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An Innovative Ayurveda Approach to treat the Idiopathic Edema: A case report

Case Report

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Abstract

Background: Idiopathic edema is a complex medical condition with limited understanding and challenging choices for treatment. Regarding the *Ayurvedic* care of idiopathic edema, there aren't many published case reports or clinical trials on PubMed despite the disease's widespread prevalence. In this case report, we propose an important *Ayurvedic* perspective that takes into consideration the exact location of the manifestation in addition to its origin while selecting methods to treat idiopathic edema. Methods: A 63-year-old male patient complained of persistent right leg edema and blackish discoloration for 18 months while he visited the outpatient department of Kayachikitsa Government Ayurved College & Hospital, Nagpur. In previous times, the patient had sought treatment from doctors who practiced modern medicine without receiving any improvement. The patient was diagnosed as having idiopathic edema after a comprehensive investigation of all possible causes and was then treated according to the *Ayurvedic* concept of *Shoth*, which is linked to the origin of *Pakwashaya* (gut). Along with oral medications, the treatment included *Basti* (a medicated enema). Results: Interestingly, the patient's quality of life significantly improved, and the edema completely disappeared after the course of treatment. Conclusion: This case study provides insightful information on the importance of disease origin and manifestation sites in the *Ayurvedic* management of idiopathic edema. It also emphasizes the significance of further research on the role that the gut plays in the pathophysiology of idiopathic edema.

Keywords: *Ayurveda, Basti, Case Report, Idiopathic edema, Shoth*.

Introduction

There are two types of *Shoth*: *Nij* (innate) and *Aagantu*. *Shoth* is a severe illness with a variety of appearances. *Aagantu Shoth* results from external wounds brought on by things like wooden fragments, stones, sharp items, fire, or poison that harm the skin. On the other hand, internal factors like routine consumption of alkaline, sour, irritant, hot, and heavy substances, undernutrition, etc. have an impact on *Nij Shoth*. *Shoth* may be divided into three different groups depending on where it occurs: *Sarwangshoth* (which affects the entire body), *Ardhang* (which affects half of the body), and *Avayava Shoth* (which affects a single organ). The location of *Shoth* is determined by the lodging of vitiated *Dosha* (1). When the vitiated *Doshas* reside in the chest, *Vayu Sthan* (*Pakwashay*), mid parts, or spread throughout the body, they cause swelling in the upper parts, lower parts, middle parts, or the entire body, respectively (2).

Oedema can be correlated with *shotha* edema, which is palpable swelling caused by an increase in interstitial fluid. There are two types of edema: acute and chronic. Causes of acute bilateral leg edema are venous insufficiency, pulmonary hypertension, heart failure, idiopathic edema, lymphedema, medicines, premenstrual edema, pregnancy, and obesity. The most common cause of chronic unilateral leg edema is deep vein thrombosis. Various systemic diseases (cardiac, renal, and hepatic), venous insufficiency, and the sudden onset of an existing chronic condition can cause unilateral edema. (3) In modern medicine, edema is treated with sodium restriction, diuretic use, and management of the underlying disorder, including leg elevation. (4)

Idiopathic edema is a multifactorial disease with an unknown cause. (5) Though there are case reports on edema caused by levofloxacin. It is quite difficult to treat edema with an unknown cause. (6) In modern medicine, idiopathic edema is managed by using loop diuretics. (7)

In this case, idiopathic edema is treated by *Ayurveda* management. There is no published case report or clinical trial on PubMed about the management of idiopathic edema through *Ayurveda*.

Patient information

A sixty-three-year-old male patient presented to the Government Ayurved Hospital Nagpur's OPD complaining of swelling over both lower limbs (right > left) and blackish discoloration over the right leg for the last eighteen months. The patient received care at a private hospital, but no relief came with it. He was then admitted to Kayachikitsa's indoor patient department for further care. The patient had been taking Tab ibuprofen

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every day for eight months. The patient had smoked regularly for ten years and had a history of chronic alcoholism, but seven months ago he quit.

The patient had a history of cellulitis and pedal edema from one and a half years prior, as well as an axe injury to his right leg and fever and chills eight months ago. He had been taking a 5-mg amlodipine tablet for eight months for a known instance of hypertension. Renal calculi history from a single incidence ten years ago.

General examination

He was afebrile, pulse rate of 98 beats per minute, a blood pressure of 120/90 mmHg, a SPO2 of 98%, and icterus, pallor, and clubbing were absent. The right leg has a blackish discoloration. Both of the legs have non-tender, pitting edema. At night, the swelling became worse. (Graph 1 mentions birth charting.)

Ayurveda-based examination *revealed Vaat-kapha Nadi, Saam Jivha, Madhyam saar, Vaatkapha Prakriti, Aaharshakti-Madhyam, Vyamshakti-Alpa, Desh-Sadharan, Vaya-Praudhavastha, Kal-Grishma,* origin of disease-Pakwashaya, vitiated *Dosha-P Pitta Kapha* involved *Dhatu-Raktdhatu* and *Rasavaha Strotas Dushti*.

Systemic Examination

The respiratory, cardiovascular, and neurological systems were all functioning normally. Bowel sounds were present. There were no abnormalities in the superficial or deep tendon reflexes.

Diagnostic Assessment

The patient was diagnosed as *Kapha-Pittaj Shoth* based on *Ayurveda-based* clinical features. All investigations are mentioned in Table 1.

Idiopathic oedema was diagnosed on the basis of differential diagnosis of oedema is shown in Table 2.

Therapeutic intervention

The patient had swelling over bilateral lower limbs (right> left), blackish discoloration over the right leg, heaviness in the affected limbs, and edema that remained stable and confined to the particular area.

The patient was treated based on the treatment principle of *Shoth*. considering vitiation of *Kapha Pitta Dosha*, *Rakta Dhatu*; medicines acting on vitiated pitta and *Kapha* were given orally; details of treatment with *Ayurveda-based* rationale are mentioned in Table No. 3.

To relieve *Aam Dipan*, *Pachan* was given by *Chopachinyadi Churna,* which causes digestive and metabolic transformation of the uncooked food product, i.e., *Aama*. *Mustadi Yapan Basti (medical enema)* (6) was given two cycles of 30 days each. A summary of the *Panchkarma* treatment is mentioned in Timeline 1. Considering Rasa-*Rakta Dushti Siravedh* (~ therapeutic bloodletting) was performed over the bilateral ankle joint, this was done eight times over the course of treatment, as mentioned in timeline 1.

Table 1: Baseline investigations

Investigation / Date	27/6/2019	15/11/2019
Haemoglobin	13gm/dl	13.3gm/dl
Platelets count	1.53 lacs/cumm	1.7 lacs/cumm
ESR	9mm/hr	5mm/hr
TLC	5500/cumm	6500/cumm
DLC Polymorphs Lymphocytes (Eosinophils+ Monocytes)	56% 32% 12%	56% 35% 9%
BSL- Fasting Post meal	83 mg/dl 93 mg/dl	-
SGOT	23.7 IU/L	14 IU/L
SGPT	12.5IU/L	10.2IU/L
Billirubin (Total)	0.36mg/dl	1.15mg/dl
Billirubin(direct)	0.24mg/dl	0.4mg/dl
Alkaline phosphate	68mg/dl	
Blood Urea	23.2mg/dl	24.5 mg/dl
Serum Creatinine	1.17mg/dl	1.07mg/dl
Urine test Albumin Sugar M/E	Nil Nil NAD	Nil Nil NAD
PS for microfilaria	Microfilaria not seen	
Bilateral Lower limb arterio venous Doppler		
22/3/2019	No significant abnormality	
23/7/2019	Doppler study evaluation of right lower limbs does not reveal any abnormality in arterial as well as venous system No thrombosis demonstrable in either of vascular System Sub cutaneous edema is seen in right lower leg and foot regions with enlarged inguinal nodes	

Table 2: Differential diagnosis of oedema

Differential diagnosis of oedema	Rationale
Deep vein thrombosis	Bilateral leg arterial and venous Colour Doppler shows no any abnormality. Tenderness absent at bilateral legs
Venous insufficiency	Doppler study not showing any venous insufficiency
Renal causes of oedema	Renal function test and Ultrasonography abdomen with in normal limit
Cardiac causes of oedema	ECG Within normal limits
Hepatic causes of oedema	liver function test within normal limits Ultrasonography abdomen with in normal limit
Obesity	BMI is *20.2Kg/m²*
Anaemia	Haemoglobin within normal range and also evaluated clinically
Obstructive sleep apnoea	Snoring absent

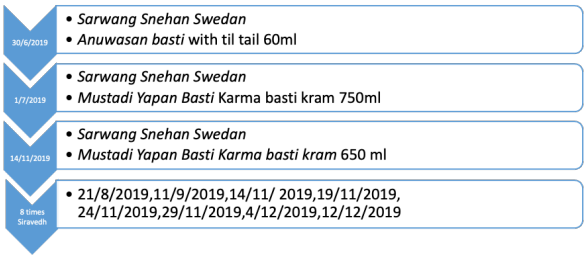
Table 3: Differential diagnosis of shotha

Differential Diagnosis of Shotha	Rationale
Vataj Shoth	The nature of edema changes very often . The skin at the oedematous part becomes thin, rough to touch and reddish. Oedema gets subsided without any appreciable reason. Swelling is of greater tendency during the day time
Pittaj Shoth	The swelling is soft to touch and odour also present., associated with fever sweating thirst, giddiness, burning sensation. Tenderness present in the affected area
Kaphaj Shoth	Heaviness in the affected limb and edema remains stable and confined to the particular area, edema takes long type to appear and longer time to cure

Table 4: Date wise treatment plan

Date	Treatment plan	Dose	Timing of medicine	Ayurveda based Rationale of treatment
27/6/2019	1.*Gomutra Haritaki Churna* 2. *Aanandbhairav Ras* 3. *Chopchinyadi Churna* 4. *Punarnava Kwath Ghanvati* 5. tab Amlo	5gm 250mg 3 gm 500mg 5mg	After meals Before meals Before meals After meals OD	*Shothhar, deepan ,Pachan Kaphaghna* *Shothhar*
12/7/2019	Ct 1,2, 3,4 Hold 5 5. tab telma	20mg	OD	
15/7/2019	1. *Aanandbhairav Ras* 2. *Chopchinyadi Churna* 3. *Punarnava Kwath Ghanvati* 4. Tab Telma 5.*Jirak + Sunthi+Dhanyak Siddha Takra*	250mg 3gm 500mg 100ml	Before meals Before meals After meals TDS	*Deepan Tridoshaghna*, Deepan , *Shothahar*
23/7/2019	CT-ALL 6.*(Sariva+Manjishtha+Gokshur +Punarnava) Kwath*	40ml	Before meals	*Rasayan, Tridoshghna, Deepan , Pachan Kaphaj Shoth* Used in *Shothaghna, Dipan , Balya*
1/8/2019	1. *Haritaki churna* 2.*Punarnava Kwath Ghanvati* 3.*Sariva+ Manjishtha+Gokshur +Punarnava Kwath* 4.Tab telma	5gm 500mg 4oml 20mg	Before meals After meals After meals OD	
21/8/2019	1.*Haritaki churna* 2.*Musta+ Sunthi churna* 3.*Shatavari + Ashwagandh churn* 4.*Punarnava Kwath Ghanvati* with *Punarnavashtak Kwath* 5.Tab Telma	5gm 5gm 3gm 500mg 40ml 20mg	Before meals Before meals After meals After meals OD	*Deepan,Pachan Rasayan ,Tridoshaghna ,Shothaghna*
11/9/2019	1. *Haritaki churna +gomutra ark* 2.*Punarnava Kwath Ghanvati* 3.*Sariva+Manjshtha+Gokshur* 4.*Kumbhajatu Vati* 5.Tab Telma	5gm+20ml 500mg 40ml 250mg 20mg	Before meals After meals Before meals After lunch OD	*Malshodhan, Deepan, Shothaghna, Sarwadosh-prashaman, Buddhi-inriyabalprad, Rasayan*
13/11/2019	1.*Haritaki churna+gomutra ark* 2.*Gokshuradi guggul* 3.*Punarnava Kwath Ghanvati* 4.*Dashang lep* 5.Tab Telma	5gm+20ml 250mg 500mg LA Rt leg 20mg	After meals Before meals After meals OD	
14/11/2019	Ct-all 6.*Sariva+ Manjshtha+Gokshur*	40ml *Kwath*	After meals	
7/12/2019	Ct-all *Latakaranj Churna*	LA		*Shothahar , Vedanasthapan*
11/12/19	Ct-all *Sankhavati*		Before meals	*Vatkaphaghna, Rasayan , Deepan ,Pachan, koshthadushtishamak*

Timeline 1



Follow-up and outcome

A significant reduction in swelling was observed after the first cycle of *Basti* treatment. The patient got relief from the swelling over the bilateral legs after the course of treatment. Complete relief was achieved in five months of total treatment. Measurement of swelling mentioned in Table 4 and Image 1.

Table 4

No of Days		1	6	11	19	36	56	67	140	147	159	166	167
At centre of knee	Rt	37	36.5	37.5	36.5	36	37	37	37	37	37	36	35.5
	Lt	36	37	37	36.5	36.5	37	37	37	37	37	37	37
5cm Above knee	Rt	36	36	36.5	36	36	37.5	37	37.5	38	37.5	36.5	36
	Lt	35.5	36	36	36	34.5	37	37.5	37	37	37	36.5	36
5cm Below knee	Rt	31.5	31	30	31	30.5	34	34	34	33	33	32	32
	Lt	31.5	32	32	31.5	32.5	34	33.5	34	33	33	32.5	31.5
Middle of calf	Rt	33	33	33	33	27							
	Lt	29	33	31.5	30	27							
Above 5cm of calf	Rt	35	34.5	31.5	32	32							
	Lt	32	33	32	32	31							
Below 5cm of calf	Rt	30	31	31	30	25							
	Lt	27	30.5	31	30.5	24							
At ankle	Rt	32.5	31.5	29.5	27	30	31.5	30	30.5	30	32	27	27
	Lt	35	27	26	25.5	27.5	28	27	28	28	28	27	27
5cm above ankle	Rt	27	23	23.5	23	23	25.5	25	24.4	23	21.5	23	23
	Lt	26	23.5	24	21	20.5	21.5	21	21.5	21.5	21.5	21.5	21
5cm below ankle	Rt	27	30	32.5	29	28.5	32	30	31	30	31.5	31	31
	Lt	28		26	28.5	28.5	31.5	27	31.5	30	30	30	30
15 cm above ankle	Rt						26.5	26	25.5	25	24.5	25	25
	Lt				28		24.5	23.5	24.5	24.5	24.5	23	23
20 cm above ankle	Rt								27.5	28	28	28	28
	Lt						27.5	27	27.5	28	28	26	26
25 cm above ankle	Rt						32	32	31.5	31	31	33	32.5
	Lt						32	28	32	32	32	30.5	30

Discussion

An increase in interstitial fluid causes edema. Recent research has shown that there is a relationship between interstitial fluid, inflammation, the occurrence of edema, and the involvement of the intestines. (8) The rectal route of administration of proper medicine and medicines that improve metabolism in the small intestine may act through this pathway. Mathematical modeling of intestinal edema proves that rectal administration of medicine with the correct volume and pressure can alter the accumulation of interstitial fluid and, thereby, decrease edema. (9) However, alterations in this axis can also develop edema.

Ancient Ayurvedic scholars have described this concept in terms of the origin of *shoth* (edema) and the site of its manifestation. If *Shoth* is situated in the lower extremities or the lower part of the body, a physician should treat it through *Pakwashay* (the intestine). Vayu interacts with Kapha, Rakta, and Pitta once it reaches external channels, resulting in obstruction and swelling that ultimately develops into a protuberance, which is shot. Charaka places a strong emphasis on diagnosing and treating diseases based on the Prakriti (nature of the dosha), *Adhishthan* (location of manifestation), and *Samuthan* (etiological causes) of the disease. (10)

In this case, edema was on the bilateral lower extremities. Hence, the site of the vitiated *dosha* is *Pakwashay*. The principle of treatment is treatment at the site of the disease's origin. Hence, the treatment principle is *Basti Chikitsa,* along with medicines acting through Ayurveda-based principles of digestion. (11) *Mustadi Yapan Basti* is indicated in *Shoth*. It also improves mental strength, *Agni* (digestive power), and *Shukra* (aphrodisiac). Medicines used in this treatment reach the small intestine and act through the microchannels situated there. (12)

There is no case report or clinical trial on the management of *idiopathic edema* through *Ayurveda*. This case report gives direction for future research in this direction. The LIMPART study on the prevalence and impact of chronic edema shows that subjective satisfaction with the control of edema was poor. (13) But in this patient, subjective satisfaction is good with

the control of edema, which he mentioned from the patient's perspective.

Conclusion

This case report gives us important leads in understanding the role of the disease origin site and the disease manifestation site in the treatment of idiopathic edema through *Ayurveda*. This case report gives direction for future research on the role of the gut in the pathogenesis of idiopathic edema.

Conflict of interest: nil

Image 1

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