



CLINICAL STUDY TO EVALUATE THE EFFICACY OF ASHWAGANDHA IN PULMONARY TUBERCULOSIS AS ADJUVANT THERAPY

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Abstract

Tuberculosis is one of the oldest disease known to affect human, is a major leading cause of death in developing countries. Immunity plays very important role next to causative organism *Mycobacterium tuberculosis*. *Mycobacterium tuberculi* mostly affect the person with low immunity. In *Ayurveda* tuberculosis is considered as *Rajayakshma* or *kshaya* which leads to *dhatu kshaya* due to obstruction of *Srotas*. *Rasayana* drugs improve the quality of *Rasa Dhatu* so good quality of *Rakta Mamsa Meda Asthi Majja Shukra* and *Ojus* is formed, so excellence of all *Dhatu*s is achieved. It also improve the micro-circulation hence improves tissue nourishment. So *Ashwagandha* which is extensively used in *Ayurveda* as *Rasayana* is selected in pulmonary tuberculosis as adjuvant therapy.

Keyword: Pulmonary Tuberculosis, *Rasayana*, *Ashwagandha*

INTRODUCTION:

Tuberculosis is one of the oldest disease known to affect human, is caused by *Mycobacterium tuberculosis complex*. It is the major leading cause of death in developing countries. Between 3.5- 4 million new cases of tuberculosis in all forms (Pulmonary and extra pulmonary) were reported annually to the world health organization. Symptoms mainly consist of fever, night sweat, weight loss, anorexia, general malaise and weakness. In majority of cases cough develops which is non-productive initially and subsequently accompanied by production of purulent sputum. Muscle wasting is also present in most of the cases.¹ In Ayurveda Tuberculosis is considered as *Rajyakshma*. *Brihtriya* have described the concept of *Rajyakshma* in detail. It is clear from *samhita* that *dhatu Kshaya* constitute the main causative factor of *Rajyakshma*. *Nidana* of *Rajyakshma* are *Ayathabalamarambham* (over exertion exceeding ones capacity), *Vegasandharna* (suppression of natural urges), *Kshayam* (Dhatu Depletion) and *Vishamashan*. All causes aggravation of Vata which stimulates *Kapha & Pitta* resulting in sign and symptoms of *Rajyakshma*. There is obstruction of *Srotas in Rajyakshma* and diminution of *dhatawagni*, which leads to depletion of *Dhatu*, more formation of mala and little formation of ojus². Various rasayana drugs acts at level of Rasa, Agni, and Srotas. At level of Rasa they enrich nutrition or *Dhatu Poshan*. With the use of Rasayana one gets excellence of Rasa which in turns produces good quality of consecutive Dhatu. Rasayana drugs also improve function of Agni, so it improves digestion and metabolism. By improving the function of Agni excellence of all

Dhatu is achieved. Rasayana drugs also act at level of *srotas* hence microcirculation and tissue nourishment.³ *Ashwagandha* is indicated specifically in *Sushruta Samhita* in the management of *Rajyakshma*.⁴ *Ashwagandha* is used to improve the immunity. It is also used as general tonic for promotion of *ojus* and *shukra*.^{5,6,7} It also improves symptoms like cough, general weakness and fatigue and weight loss.⁸ Keeping all this in view *Ashwagandha* was chosen as trial drug in management of tuberculosis as adjuvant therapy.

MATERIAL AND METHOD

To find out the effect of *Ashwagandha* Churna on Pulmonary Tuberculosis 18 patients were selected from OPD and IPD of RGGPGAC Paprola irrespective of their age sex occupation religion etc. Trial was conducted in 2004-2007. Routine blood investigations have been carried out in order to rule out any other pathology.

INCLUSION CRITERIA:

Patient suffering from pulmonary tuberculosis
All patients in age group of 20-60 have been selected
Exclusion criteria
Patients not willing for trial
Patients below age 20 and above 60 years
Patients with complication of disease
Duration of trial: Total duration of trial was 60 days.
Drug &Dose: *Ashwagandha churna* (Root Churna) 5gm. BD with milk orally
Criteria of assessment: Assessment was done on the basis of various subjective and

objective criteria. It was based on cardinal sign and symptoms of disease and their gradation. All sign and symptoms were graded according to severity on the basis of improvement reported by the patients. Assessment was done and scored for statically analysis.

SUBJECTIVE CRITERIA

Scoring and gradation

1. General feeling of well being

Normal	G0
Not completely fit	G1
Low	G2
Very low	G3

2. Fatigue

Normal	G0
Only in evening after exertion	G1
Always tired	G2

3. Appetite

Increased	G0
Good	G1
Not so good	G2
Reduced	G3

4. Weight gain

More than 5 kg	G0
Moderate 2-5 Kg	G1
Mild upto 2kg	G2
No weight gain	G3

5. Ability to work

Normal	G0
Not completely fit	G1
Low	G2
Very low	G3

6. Digestion

Normal	G0
Not satisfactory	G1

Poor G2

7. Sleep

Normal	G0
Disturbed	G1
Insomnia	G2

8. Cough

No cough	G0
Occasional	G1
Mild	G2
Moderate	G3
Severe	G4

9. Fever

Absent	G0
Occasional	G1
Daily evening rise	G2
Continuous	G3

10. Expectoration

Nil	G0
Mild	G1
Moderate	G2
Profuse	G3

11. Haemoptysis

Absent	G0
Mild	G1
Moderate	G2
Marked	G3

OBJECTIVE CRITERIA

Hb, TLC, DLC, ESR,
Chest x ray

OBSERVATION AND RESULTS

Among total number of patients 45% patients were of age group in between 20-35 years and 39% were in age group of 36-50 age group. 61 % patients were male. 50% patients were non-vegetarian. 88%

were belongs to rural area. 50% were belongs to middle class and 50% were belongs to middle class. 44 % patients were smoker. 50% patients were of Vata Pittaj Prakriti.

Symptoms	Mean BT	Mean AT	%Relief	SD	SE	t	p
General feeling of well being	2.25	0.68	69	0.963	0.24	6.4	0.0001
Ability to work	2.18	0.68	68	0.632	0.158	9.48	0.0001
Fatigue	1.437	0.565	61	0.5	0.125	7	0.0001
Appetite	1.43	0.56	60	0.44	0.111	11.18	0.0001
Digestion	0.562	0.562	0	0.730	0.182	0	1
Sleep	0.687	0.125	85	0.671	0.118	3.94	0.0001
Cough	2.31	0.5	78	0.655	0.163	11.067	0.0001
Fever	1.87	0.375	70.05	0.632	0.158	9.480	0.0001
Expectoration	1.06	0.125	80	0.997	0.249	3.7	0.0001
Haemoptysis	0.312	0	100	0.704	0.176	1.775	0.96

DISCUSSION

Tuberculosis is one of the oldest disease known to affect human, is a major leading cause of death in developing countries. . In Ayurveda tuberculosis is considered as *Rajyakshma* or *kshaya* which leads to *dhatu* kshaya due to obstruction of *Srotas*. Rasayana drugs improve the quality of rasa dhatu so good quality of *rakta*, *mamsa*, *meda*, *asthi*, *Majja*, *Sukra* and *ojus* is formed, so excellence of all dhatus is achieved. It also improve the microcirculation hence improves tissue nourishment. In general well-being there was 69% relief. Ability to work was improved 68%. Fatigue was improved 61%. Percentage relief in appetite and sleep were 60 and 85% respectively. Improvement in all above said symptoms was statistically insignificant. Improvement in digestion and haemoptysis was statistically not significant. Whereas in cough, fever and expectoration percentage relief was 78%, 70.05% and 80% respectively this was statistically highly significant. There was significant improvement in weight gain.

CONCLUSION:

In patients of Pulmonary tuberculosis there was marked improvement in symptoms like cough, fever, expectoration, weight gain, appetite etc. No unto wanted effect of therapy was observed during treatment and during follow up period. So it can be concluded that Ashwagandha is very effective in management of Pulmonary Tuberculosis as adjuvant therapy but to establish this effect further study of longer duration and larger sample is required.

REFERENCES

1. Samhita C. Vidyotini Hindi Commentary. In: Shastri K, Chaturvedi GN, editors. Part I and II. Varanasi: Chaukhamba Sanskrit Series; 1969.

2. Debnath PK, Chattopadhyay J, Ghosal D, Bhattacharya P. Immunomodulatory Role of Ayurvedic Rasayan for Quality of Life. International Nat Conf. 1998:38.
3. Bhattacharya SK, Muruganandam A. Adaptogenic activity of Withaniasomnefera: An experimental model using a rat model of chronic stress. PharmacolBiochemBehav. 2003;75:547–55.
4. .Shashtri Sudarshn commentary on Madhavnidan madhukosha Chaukhmbha sanskritsansthan 19th edition
5. Kirtikar and Vasu Indian medicinal plants vol 1 &2 2nd edition 1984
6. Harrison T.R. Principal of Internal medicine 2001 15th edition vol 1-2
7. Katiyar CK, Brindabanam NB, Tewari P, Narayana DB. Immunomodulation products from Ayurveda: Current status and future perspectives. In: Upadhaya SN, editor. Immunomodulation. New Delhi: Norosa Publishing House; 1997.
8. Brahma SK, Debnath PK. Therapeutic importance of rasayana drugs with special reference to their multi dimensional actions. Aryavaidyam. 2003;16:160–3.
9. .Bhattacharya SK, Goel RK, Kaur R, Ghosal S. Anti-stress activity of sitoindoles VII, VIII, new steryl glycosides from Withania somnefera. Phytother Res. 1987; 1:32–3.

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