that occurs secondary to use of certain drugs (Allergens). In this case of Stevens-Johnson syndrome, after studying Nidanapanchaka, parameters were found to be matched with 'Pittaja Visarpa'.

It is a need of time to study such rare diseases in Ayurvedic perspective to develop diagnostic and curative protocols to overcome limitations of contemporary medical science. Hence, anuktavyadhi, like Stevens-Johnson syndrome, should be diagnosed and treated on the basis of Panchanidanatmak understanding of dosha-dushya Vikriti found in patient.

Consent and ethical statement

Present study was carried out in accordance with ethical principles by following the International Conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP).

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