Effect of Swasthya Raksha Kit as an Adjuvant Therapy in Clinically Diagnosed Cases of Pulmonary Tuberculosis (Rajayakshma)

Dr. Kiran S. S.[1]; Dr. Sudheesh K. P.[2*]; Dr. Neethu Tharol[3];
Dr. Harishkiran G. S.[4]

[1]Assistant Professor, Department of Kayachikitsa, Shri Veer Pulikeshi Rural Ayurvedic Medical College Hospital & Research Center, Badami- 587201
[2]Assistant Professor, Department of Shalakyatantra, Shri Veer Pulikeshi Rural Ayurvedic Medical College Hospital & Research Center, Badami- 587201
[3]Assistant Professor, Department of Rasashatra Evam Bhaishajyakalapna, Shri Veer Pulikeshi Rural Ayurvedic Medical College Hospital & Research Center, Badami- 587201
[4]Assistant Professor, Department of Roganidana Evam Vikriti Vijnana, Shri Veer Pulikeshi Rural Ayurvedic Medical College Hospital & Research Center, Badami- 587201

Corresponding Author: Dr. Sudheesh K. P.[2*]

Abstract: Rajayakshma is mentioned as one of the Ashthamahagada by Acharya Charaka and also known as the "king of the disease" Due to its multisystem involvement and varied symptoms. Rajayakshma has been linked to numerous immunodeficiency syndromes. However, a closer look at the symptoms reveals that it more closely resembles a multisystem respiratory disease. Swasthya Raksha is a formulation conceptualized by All India Institute of Ayurveda, New Delhi & prepared by Indian Medicine Pharmaceutical Corporation Limited, to combat the post hostile effects of COVID 19. In the present period, pulmonary tuberculosis can be linked to Rajyakshma, which affects the Pranavaha Srotas. Pulmonary Tuberculosis (PTB) is one among such conditions. PTB may be compared with Rajayakshma in Ayurveda. Use of Rasayana drug as an adjunct with Anti Tubercular Drugs provides better physical and mental wellbeing to the patients. Swasthya Raksha Kit consists of Chyavanaprash, Rasayanchurnavati, Swasthyaraksha Tea and Anutaila. Although the pathophysiology of Rajayakshma and pulmonary tuberculosis differ, their clinical profiles are remarkably similar.

➢ Methods:
30 known cases of Tuberculosis patients has been selected based on inclusion and exclusion criteria from Taluk Government Hospital, Badami and Swasthya Raksha kit were advised for one month and were asked to come for follow up after one month this was continued for a total of 90 days and the symptoms were assessed before and after completion of 90 days.

➢ Results:
There were significant changes in the symptoms of Rajaykshama/PTB patients when Swasthya Raksha kit were used as an adjuvant with anti-tubercular medicines for 90 days.

➢ Interpretation and Conclusion:
Addition of Swastha Raksha kit with contemporary medicines of PTB gives relief from symptoms and complications of medicines and further large-scale studies is to be conducted to understand this in a better way.

Keywords: Rajayakshma, Yakshma, Jwara, Kshaya, Roga, Pulmonary Tuberculosis, Swasth Raksha kit.

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I. INTRODUCTION

Tuberculosis is one among the potential infectious communicable disease with high mortality rate. during 1931[1]. It has become a global health issue for the first time in history. In India over 1.8 million people get TB annually, with 0.8 million of those cases being new and smear-positives as well as high infectious cases.[2]As compared to 2019, WHO estimates that the number of new patients with TB diagnoses worldwide decreased in 2020. and India is responsible for the biggest decline in the worldwide TB notification deficit.

'Global tuberculosis report 2021' by WHO released on october 14, shows that india contributed for 41 % of the total global drop of 1.3 million.[3]Globally, there were 5.8 million new TB diagnoses in 2020 compared to 7.1 million in 2019.[4]

The current treatment plan has failed due to a number of factors, including poverty, adverse drug reactions, and poor drug compliance. Despite vaccination against RNTCP (revised national tuberculosis control programme) and tuberculosis, the success rate is not encouraging. One of the main reasons people look for alternative TB treatments is drug resistance.

Since the Vedic era, Rajayakshma[5] has been extensively researched in ancient India, and the closest clinical entity to Rajayakshma is tuberculosis. Although it affects all structures, the respiratory system and meninges are the areas where rajayakshma has the most influence. However, the current study focuses primarily on the respiratory presentation of rajayakshma.

Especially on swasa, kasa, jwara, aruchi, dourbalya, parshwashoola, dhatukshaya etc. Ayurveda has categorised primary symptoms in Trirupa, Shadroopa, Ekadasha, based on clinical presentation. Invariably kasa, swasa, jwara and weight loss are to be stringently treatment in pulmonary tuberculosis, if agantuja, abhishangja and krimija, upsargaja

is only targeted in the intervention it is not a complete module.

Recovery and the avoidance of respiratory tissue damage would be improved if DOTS therapy was combined with an enhanced anti-inflammatory, respiratory tissue protective strategy.[6] The research topic is whether improving respiratory rasayana can reverse the appearance of pulmonary tuberculosis (rajayakshma) or if improving patient compliance and quality of life would be preferable. Recent studies have revealed that Auyrvedic Rasayana like Aswagandha and Shilajeet therapy could modulate the immune profi le in patients[7]

➢ *Objectives*

- To rigorously examine the etiopathogenesis of pulmonary tuberculosis and its treatment approaches, such as AKT, and to thoroughly research Nidanapanchaka and Chikitsa of Rajyakshma
- To monitor the combined impact of AKT and the Swasthyaraksha kit as an adjuvant therapy in the treatment of Rajayakshma.

II. METHODOLOGY

30 patients with known cases of tuberculosis were chosen based on inclusion and exclusion criteria from Taluk Government Hospital, Badami.

Swasthyaraksha kit was advice for a month and asked to return for a follow-up after that. This method of training lasted for a total of ninety days, during which time the patients symptoms were evaluated both before and after the ninety days had passed and statistical analysis techniques. Statistical tests used was the Wilcoxon Sign Rank test.

➢ Follow-up: three follow-ups every thirty days.

Table 1 Inclusion and Exclusion Criteria

Sl.no	Inclusion Criteria	Exclusion criteria
1	Cases of sputum-ve and sputum +ve	Extra pulmonary tuberculosis
2	Relapse cases	HIV and Tuberculosis co-infect
3	Failure cases	MDR Tuberculosis patients
4	Age 20-70 year	Age below 20 year and above 70 year
5	With mild pulmonary infusion	Severely ill and Pregnant patients

- *Swathyaraksha Kit Consists of*

✓ Chyavanaprash 180g - 1 unit
✓ Swasthyaraksha tea 100g – 1unit

✓ Rasayanachurna + ashwagandha tablet 120 tablets – 1unit
✓ Anu taila 10ml – 2units

➢ *Subjective Criteria for Assessment[9]*

Table 2 Grading for Symptoms

SL: no	Symptoms	Severity	Grade
1	KASA	• No kasa at all	CD0
		• Bouts of kasa once or twice a day with minimum discomfort	CD1
		• Bouts of kasa 3-4 times a day	CD2
		• Bouts of kasa throughout the day with moderate discomfort unable to do daily work	CD3

2	SWASA	• Kasa both day and night with restlessness, severe discomfort	CD4
2	SWASA	• No signs of swasa • Dysponea after heavy work relived by rest Mild dysponia while walking • Moderate swasa even at rest • Swasa need emergency intervention	CD0 CD1 CD2 CD3 CD4
3	ARUCHI	• Willing toward all bhojyapadartha • Willing toward some specific ahara\ rasavishesha • Willing only toward favorite rasa • Unwilling for food but could take the meal • Totally unwilling for meal	CD0 CD1 CD2 CD3 CD4
4	JWARA	• Afebrile • Few days in a week • Alternate day fever • Mild fever everyday • Moderate fever everyday	CD0 CD1 CD2 CD3 CD4
5	PARSHWA SHOOLA	• No parswashoola at all • Mild shola not disturbing the routine • Moderate occasional shola relieved with rest and diet • Moderate, severe- frequent disturbing the resume needs intervention • Persistent confined to bed always shola no relief with intervention	CD0 CD1 CD2 CD3 CD4
6	DOURBALYA	• Normal without any weakness • Slight feeling of weakness • Can walk few steps • Difficulty in doing daily activities • Weakness even at rest	CD0 CD1 CD2 CD3CD4
7	WEIGHT LOSS /KSHYA	• No weight loss • Weight loss.>2kg • Weight loss>3kg • Weight loss 4-5kg • Weight loss>5kg	CD0 CD1 CD2 CD3CD4
8	PANDU	• No pallor • Pallor of conjunctiva • Pallor of conjunctiva and mucous membrane CD2+Pallor of skin • CD3+Pallor of all above and palmar crease	CD0 CD1 CD2 CD3 CD4
9	SWARA-BHEDA	• Clinically stable • Minimum very rare self-limiting • Moderate, causes difficulty to talk, relieves with drinking water. • Moderately high, frequent onset, doesn't respond to drinking water. • Persistent, severe, unable to speak not responding to medicine.	CD0 CD1 CD2 CD3 CD4

A scoring pattern of Normal-0, Mild-1, Moderate-2, and Severe-3 was used to provide data objectively and for statistical analysis. Through statistical analysis, this score was acquired before and after each month until the completion of treatment, and the percentage of relief was calculated with Wilcoxon Sign Rank test to evaluate the effectiveness of the treatment.

III.   RESULTS

Table 3 Kasa

RANKS								
Descriptive Statistics			**BT-AT**				"Z Value"	"P Value"
	Mean	**S. D**		**N**	**Mean Ranks**	**Sum of Ranks**		
BT	3.200	56.061	Negative Ranks	16[a]	3.50	21.00		
AT	2.7333	96.11	Positive Ranks	0[b]	0.00	0.00		
			Ties [C]	14[c]			-2.333	0.020
			Total	30				

Table 4 Shwasa

RANKS							
Descriptive Statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	Mean	**S. D**		**N**	**Mean Ranks**	**Sum Of Ranks**		
BT	1.7333	1.1629	Negative Ranks	15[a]	3.00	15.00		
AT	1.2667	1.0328	Positive Ranks	0[b]	0.00	0.00		
			Ties	15[c]			-2.271	0.034
			Total	30				

Table 5 Aruchi

RANKS							
Descriptive Statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	Mean	**S. D**		**N**	**Mean Ranks**	**Sum Of Ranks**		
BT	2.9333	70.373	Negative Ranks	30[a]	8.00	105.00		
AT	7.666	72.375	Positive Ranks	0b	0.00	0.00		
			Ties	0c				
			Total	30			-3.449	<0.001

Table 6 Dourbhalya

RANKS							
Descriptive statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	mean	**S. D**		**N**	**Mean ranks**	**Sum of ranks**		
BT	2.00	1.00	Negative ranks	18[a]	4.50	36.00		
AT	1.200	1.676	Positive ranks	0[b]	0.00	0.00		
			Ties	12[c]				
			Total	30			-2.588	0.010

Table 7 Kshaya

RANKS							
Descriptive statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	mean	**S. D**		**N**	**Mean ranks**	**Sum of ranks**		
BT	2.200	1.146	Negative ranks	19[a]	5.0	45.00		
AT	1.266	0.593	Positive ranks	0[b]	0.00	0.00		
			Ties	11[c]				
			Total	30			-2.724	0.006

Table 8 Pandu

RANKS							
Descriptive statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	mean	**S. D**		**N**	**Mean ranks**	**Sum of ranks**		
BT	2.200	1.146	Negative ranks	18[a]	5.0	45.00		
AT	1.266	0.593	Positive ranks	0[b]	0.00	0.00		
			Ties	12[a]				
			Total	30			-2.724	0.006

Table 9 Swarabheda

RANKS							
Descriptive statistics			**BT-AT**			**"Z Value"**	**"P Value"**
	Mean	**S. D**		**N**	**Mean ranks**	**Sum of ranks**		
BT	3.333	1.046	Negative ranks	12[a]	1.50	3.00		
AT	0.1333	0.5164	Positive ranks	0[b]	0.00	0.00		
			Ties	18[c]				
			Total	30			-1.342	0.180

Table 10 Parshwashoola

RANKS							"Z Value"	"P Value"
Descriptive statistics			BT-AT					
	mean	S. D		N	Mean ranks	Sum of ranks		
BT	0.9333	73.703	Negative ranks	20[a]	5.50	55.00		
AT	0.2000	04.414	Positive ranks	0[b]	0.00	0.00		
			Ties	10[c]			-3.051	0.002
			Total	30				

Table 11 Jwara

RANKS							"Z Value"	"P Value"
Descriptive Statistics			BT-AT					
	Mean	S. D		N	Mean Ranks	Sum of Ranks		
BT	1.266	56.061	Negative Ranks	16[a]	3.50	21.00		
AT	0.266	96.11	Positive Ranks	0[b]	0.00	0.00		
			Ties [C]	14[c]			-2.333	.001
			Total	30				

Table 12 Changes in Parameter

Parameter	Mean BT	Mean AT	P Value	%	Remarks
Kasa	2.866	0.333	.001	88.46%	HS
Shwasa	1.400	0.333	.001	76%	HS
Jwara	1.266	0.266	.001	83%	HS
Aruchi	2.933	0.667	.001	77%	HS
Parshwashoola	0.933	0.200	.002	78%	HS
Dourbalya	2.00	1.200	.010	40%	S
Pandu	1.600	0.733	.026	54%	S
Swarabheda	0.333	0.133	0.180	37%	NS
Kshaya	2.000	1.266	.006	45%	S

Table 13 Changes in Parameter

PARAMETER	GROUP	%
KASA	.001	88.46
SHWASA	.001	76
JWARA	.001	83
ARUCHI	.001	77
PARSHWASHOOLA	.002	78
DOURBALYA	0.01	40
KSHAYA	.006	45
PANDU	.026	54
SWARABHEDA	0.180	39

IV. RESULTS AND DISCUSSION

➤ *Kasa:*

The p-value is less than 0.001, indicating a statistically significant improvement of 88.4% in kasa. Due to srotorodhaavarana, the typical directed vata achieves pratilomagati, moves urdhwagati, and combines with kapha to form bahuroopakasa. *Kapha lakshanas include pitta, Shweta, Bahala, and Picchila Yuktha kapha. Both bacteria-produced neuron-targeting chemicals and nocioceotiveneurins innervating the lung can cause the cough reflex.*

➤ *Shwasa:*

Patients with PTB frequently exhibit Swasakrichrata. In this study Shwasa complaints of patients has improved by 76%, with a statistically significant p value of less than 0.001.

Similar to the primary samprapti, urakshata in rajayaksma patients results in kapha sthanavatavriddhi. Since ura is one of the main sthana for avalambaka kapha, srotorodha causes ama to accumulate, or in kapha sthana.

Urakshata, which causes a deficiency in avalambaka kapha-ambukarmana and dharana, might create a space where the chest can freely expand and rest. The narrowing of the airways increases resistance to the airflow promotes the hridya and aids in the body's circulation of nutrients.

Additionally, respiratory muscle weakness is a result of rakta dhatu kshya. reduce the amount of oxyhemoglobin and the ventilation perfusion ratio. There is less oxygen being

transported from the lungs to the tissues.

➢ *Jwara:*

Patients with PTB frequently exhibit Jwara and has improved by 83%, with a statistically significant p value of less than 0.001.

One way to understand jwara in rajyakshma is as a result of decreased immunity, agni displacement, and the participation of rasavahasrotas. Classics like Amsa Parshwabhitapascha, Santapakarapada Daha, and SarvangaJwara all make reference to particular lakshanas. This can be interpreted as amsaparshwaabhitapa pointing to the lung involvement lobe. Karapadadaha is primarily caused by dhatu poshanaabhava and poor circulation to the srotorodha or peripheral, which results in a nutrient deficit. The lack of the myealin sheath's normal function causes peripheral neuropathy.

➢ *Dourbalya:*

Patients with tuberculosis frequently appear with dourbalya. Group A's dourbalya has improved by 40%, with a statistically significant p value of less than 0.010. Srotorodha causes raktadi dhatu kshya, which reduces absorption and prevents normal dhatu poshana, which causes the body to become feeble. Chronic dhatu causes vatavriddhi, which in turn causes dourbalya.

➢ *Kshaya:*

The medicinal formulations such as Chavanaprash, RasayanaChurna Viti, Swastha Raksha Tea, and Anutailam have deepana and pachana properties with katu, tikta rasa, and ushnaveerya, as do the ama pachana and agnideepana. This results in a 45% improvement in Kshaya with a Pvalue of.006, which is extremely significant. Its aforementioned qualities cause it to relive srotoshodhana, which leads to the correct creation of ahara rasa. Since dhatwagni are directly dependent on the jatharagni, they carry out their regular functions and feed the dhatu that comes after them, increasing the dehabhara. This ahaara rasa supplies food to all the dhatu.

➢ *Parshwashool:*

With a p value <0.010, there is a 78% improvement in dourbalya, primarily during deep expiration and inspiration. This could be due to recurrent kasa, which weakens the intercoastal muscles.

➢ *Pandu:*

One of the frequently observed presenting problems is pandu. The pandu has improved by 54%, which is statistically significant with value < .026 Because of congestion in rasavahasrotas, ushmarakta dhatu will not receive adequate sustenance, and poshya rasa dhatu would be destroyed. The combined action of the medicines were srotoshodana and dhatuposhana hence the change was noted.

➢ *Swarabheda*

This symptom is seen in few of the individuals of PTB that too with extreme cough due to repeated cough there will be strain to the vocal box thus leading to the symptoms. Here there was a reduction of 37% with a p value <0.180 which

is not significant.

V. MODE OF ACTION OF MEDICINES

➢ Chyavanaprash 180g - 1 unit
➢ Swasthyaraksha tea 100g – 1unit
➢ Rasayanachurna + Ashwagandha tablet 120 tablets – 1unit
➢ Anu taila 10ml – 2units

The subjective parameters changed as a result of these medications srotoshodana, rasayana, dathubalaposhana, and vatanulomana.

➢ *Chavanaprash[9]*

Tridosha hara, RasayanaOjovardhaka, Vrushya, the margavarodha, and Dhatu Poshana are among the qualities that occur in the shareera and lessen the symptoms.

➢ *Rasyana Churnavati*

Since inappropriate poshanaanulomana and pratilomakshaya are the primary symptoms of Rajayskhama, the formulation of Rasyana and DathuPoshana lessens the symptoms of Rajayakshma.

➢ *Swastharaksha Tea*

The medications in Sawastharaksha tea are thiktapachanam and srothoshodanam, clear the avrana and perform dathuposhana, which reduces symptoms.

➢ *Anutailam[10]*

Which is Snigda and vatasahamanam doses the dhatu poshana and vatanulomana.

VI. CONCLUSION

➢ Despite the possibility of other incapacitating conditions, a detailed examination of the symptomatology of Rajyakshma, which affects Pranavahasrotas, reveals that it clinically resembles a respiratory predominant sickness such as pulmonary tuberculosis.
➢ All acharyas unequivocally describe a set of four nidana in the manifestation of Rajyakshma.
➢ In the current study, it appears that a combination of two or more components is more common than a single-headed nidana. This can be because the work culture has changed from Samhita Kala to the present day.
➢ Clinical trials for pulmonary tuberculosis are conducted both before and after therapy as part of evidence-based research. A thorough evaluation was conducted to rule out any comorbidities and determine the impact of ATT on medication resistance and sputum positivity.
➢ Of the 30 patients in the group clinical trial, 4 patients had pratilomakshya and 26 patients had anulomakshya. The trial medication also demonstrated a noteworthy effect on pratilomakshaya.
➢ Subjective parameters such as 88.4% improvement in Kasa, 76% in Shwasa, 77% in Aruchi, 78% in Parshwashoola, 40% in Dourbalya, 83% in Jwara, 54% in Panda, and 45% in Kshaya were shown to be statistically highly significant.

Thus, we can conclude that pulmonary tuberculosis symptoms and problems are lessened by the addition of medications such as the Swasthy Raksha package with antitubercular pharmaceuticals.

- *Scope for Further Studies*

✓ The investigation should be conducted for six months in conjunction with AKT.
✓ The MDR instances should be pursued further.
✓ The impact of the medications on the pratilomakshaya of patients infected with HIV.
✓ Body weight-based drug dosage
✓ The impact of Rasa rasayana as an adjuvant versus ATT

Fig 1 Ingredients of Swasthyaraksha Kit

Fig 2 Distribution of Swasthya Rakshya Kit

Fig 3 Distribution of Swasthya Rakshya Kit

REFERENCES

[1]. Sudre P, ten Dam G, Kochi A. Tuberculosis: a global overview of the situation today. Bull World Health Organ. 1992;70(2):149-59. PMID: 1600578; PMCID: PMC2393290.

[2]. Chauhan A, Parmar M, Dash GC, Solanki H, Chauhan S, Sharma J, Sahoo KC, Mahapatra P, Rao R, Kumar R, Rade K, Pati S. The prevalence of tuberculosis infection in India: A systematic review and meta-analysis. Indian J Med Res. 2023 Feb-Mar;157(2&3):135-151. doi: 10.4103/ijmr.ijmr_382_23. PMID: 37202933; PMCID: PMC10319385.

[3]. Maher D, Raviglione M. Global epidemiology of tuberculosis. Clinics in chest medicine. 2005 Jun 1;26(2):167-82.

[4]. Sia IG, Wieland ML. Current concepts in the management of tuberculosis. InMayo Clinic Proceedings 2011 Apr 1 (Vol. 86, No. 4, pp. 348-361). Elsevier.

[5]. Yadavaji Trikamaji, editor. Charaka Samhita of Charaka, Nidana Sthana, chapter 6, verse no.4. reprinted, Varanasi; Chowkhambha Sanskrit Series, 2008; (1): 193.

[6]. Shirke, V. (2021). Rajayakshma: Ayurvedic classical literature review.: Array. *Ayurline: International Journal of Research in Indian Medicine*, 5(03). https://doi.org/10.52482/ayurline.v5i03.551

[7]. Debnath PK, Chattopadhyay J, Ghosal D, Bhattacharya P. Immunomodulatory Role of Ayurvedic Rasayan for Quality of Life. International Nat Conf 1998. 38.

[8]. Bala K, Goyal M. Ayurvedic approach in the management of Pulmonary Tuberculosis wsr to Rajayakshma-A Case Report. Journal of Ayurveda and Integrated Medical Sciences. 2025 Aug 25;10(9):316-23.

[9]. Debnath PK, Chattopadhyay J, Mitra A, Adhikari A, Alam MS, Bandopadhyay SK, Hazra J. Adjunct therapy of Ayurvedic medicine with anti tubercular drugs on the therapeutic management of pulmonary tuberculosis. J Ayurveda Integr Med. 2012 Jul;3(3):141-9. doi: 10.4103/0975-9476.100180. PMID: 23125511; PMCID: PMC3487240.

[10]. Sharma R, Martins N, Kuca K, Chaudhary A, Kabra A, Rao MM, Prajapati PK. Chyawanprash: A Traditional Indian Bioactive Health Supplement. Biomolecules. 2019 Apr 26;9(5):161. doi: 10.3390/biom9050161. PMID: 31035513; PMCID: PMC6571565.

[11]. Balkrishna A, Rastogi S, Kharayat B, Tomer M, Varshney Y, Singh K, Kumari P, Dev R, Srivastava J, Haldar S, Varshney A. Anu taila, an herbal nasal drop, suppresses mucormycosis by regulating host TNF-α response and fungal ergosterol biosynthesis. J Appl Microbiol. 2022 Apr;132(4):3355-3374. doi: 10.1111/jam.15451. Epub 2022 Feb 6. PMID: 35025137.