व्यापदस्तासां सिद्धिः WSR To Cutaneous Adverse Drug Reactions -A Case Study

Prof. (Dr) Sangram Keshari Das[1], Aniket Anil Pagi[2], Dr. Bishnupriya Mohanty.[3]

[1]Professor & Head, Dept. of Dravyaguna Vijnana, Gomantak Ayurveda Mahavidyalaya & Research Centre, At/Po- Shiroda, Dist- North Goa, Goa, India-403103.

[2]Final B.A.M.S., Gomantak Ayurveda Mahavidyalaya and Research Centre, Shiroda, Goa

[3]MD, PhD.Professor and HOD.Department of Sanskrit Samhita and Siddhanta.Gomantak Ayurveda Mahavidyalaya and Research Centre, Shiroda, Goa

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ABSTRACT:

Cutaneous adverse drug reactions (CADRs) are among the most common manifestations of adverse drug reactions and may range from mild erythematous eruptions to severe life-threatening conditions. This case report describes the successful management of CADR through Ayurvedic interventions in a 22-year-old male patient who developed eczematous, erythematous, and intensely pruritic lesions around a healing surgical wound following the application of Jatyadi Taila and subsequent use of topical conventional medications. Clinical assessment, patch test, haematological investigations, and causality evaluation using the Naranjo Adverse Drug Reaction Probability Scale confirmed a definite drug-induced reaction, while the Dermatology Life Quality Index (DLQI) indicated a very large impact on quality of life. Ayurvedic management consisted of discontinuation of the offending agents, administration of Guggulu Tiktam Kashayam, Aragwadhadi Kashayam, Nimba Ghanavati, Dushivishari Gulika, Rasottamadi Lepam, and Jalaukavacharana (leech therapy). Complete resolution of symptoms was achieved within 17 days, accompanied by normalisation of haematological parameters and improvement in DLQI score. This case highlights the potential role of individualised Ayurvedic therapy in managing CADRs and improving patient outcomes without reported adverse effects.

Keywords: Cutaneous adverse drug reaction, Ayurveda, Drug-induced dermatitis, Jalaukavacharana, Naranjo scale, DLQI, Ayurvedic management.

INTRODUCTION:

Adverse drug reactions (ADRs) are defined as “a response to a drug that is noxious and unintended, and which occurs in doses normally used for the treatment, prophylaxis, or diagnosis of disease, or the modification of physiological function” **[1]**. ADRs encompass all types of adverse reactions to drugs, affecting any part of the body. Among all types of ADRs, when the unintended and harmful reaction to a systemic drug is limited to only the skin, it is termed CADR or toxidermia. These reactions range from mild erythematous skin lesions to severe forms of drug-induced dermatitis, including bullous reactions (Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN)/Lyell syndrome), acute generalised hyperemic pustulosis (AGEP), and drug reactions with eosinophilia and systemic symptoms (DRESS) **[2]**. CADR is frequent, but a small fraction (2%) of adverse reactions are classified as severe, and very few are fatal. Only 2-3% of all hospitalised patients suffer from CADR. Fortunately, most drug eruptions are self-limited, mild, and resolved with the discontinuation of the offending pharmacological agent. Severe and potentially life-threatening events such as SJS and TEN are rare and affect approximately 1 or 2 out of one million people **[3][4]**. They are characterised by a heterogeneous field of clinical presentations, sometimes with exanthematous (maculopapular) drug eruption and sometimes with no obvious features suggesting drug causality. It can significantly impact a patient's quality of life and pose challenges in management, especially when the causative agent is part of the necessary treatment for another

condition. In Ayurveda, this condition can be correlated with Aushadha Anurjata Janya Twak Vikara, which refers to skin disorders caused by incompatible or improperly administered medicines. This concept of Aushadha Anurjata (allergic to certain groups of medications) can be categorised under the broad umbrella of Asatmya (incompatibility) in Ayurveda. A substance that is not favourable to the human body is known as Asatmya, and it becomes responsible for vitiating and provoking the internal milieu of the organism **[5]**.

Ayurveda, the ancient system of medicine, focuses on a holistic approach to treating skin disorders. It considers not only the local manifestations but also the systemic imbalances that may contribute to the condition. The Ayurvedic approach to skin disorders is based on the concept of the harmony between three Doshas (regulatory functional factors of the body) (i.e., Vata (Dosha responsible for movement and cognition), Pitta (Dosha responsible for regulating body temperature and metabolic activities) and Kapha (Dosha responsible for regulating body fluids and keeping the body constituents cohesive)), rhythmic transformation of seven Dhatus (major structural components of the body), proper elimination of Mala (Sharira Mala and Dhatu mala) (waste products) from the human body and their role in maintaining skin health. CADR, from an Ayurvedic perspective, is often seen as a result of aggravated Pitta Dosha, with possible involvement of Vata and Kapha depending on the specific manifestations **[6]**. This case report presents the Ayurvedic management of drug-induced dermatitis that developed following the use of Jatyadi Taila application for wound healing and the use of conventional medications for skin conditions.

Case Presentation:

Patient's details

A 22-year-old male patient, presented with a skin manifestation at the right popliteal fossa. History revealed that due to insect bite there was abscess formation at Right popliteal fossa. The abscess was identified as Acute on Chronic Abscess. A cruciate incision was made & abscess was drained out by theI&D method, leaving a surgical wound.

For wound healing, Betadine 5% was used for the initial 6 days, and then switched to Jatyadi taila. After 2-3 days of dressing done using Jatyadi taila, a rash developed surrounding the healing wound associated with redness and itching. The patient was unaware of the cause of the skin manifestation, continued dressing with Jatyadi taila, and simultaneously, he had consulted a local practitioner for the skin condition. According to the prescription, he had to apply the following topical cream/lotion, after which the condition worsened: Calydryl lotion (Calamine, Diphenhydramine Hydrochloride, Camphor), Fusidicin ointment (Fusidic acid). However, there was no ill effect on wound healing. He had no significant past medical history and no known allergies before this incident. The patient reported no family history of similar skin conditions or allergies.

Clinical Findings

On clinical examination, the patient presented the following findings:

eczematous scaly lesions around the surgical wound on the right popliteal fossa with mild erythema, severe itching causing significant discomfort and sleep disturbance, serous discharge from skin lesion and mild oedema in the affected area.

All vitals were within normal limits.

Body Temperature = 98 ° F, Pulse = 80/min.

Respiratory rate: 19/min, blood pressure = 120/82 mmHg

Ashta vidha Pariksha (Eightfold examination):

Nadi(pulse) was Pitta- Kapha dominant in character. Mutra(urine) was normal in colour, Mala(excreta) was Samyak. Jiwha (tongue) had a slight white coating. Shabda (speech) was medium pitch, clear. Sparsha (tactile sensation) was warm. Drik(eyes) were normal. Akruti (body stature) was Medium in size.

Patch test

A Patch test was done on a part of the right hand using the same Jatyadi taila used by the patient & the result was positive. There was a slight rash with itching the next day, indicating an allergic reaction.

Diagnostic approach:

Based on the patient's history and clinical findings, a diagnosis of CADR was made. The aggravation of symptoms after application of Jatyadi taila & also a patch test done, strongly supported the diagnosis. To assess the severity of the problem, Complete blood count (CBC) and ESR were advised. Elevated WBC count (13,500/umm), Eosinophils (8), ESR (34 min/hr) further confirmed the diagnosis of an allergic reaction. Two scales were used to assess the severity and impact of the ADR: the Adverse Drug Reaction probability scale - Naranjo scale **[7]** & Dermatology Life Quality Index (DLQI) **[8][9]**. The initial scores at the first visit were as follows: Naranjo scale = 9 (indicating a definite ADR) and DLQI = 17 (within the 11-20 range, indicating a moderate to severe impact on the patient's quality of life). While the Naranjo scale helped confirm the definite causality of the drug in the adverse reaction, the DLQI provided insight into the severity of the condition and its impact on the patient's daily functioning. A score of 9 on the Naranjo scale typically indicates a definite relationship between the drug and the adverse event. This score was based on several key factors observed in our case, including i) the adverse event appeared shortly after the initiation of the application of medicines, ii) Patch test confirmation. iii) The following drugs may lead to further deterioration of the condition: Calydryl lotion (Calamine, Diphenhydramine Hydrochloride, Camphor), Fusidicin ointment (Fusidic acid)

From an Ayurvedic perspective, the condition was assessed as a Pitta-predominant skin manifestation with secondary involvement of Kapha, Vata Doshas and consideration of either Dushi Visha (artificial poison) or Agantuja Visha (exogenous poison) for the conventional drugs causing adverse skin manifestations. The features suggesting Pitta involvement included erythema, a burning sensation, and rapid progression of the rash. Kapha involvement was indicated by intense itching and mild oedema, whereas Vata involvement was suggested by dryness and scaling of the skin at the affected parts, itching, and thickening of the affected skin areas. This Pitta vitiation, triggered by the Dushi Visha or Agantuja Visha (in this case, the conventional medications), provides the basis for the Ayurvedic diagnosis and subsequent treatment approach. The diagnosis also considered the concept of Satmya (homologation) in Ayurveda, which suggests that the prescribed conventional medications were incompatible with the patient's constitution, leading to an adverse reaction manifesting as severe dermatitis.

Therapeutic Intervention

The foremost therapeutic advice in this case of CADR was to stop all medications due to which the situation arose and became complicated. Simultaneously, to assess the status of the disease and the strength of the patient, the following therapeutic interventions were prescribed and modified over the course of four visits to address the changing needs of the patient and the progress of the condition. The details of the therapeutic interventions are summarised below in Table 1

Date	Medications	Dose, Frequency	Rationale
First visit 11/11/25	Guggulu Tiktam Kashayam tablets.	2 TDS After food (1 Tab = 250mg)	Aimed to pacify the aggravated Pitta Dosha. Reducing inflammation and initiating the detoxification process.
	Aragwadhadi Kashayam tablets.	2 TDS After food (1 Tab = 250mg)	
	Rasottamadi Lepam for Local application.	3 times per day	To promote rapid healing and to get relief from symptoms.
Second Visit 15/11/25	Jalaukavacharana procedure.	3 Leeches were applied to the affected area till the fall off on their own. (Figure 5).	Detoxification of Rakta Dhatu locally by blood letting.
	Guggulu Tiktam Kashayam tablets.	2 TDS After food (1 Tab = 250mg)	Mrudu Virechana.

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	Aragwadhadi Kashayam tablets.	2 TDS After food (1 Tab = 250mg)	
	Rasottamadi Lepam for Local application.	3 times / day	Symptomatic relief.
Third visit 20/11/25	Nimba Ghanavati with water.	2BD After food	Further purification of Rakta Dhatu.
	Dushivishari Gulika.	2BD After food	
	Rasottamadi Lepam for Local application.	2 times / day	To improve complexion and restore the skin.
Fourth visit 28/11/25	No medication is advised.	-	The patient is asymptomatic.

Table 1: Details of therapeutic interventions administered

Along with these medications, the patient was advised to follow the dietary regimen as customised for him. He was advised to avoid hot, sour, salty, spicy, fried and fermented food items as they may worsen the symptoms.

Follow-up and Outcome:

A detailed timeline of follow-up events is illustrated along with photographs in Table 2

Day - Date – Observations; Photographs.	**Day - Date – Observations; Photographs.**
	
Figure 1; 23/10/2025; Initial onset of skin problems, i.e. mild itching and erythema.	**Figure 2;** 06/11/2025 Condition worsened after application of the conventional medicines. Intense itching, erythema, serous discharge.
	
Figure 3; Day 0; 11/11/2025; First visit, Intense Itching, eczematized skin lesion, drying- scaling, serous discharge, mild oedema. Diagnosed as CADR, Naranjo scale and DLQI assessment done; Initial Ayurvedic medications prescribed.	**Figure 4;** Day 3; 14/11/2025 Symptoms slightly reduced responding to the Ayurvedic medicines.

	
Figure 5; Day 4; 15/11/2025; Second Visit, Jalaukavacharana procedure was done and previous medications continued.	**Figure 6;** Day 9; 20/11/2025; Third visit, Significant improvement noted, Treatment adjusted.
	
Figure 7; Day 17; 28/11/2025; Fourth visit, Complete resolution of symptoms, no medications advised.	**Figure 8;** Day 30; 11/12/2025; No reversal of symptoms, patient completely asymptomatic.
Table 2: Timeline of detailed events with photographs Naranjo scale: adverse drug reaction probability scale; DLQI: Dermatology Life Quality Index.	

After 17 days of Ayurvedic treatment ie. On 28/11/2025, the patient reported with complete resolution of symptoms, the skin appeared clear, devoid of skin lesion, itching, and oedema. The patient expressed feeling healthy and happy, with improved sleep and a return to normal daily activities. The objective improvements are the resolution of eczema, absence of scaling and oedema and no reports of itching or burning sensations. All of the pathological outcomes were normal and are presented in Table 3.

Hematological parameters	**Before treatment**	**After treatment**
Total leucocyte count (/cu mm)	13,500	7800
Eosinophil	8	4
ESR (mm in 1st hour)	34	20
Table 3: Assessment of pathological parameters before and after treatment		

The assessment and interpretation of the extent of adverse drug reactions in the Naranjo scale and DLQI scores are illustrated in Tables 4-5.

Scale	**Day 0**	**Visit 1**	**Visit 2**	**Visit 3**	**Visit 4**
Naranjo Scale (Adverse Drug Reaction Probability)	NA	9	NA	NA	NA
DLQI (Dermatology Life Quality Index) Score	5	17	12	8	2
Table 4: Assessment of adverse drug reactions in Naranjo scale and DLQI score DLQI: Dermatology Life Quality Index					

Interpretation of results in Naranjo scale		Interpretation of results in DLQI score	
Score	**ADR probability**	**Score**	**Effect on life**
≤ 0	Doubtful	0 - 1	No effect
1 - 4	Possible	2 - 5	Small effect
5 - 8	Probable	6 - 10	Moderate effect
≥ 9	Definite	11 - 20	Very large effect
		21 - 30	Extremely large effect

Table 5: Interpretation of Naranjo scale and DLQI (Dermatology Life Quality Index) scores from the standard reference range

The patient adhered well to the prescribed medications; compliance was confirmed by regular interaction with the patient via telephone, and no adverse effects from the Ayurvedic treatment were reported.

Patient perspective: The patient expressed high satisfaction with the treatment outcomes. In his words, "The Ayurvedic treatment not only cleared my skin but also made me feel better overall. I appreciate the holistic approach and the absence of any noticeable side effects. It is remarkable how my skin has healed, and I am able to return to my normal life."

Informed consent: The authors certify that informed consent of the patient was obtained for the purpose of publication of this case report, including the use of clinical photographs and other clinical information in the journal. He understood that his name and initials would not be published and that proper efforts would be taken to conceal his identity. He was made aware of the potential benefits and risks of the Ayurvedic treatment approach, and he willingly opted for this line of management.

DISCUSSION:

Cutaneous adverse drug reactions (CADRs) constitute a significant proportion of adverse drug reactions encountered in clinical practice and may present with a broad spectrum of dermatological manifestations ranging from mild exanthematous eruptions to severe and potentially fatal conditions such as Stevens–Johnson syndrome and toxic epidermal necrolysis [1][2][3][4]. The present case demonstrates the successful management of a localised CADR using Ayurvedic interventions after the offending agents were identified and discontinued.

The temporal association between the application of Jatyadi Taila and the subsequent appearance of erythematous, pruritic, eczematous lesions strongly suggested a drug-induced hypersensitivity reaction. The positive patch test further reinforced the causal relationship, while the Naranjo score of 9 established the reaction as a definite ADR [7]. Elevated leukocyte count, eosinophilia, and raised ESR supported the presence of an active inflammatory and allergic process.

From an Ayurvedic perspective, the condition was interpreted as a manifestation of Aushadha Anurjata Janya Twak Vikara occurring due to Asatmya (incompatibility) of the administered medications [5][10]. The predominant clinical features—erythema, itching, oedema, dryness, and scaling—indicated the involvement of Pitta, Kapha, and Vata doshas. Pitta predominance was evident through redness and inflammatory changes, Kapha involvement through itching and oedema, and Vata involvement through dryness and scaling of the affected skin. The concept of Dushi Visha or Agantuja Visha was also considered in understanding the pathological response induced by the incompatible drugs. [10]

The treatment strategy focused on eliminating the causative factors and restoring doshik balance. Discontinuation of all suspected medications represented the primary therapeutic step and aligns with modern recommendations for CADR management, where prompt withdrawal of the offending drug is considered essential. Ayurvedic medicines such as Guggulu Tiktam Kashayam, Aragwadhadi Kashayam, Nimba Ghanavati, and Dushivishari Gulika were selected for their traditional indications in inflammatory skin disorders and their potential to alleviate Pitta-Kapha vitiation. Rasottamadi Lepam was administered locally to reduce inflammation, itching, and scaling.

Guggulu Tiktam Kashayam is a classical formulation described in Ashtanga Hridaya for the management of chronic skin diseases, inflammatory disorders, ulcers, and musculoskeletal conditions [11]. It contains Guggulu (Commiphora mukul) along with predominantly Tikta (bitter) herbs such as Nimba (Azadirachta indica), Guduchi (Tinospora cordifolia), Patola (Trichosanthes dioica), Vasa (Adhatoda vasica), Manjistha (Rubia cordifolia), Haridra (Curcuma longa), Kutki (Picrorhiza kurroa), Vidanga (Embelia ribes) and several other herbs. These drugs possess Tikta-Kashaya Rasa, Pitta-Kapha shamaka, Rakta Shodhaka, Kandughna, Kushthaghna, and Shothahara properties. Modern pharmacological studies have demonstrated anti-inflammatory, antioxidant, antimicrobial, immunomodulatory, and wound-healing activities of major ingredients such as Guggulu, Neem, Guduchi, Turmeric, and Manjistha. Collectively, the formulation reduces inflammatory mediators, purifies the blood, corrects immune dysregulation, and accelerates healing of inflamed skin lesions [12].

Aragwadhadi Kashayam is traditionally indicated in Kushtha, Kandu, Pitta-Rakta disorders, and various inflammatory skin diseases. Its principal ingredient, Aragwadha (Cassia fistula), is well known for its Rakta Prasadana, Kandughna, Kushthaghna, and mild detoxifying actions. The formulation also contains herbs possessing Tikta and Kashaya properties that pacify aggravated Pitta and Kapha, alleviate itching, reduce erythema, and act as Mrudu Virechaka (facilitate elimination of accumulated toxins via mild purgation). Pharmacological studies have shown that Cassia fistula possesses anti-inflammatory, antimicrobial, antioxidant, and wound-healing activities, making it beneficial in allergic and inflammatory dermatoses .

Rasottamadi Lepam is a classical external formulation indicated for eczema (Vicharchika), itching (Kandu), chronic ulcers, and inflammatory skin diseases. It contains purified mineral ingredients such as Shuddha Parada, Gandhaka, Manashila, Sindura, together with herbal drugs including Haridra (Curcuma longa), Daruharidra (Berberis aristata), Maricha (Piper nigrum), Shweta Jeeraka (Cuminum cyminum), and Krishna Jeeraka (Nigella sativa). When applied locally, it exhibits Kandughna, Krimighna, Lekhana, Shothahara, and Ropana actions. Curcumin from Haridra and berberine from Daruharidra possess well-established anti-inflammatory and antimicrobial effects, while black pepper enhances local penetration of active constituents. These combined actions help reduce erythema, itching, microbial colonisation, and scaling, thereby promoting rapid healing of the affected skin.

Nimba Ghanavati primarily contains Nimba (Azadirachta indica), one of the foremost drugs indicated in Ayurveda for skin disorders. Neem possesses Tikta-Kashaya Rasa, Laghu-Ruksha Guna, Sheeta Virya, and acts as Kushthaghna, Kandughna, Krimighna, Rakta Shodhaka, and Pitta-Kapha Shamaka. Experimental studies have demonstrated potent antibacterial, antifungal, antiviral, antioxidant, immunomodulatory, and anti-inflammatory activities of neem constituents such as nimbidin and azadirachtin. These properties help control allergic inflammation, reduce pruritus, prevent secondary infection, and support restoration of normal skin architecture.

Dushivishari Gulika is a classical antidotal formulation indicated in conditions involving Dushi Visha, chronic toxic states, allergic manifestations, and poison-induced disorders. It contains several herbs possessing Vishaghna, Rakta Shodhaka, Deepana, and Pachana properties, which aid in neutralising residual toxins and correcting impaired metabolism. In the present case, the formulation was selected considering the Ayurvedic concept of Aushadha Anurjata and Dushi Visha, where repeated exposure to incompatible medicines leads to persistent inflammatory manifestations. By reducing systemic inflammatory burden and supporting detoxification, Dushivishari Gulika may have contributed to complete clinical recovery. A notable component of the treatment protocol was Jalaukavacharana (leech therapy), which was performed during the second visit. Jalaukavacharana is regarded in Ayurveda as a form of Raktamokshana (bloodletting), particularly useful in Pitta-dominant disorders involving inflammation, burning sensation, and localised congestion. The marked symptomatic improvement observed after the procedure suggests its possible contribution to reducing local inflammatory mediators and improving tissue healing. Ayurvedic literature has emphasised the utility of Jalaukavacharana in inflammatory skin conditions.

The treatment protocol was designed to address the underlying Pitta-Kapha predominance, purify Rakta Dhatu, eliminate Dushi Visha, relieve inflammation and pruritus, and promote tissue healing. The formulations were

selected based on their classical indications in Kushtha, Vicharchika, Kandu, Vrana, and other inflammatory skin disorders.

Clinical improvement was progressive throughout the treatment period. The patient's DLQI score decreased from 17, indicating a very large effect on quality of life, to 2, indicating only a small residual impact. This improvement reflects not only the resolution of physical symptoms but also the restoration of sleep, comfort, and daily functioning. Objective laboratory findings confirmed the clinical response, with total leukocyte count decreasing from 13,500/cu mm to 7,800/cu mm, eosinophil count reducing from 8% to 4%, and ESR decreasing from 34 mm/hour to 20 mm/hour following treatment. These findings suggest effective control of the inflammatory and allergic response.

The absence of adverse events during treatment and the lack of symptom recurrence during follow-up further support the safety and effectiveness of the therapeutic approach adopted in this case. Nevertheless, as this report describes a single patient, the findings cannot be generalised without caution. Controlled clinical studies involving larger sample sizes are required to establish the efficacy, safety, and reproducibility of Ayurvedic interventions in CADRs. Future research should also explore the pharmacological actions of these formulations and procedures through rigorous scientific methodologies. Overall, this case demonstrates that an individualised Ayurvedic treatment approach integrating internal medicines, local applications, dietary modifications, and Jalaukavacharana may offer a promising complementary strategy for the management of selected cases of CADR, particularly when conventional medications themselves are implicated in the adverse reaction.

CONCLUSION:

This case report highlights the successful management of cutaneous adverse drug reaction through a comprehensive Ayurvedic treatment protocol. Early identification and withdrawal of the offending agents, combined with Ayurvedic internal medications, Rasottamadi Lepam, dietary regulation, and Jalaukavacharana, resulted in complete clinical recovery within 18 days. Significant improvement was observed in laboratory parameters and quality-of-life scores, with no recurrence during follow-up. The findings suggest that Ayurveda may provide a safe and effective complementary approach in the management of CADRs. However, larger clinical studies are necessary to validate these observations and establish evidence-based treatment protocols for broader clinical application.

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