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Mapping the Pathological Progression of *Pakshaghata* Through *Shatkriyakala*: A Scoping Review

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Abstract

Background: *Pakshaghata* (paralysis of one side of the body) is a major disease described under *Vata Nanatmaja Vyadhi* in Ayurveda, which matches with cerebrovascular accident (CVA or stroke) in modern medical science. While modern emergency medicine mainly focuses on treatment after stroke occurs, classical Ayurveda explains disease development as a step-by-step six-stage process called *Shatkriyakala* (*Sanchaya*, *Prakopa*, *Prasara*, *Sthanasamshraya*, *Vyakti*, and *Bheda*).

Objectives: This review aims to study classical Ayurvedic texts and modern literature to explain the stages of *Pakshaghata* through *Shatkriyakala* and identify early treatment opportunities at each stage.

Eligibility Criteria & Information Sources: Information was taken from classical Samhitas (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Madhava Nidana*, and *Bhavaprakasha*) and research articles published up to 2025 across PubMed, DHARA, and Google Scholar, following PRISMA-ScR guidelines.

Charting & Synthesis Methods: Details about disease causes (*Dhatukshaya* and *Margavarana*), stage-wise symptoms, and stage-specific Ayurvedic treatments were collected and summarized simply.

Results: *Sanchaya* to *Prasara* represent early stages where risk factors like high blood pressure build up in the body. *Sthanasamshraya* in *Mastishka* (brain) matches with Transient Ischemic Attack (TIA) and early warning signs (*Purvarupa*). *Vyakti* is full paralysis (*Cheshta Nivritti*, *Vak Stambha*), where immediate

treatments like *Snehana*, *Svedana*, *Mridu Virechana*, and *Basti* are required. *Bheda* is the chronic stage needing long-term rehabilitation.

Conclusions: Understanding *Pakshaghata* through *Shatkriyakala* helps doctors stop stroke at early stages instead of waiting to treat after full paralysis happens.

Keywords: *Pakshaghata, Shatakriyakala, Hemiplegia.*

Introduction

Pakshaghata is one of the most serious nervous system diseases explained in traditional Ayurvedic medicine[1]. In this condition, a person loses function, sensation, and movement on one side of the body, often with severe pain. Ayurveda places it among eighty major diseases caused mainly by disturbed *Vata Dosha* (*Vata Nanatmaja Vyadhi*)[2,3]. In modern medical science, *Pakshaghata* is compared with hemiplegia caused by cerebrovascular accident (CVA or stroke), which is a leading cause of death and long-term disability worldwide[4,5].

Modern stroke treatment has advanced a lot with brain scanning and clot removal, but stopping stroke before it happens or helping chronic patients fully recover remains a big challenge[5,6]. Long ago, *Acharya Sushruta* gave the concept of *Shatkriyakala*, the six sequential stages of disease development: *Sanchaya* (accumulation), *Prakopa* (aggravation), *Prasara* (spread), *Sthanasamshraya* (localization), *Vyakti* (full appearance), and *Bheda* (complications and chronicity)[7]. *Shatkriyakala* simply means choosing the right time for medical treatment (*Chikitsa Avasara*)[7,8].

Acharya Charaka clearly explains the two main reasons why *Vata* gets disturbed in the body: *"Vayor dhatukshayat kopo margasyavaranaena cha"*[9]. This verse shows two main pathways: *Dhatukshaya* (weakening or loss of body tissues) and *Margavarana* (blockage in body channels or blood vessels)[9,10]. Instead of looking at stroke as a sudden event that happens out of nowhere, *Shatkriyakala* shows how small imbalances slowly grow over time into a serious disease[8,11].

This review collects evidence from old Ayurvedic books and modern research to map *Shatkriyakala* onto Pakshaghata, giving clear ideas for prevention, emergency management, and recovery[11,12].

Methods

This scoping review was prepared following the standard rules of Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)[12].

1. Protocol and Eligibility Criteria

A simple plan was made before starting the study. Literature was selected if it contained:

1. Ayurvedic descriptions of *Vata Vyadhi*, Pakshaghata, *Shatkriyakala*, or *Kriyakala*.
2. Modern details about stroke risk factors, warning signs, brain ischemia, and blockage mechanisms.
3. Studies or articles connecting Ayurvedic disease stages with modern stroke care.

Articles were excluded if they did not have proper grounding in classical Ayurvedic books or lacked clear references.

2. Information Sources and Search Strategy

Detailed manual and digital searches were carried out in core Ayurvedic texts along with famous commentaries (*Charaka Samhita* with Chakrapani's commentary, *Sushruta Samhita* with *Dalhana*'s commentary, *Ashtanga Hridaya* with *Arunadatta*'s commentary, *Madhava Nidana*, and *Bhavaprakasha*)[1,7,9,13]. Digital databases like PubMed, DHARA, and Google Scholar were searched up to October 2025. Search terms included simple words and combinations like: ("*Pakshaghata*" OR "*Vatavyadhi*") and ("*Shatkriyakala*" or "*Kriyakala*" or "Pathogenesis") and ("Cerebrovascular Accident" OR "Stroke" OR "Infarct").

3. Selection of Sources and Data Charting

Titles and summary texts were checked first, followed by reading full articles. Important details were noted down: classical chapter and verse numbers, disease mechanisms (*Dosha*, *Dushya*, *Srotas*), stage symptoms, modern correlations, and stage-wise treatment methods (*Chikitsa Sutra*).

Results & Pathological Synthesis

1. Selection of Evidence

A total of 49 sources were studied. These included classical Ayurvedic Samhitas (20 sections and commentaries), published review articles (18 papers), clinical research studies (8 studies), and guideline documents (3 frameworks including PRISMA-ScR)[1,7,9,11,12].

2. The Six Stages of *Shatkriyakala* in *Pakshaghata*

Stage 1: *Sanchaya* (Accumulation)

Sanchaya is the first stage where *Vata Dosha* slowly starts collecting in its main natural place in the body, which is *Pakvashaya* (large intestine)[7,14]. This happens due to wrong diet and habits (*Nidana*) like taking dry or cold food, irregular eating, over-fasting, excessive stress, lack of sleep, and old age[1,14]. At this point, the disease is very mild and has no brain or limb paralysis symptoms. The patient may only feel simple problems like mild heaviness or fullness in the abdomen (*Stabdhapoornakosthata*) or general tiredness[7,14].

In modern medicine, *Sanchaya* matches with the early risk factor stage, where high blood pressure, diabetes, high cholesterol, smoking, and stress start causing silent damage to blood vessels[11,15].

Stage 2: *Prakopa* (Aggravation)

If bad food and habits continue, the collected *Vata Dosha* gets excited or aggravated in *Pakvashaya*[7,8]. Symptoms at this stage include sound or gurgling in the stomach (*Kukshi-atopa*) and pain shifting from one place to another[7,14].

In modern science, *Prakopa* relates to increasing inflammation in blood vessels, thickening of artery walls, and growth of cholesterol plaques[11,16].

Stage 3: *Prasara* (Dissemination or Spread)

In *Prasara*, the increased *Vata Dosha* spills over from its main site and begins moving throughout the entire body through circulation channels (*Rasayani* and *Dhamani*)[7,13]. Symptoms become more general, like body pain, uneasiness, and temporary circulation disturbance[7,14].

This stage matches with tiny blood clots forming or passing through blood vessels and temporary changes in blood supply to the brain[11,16].

Stage 4: *Sthanasamshraya* (Localization & Early Warning Signs)

Sthanasamshraya is the most critical stage where the actual disease takes root[7,11]. The moving *Vata Dosha* gets stuck at a weak spot (*Khavaigunya*) in the blood vessels of the brain (*Mastishka Sira* and *Dhamani*)[1,11]. Here, *Dosha-Dushya Sammurchana* (mixing of bad *Vata* with body tissues like blood and muscle) takes place[1,11].

Clinically, this stage produces early warning signs (*Purvarupa*), such as sudden numbness, tingling sensation (*Suptata*), temporary weakness in hands or legs, slurred speech, or mild face twisting[1,11]. Modern medicine calls this stage a Transient Ischemic Attack (TIA or mini-stroke)[11,16].

Stage 5: *Vyakti* (Full Appearance of Disease)

Vyakti is the stage where full stroke appears clearly[7]. The disturbed *Vata*, acting either due to blockage (*Avarana*) or severe tissue damage (*Dhatukshaya*), stops working on one side of the body (*Paksha*)[1,9].

Classical Ayurvedic books describe clear symptoms: complete loss of movement in limbs (*Cheshta Nivritti*), difficulty in speaking (*Vak Stambha*), severe pain (*Ruja*), loss of sensation or consciousness (*Achetana*), and twisting of face (*Mukhakarshana*)[1,3,9]. This matches directly with acute ischemic or hemorrhagic stroke in modern medicine[11,15].

Stage 6: *Bheda* (Chronicity and Complications)

Bheda is the final chronic stage where long-term damage, stiffness, and complications (*Upadravas*) develop[7,14]. Symptoms include tightening or bending of limbs (*Sankocha*), muscle wasting (*Mamsa-kshaya*), fixed weakness, and difficulty in walking or moving[1,9].

This corresponds to chronic post-stroke paralysis needing continuous rehabilitation and nursing care[11,15].

3. Stage-Specific Treatment Opportunities

Shatkriyakala gives doctors a step-by-step roadmap for treatment (*Chikitsa Avasara*) at each phase[7,8]:

Table 1: Clinical approach to stages of *Shatkriyakala*

***Kriyakala* Stage**	**Disease & Pathological Status**	**Main Treatment Goal**	**Recommended Ayurvedic Strategy**	**Modern Clinical Correlation**
1. *Sanchaya*	Early risk stage; *Vata* collecting in *Pakvashaya*	Primary prevention; calm down collected *Vata*	Stop bad habits (*Nidana Parivarjana*), warm foods, good digestion, light herbs	Lifestyle changes, blood pressure control
2. *Prakopa*	Rising vessel irritation; aggravated *Vata*	Prevent spreading and vascular damage	Light pacifying herbs (*Samana*), warm fomentation (*Svedana*)	Risk factor management, medical checkup
3. *Prasara*	Small clot movement; circulating *Vata*	Clear moving *Doshas*; prevent organ localization	Mild cleansing (*Mridu Shodhana*), easy bowel movement (*Anulomana*)	TIA risk monitoring, medical review
4. *Sthanasamshraya*	TIA / Warning signs; *Vata* settling in brain vessels	Stop stroke before permanent damage happens	Early warning treatment (*Purvarupa Chikitsa*), head oil drops (*Shiro-Pichu*), nose drops (*Nasya*)	Emergency TIA treatment, early hospital care
5. *Vyakti*	Acute Stroke; sudden half-body paralysis	Protect brain cells, reduce brain swelling, emergency care	Oil massage (*Snehana*), steam (*Svedana*), mild purgation (*Mridu Virechana*), medicated enema (*Basti*)	Acute stroke care, clot removal (0-24 hours)

6. *Bheda*	Chronic paralysis; muscle weakness, stiffness	Rehabilitation, muscle recovery, secondary prevention	Nourishing enema (*Brimhana Basti*), warm rice-milk poultice (*Shashtika Shali Pinda Sweda*), *Rasayana*	Physical therapy, occupational rehab, long-term care

Acharya Charaka mentions for treating *Pakshaghata* in *Chikitsa Sthana*: *"Svedanam snehasamyuktam pakshaghate virechanam"*[17]. This means oiling, sweating treatment, and mild purgation are the main pillars of treatment[1,17]. After the initial emergency is stable, mild purgation (*Mridu Virechana*) clears channel blockage (*Avarana*). This is followed by medicated enemas (*Basti* with *Bala Taila*), head oiling (*Shirobasti*), and nose drops (*Nasya*) to rebuild nerve strength and restore movement[1,17,18].

Discussion

1. Key Findings & Practical Use

This scoping review highlights *Shatkriyakala* as a very practical and time-sensitive concept in Ayurveda that connects prevention with disease cure[7,8]. *Acharya Charaka* explains the main purpose of Ayurveda in a simple line: *"Swasthasya swasthya rakshanam aturasya vikaraprasamanam cha"*, which means keeping healthy people healthy and curing diseases in sick patients[19]. *Shatkriyakala* applies this rule step-by-step: Stages 1 to 3 focus on maintaining health and preventing stroke, Stage 4 gives a chance for early intervention during warning signs (TIA), and Stages 5 to 6 guide acute stroke care and long-term recovery[7,11,19].

Understanding the two basic ways *Vata* causes *Pakshaghata*, *Dhatukshaya* (tissue degeneration) and *Margavarana* (channel obstruction) is extremely important in clinical practice[9,10]. In *Avarana* type stroke (clot or blockage), the doctor must first unblock channels (*Srotoshodhana*) and clear *Kapha* or *Pitta* before giving heavy nourishing tonics[9,17]. In contrast, in *Dhatukshaya* type stroke (weakness or bleeding), immediate nourishing and strengthening therapy (*Snehana*, *Brimhana*, *Rasayana*) is necessary right from the start[1,9].

2. Strengths and Limitations

A major strength of this study is its systematic presentation using PRISMA-ScR guidelines, connecting old Ayurvedic Samhita with modern medical concepts in simple and clear English[12].

However, there are some limitations. While the theoretical connection between *Shatkriyakala* and stroke development is strong, large clinical research trials measuring specific biological markers or brain scans across these six stages are still limited in current literature[11]. More practical clinical studies are recommended in the future.

Conclusions

The Ayurvedic concept of *Shatkriyakala* provides a very logical and easy-to-understand six-stage model for *Pakshaghata*. By dividing disease progression into six clear stages, it turns stroke management from reactive care after brain damage into proactive stage-by-stage prevention and treatment. Using *Shatkriyakala* in modern integrative stroke care can help in early detection, better treatment choices, and faster patient recovery.

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