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A CONCEPTUAL STUDY ON RAJAYAKSHMA WITH SPECIAL REFERENCE TO PULMONARY TUBERCULOSIS THROUGH AYURVEDA

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One of the *Asthamahagadas* described by *Acharya Charaka* and known as the "king of the disease" is *Rajyakshma*. Due to its multisystem involvement and syndromic expression, it has traditionally been difficult to identify and treat. Therefore, it is crucial to fully comprehend *Nidana* and *Samprapti* prior to making treatment plans. *Rajyakshma* has been linked to numerous immunodeficiency syndromes. However, a closer look at the symptoms reveals that it more closely resembles a multisystem respiratory disease. As well as being classified as an *Aupsargika Vyadhi*, the ailment also had a number of predisposing elements or *Chaturvidha Nidana*. *Tridoshas* and *Sapta Dhatu* are induced as a result of *Nidana* indulgence. In the present period, pulmonary tuberculosis can be linked to *Rajyakshma*, which affects the *Pranavaha Srotasa*. Although the pathophysiology of *Rajyakshma* and pulmonary tuberculosis differ, their clinical profiles are remarkably similar. Western medicine focuses primarily on infectious diseases, how they spread, various diagnostic techniques, and WHO-recommended antibiotics. The paper's main goals are to fully convey the fundamental ideas of *Rajyakshma's Hetu and Samprapti* and how they affect the *Pranavaha Srotasa* in relation to pulmonary tuberculosis. *Rajyakshma* is considered the king of all diseases. It is formed with two words: *Raja* (king) and *Yakshma* (decay), which means fraying condition of huge magnitude. The symptoms of *Rajyakshma* include *Sahasa* (extreme tension and strain), *Vegasandharana* (restraining natural impulses), *Kshaya* (decreasing *Dhatu*), and *Vishamashana* (resisting natural urges). It is a *Shosha* that *Madhyama Rogamarga Vyadhi* has manifested. The *Tridosha* and the *Sapta Dhatu* are impacted by the emergence of *Ekadasha Roopa*. The *Nidana* and the *Samprapti* are given a lot of attention in the classics of *Ayurveda*, since they are crucial to comprehending *Chikitsa*. *Chikitsa is Nidana Parivarjana* and *Samprapti Vighatana*; it is nothing. *Rajyakshma's* knowledge was compiled by exhaustively searching the primary Ayurvedic literature. *Rajyakshma* is a rare illness, and the disease hierarchy is as described by *Sahasajanaya Rajyakshma* and *Vega Sandarana*. *Janya Rajyakshma*, *Kshaya Janya Rajyakshma*, and *Vishamashana Janya Rajyakshma* is one of the four categories involved in *Nidana*. In modern medicine, *Rajyakshma* may correlate with pulmonary tuberculosis. Though there is a difference in the pathogenesis of tuberculosis and *Rajyakshma*, the clinical picture of both is quite similar.

Keywords: *Rajyakshma, Yakshma, Jwara, Kshaya, Roga, Pulmonary Tuberculosis.*

1.INTRODUCTION:

Rajyakshma is caused by the vitiation of *Tridosha* and *Sapta Dhatu*. *Ekadasha Roopa* manifests as a result of *Sahasa, Vega Sandharana, Kshaya*, and *Vishamashana* indulgences. *Rajyakshma* is regarded as the most severe illness. As a result, it is referred to as *Raja* (king) and *Yakshma* (decay), which denotes a severe state of fraying. *Parshwashoola, Jwara, Kasa*, and *Raktashthiwana* are *Rajyakshma* symptoms. The purpose of the current study, which is titled "*Rajyakshma*," is to explore and assess the full concept and etiopathogenesis of *Rajyakshma* using clinical as a whole in the context of contemporary thought and Ayurvedic principles. The diagnosed cases of tuberculosis are used in this study because *Rajyakshma* is a condition that, in this time period, has a better correlation with pulmonary tuberculosis.

Both system adherents have worked hard to comprehend the pathophysiology of *Rajyakshma* and pulmonary tuberculosis, respectively. Because of this, each pathological occurrence in both of these clinical entities is discussed in great detail in the relevant literature.

Although *Rajyakshma* and pulmonary tuberculosis have different pathogenetic mechanisms, their clinical profiles are remarkably similar. In the case of *Rajyakshma*, the definition of "*Chikitsa*" provided by *Acharya Charaka* is entirely appropriate. According to *Acharya Charaka*, the proper treatment for diseases should be administered with the aim of preventing any discordance from arising in the *Dhatu*s and preserving their concordance.

Ayurvedic Concept of *Rajayakshma*:

Ayurveda defines health as "a state of the body, mind, and spirit that is in balance with regard to structure and function." All of those are in an unbalanced state, or *Dhatu Vaishamya/Vyadhi*. There are several ailments, and Ayurveda has descriptions of them all. One of them is *Rajayakshma* as well. In *Rajayakshma*, the seven *Dhatu* predominantly turned into *Mala* and died, as opposed to partially converting into *ojasa*, which is thought to be a carrier of *Prana*. The causes of *Rajayakshma* have been categorized by ancient *Acharyas* into four categories.

Examining the ailment is important for the second purpose of *Ayurveda* to be accomplished. Without a thorough inspection, an illness cannot be cured. It is the cause of the "*Trisutra*" (*Hetu*, *Linga*, and *Aushadha*) that *Ayurveda* refers to. *The Trisutra* was the first to mention *Hetu*, demonstrating the significance of this concept in Ayurvedic treatment.

Rajayakshma is primarily attributable to *Dhatukshaya* (tissue emaciation or loss). This process universally initiates the process of pathogenesis in *Rajayakshma* patients. In addition, there is inevitable metabolic dysfunction (*Dhatwagninasana*), in which *Rasa* (tissue fluid), *Rakta* (blood), *Mamsa* (muscle), *Meda* (adipose tissue), and *Shukra* (generative tissue) are lost. This leads to the ultimate deterioration of immunity, or *Ojokshaya*. As per Ayurvedic concepts, an unusual metabolic change occurs, leading to the loss of various *Dhatu* (tissues) such as *Ojokshaya*, *Sukra*, and *Meda Dhatu* to *Rasa Dhatu* preceding each other, which is known as *Pratilomakshaya*.

2. DEFINITION:

According to *Acharya Charaka*, obstruction in the *Rasavahi Srotasa* causes the *Rasa Dhatu* to build up at its own location, travel higher, and manifest as *Kasa* and other clinical symptoms. As a result, *Shadrupa* and *Ekadasharupa* are created, and the collection of these clinical symptoms is referred to as "*Rajayakshma*" as a

whole. *Shosha* is an illness that, in the words of *Acharya Sushruta*, is both preceded by and presents as a complication of many other ailments. It is extremely challenging to identify and cure.

Conceptual Review

The disease *Rajayakshma* is described in *Brihatrayi* and in all successive texts.

Etymology:

On the basis of etiological factors: *Rajayakshma* can be classified into 4 types

- *Sahasaja Rajayakshma*
- *Sandharanaja Rajayakshma*
- *Kshayaja Rajayakshma*
- *Vishmashanaja Rajayakshma*

On the basis of *Dosha* predominance: Although *Rajayakshma* is *Sannipataja Vyadhi*, but a few *Acharya* classified it into five types:

- *Vataja Rajayakshma*
- *Pittaja Rajayakshma*
- *Shleshmaja Rajayakshma*
- *Sannipataja Rajayakshma*
- *Urahkshataja Rajayakshma*

On the basis of clinical features: According to the clinical picture of the disease, it has been classified into three types:

- *Trirupa Rajayakshma*
- *Shadrupa Rajayakshma*
- *Ekadasharupa Rajayakshma*

On the basis of Pathogenesis: *Rajayakshma* emerges in two possible ways, and these can be regarded as two sorts of *Rajayakshma* as said by *Acharya Charaka* and *Sushruta*.

- *Anuloma Kshaya*
- *Pratiloma Kshaya*

3. NIDANA/ETIOLOGY:

After reviewing all the classics, it is discovered that *Rajayakshma* has four main causes, which can each cause the ailment on their own or together.

1. *Sahasa*
2. *Vega Sandharana*,
3. *Kshaya*,
4. *Vishamashana*

1. ***Sahasaja Rajayakshma*** (due to over exertion beyond one's capacity): *Sahasa* means exerting oneself to the limit through excessive and arduous labour. Fighting between weak and strong people exerting effort, being overly talkative or speaking too much long-distance swimming, vigorous massaging, applying pressure with the feet, running quickly over long distances, indulges in other routines like extreme exercise and prolonged study, fasting, carries a lot of weight and can cause injury. A heavy vehicle raiding down from height and causing any other kind of injury. These excesses vitiate *Vata*, which affects the *Kapha* that is typically found in *Urha Pradesha*, vitiating *Pitta*, which causes it to move up, sideways, and downward.

2. *Vegsandharanaja Rajayakshma* (due to suppression of natural urges)

Vega Sandharana is the term for the repression of natural inclinations to urinate, defecate, or urinate in front of a female while a person is in front of the monarch during a conference with wise people. Once *Vata* becomes inflamed, it will vitiate *Pitta* and *Kapha*. According to *Vijayarakshita*, the term "*Vegas*" in this context only refers to the desires to flatus, defecate, and urinate- not to all the other *Vegas* that are addressed in the "*Navegandharniya*" chapter of the *Charaka Samhita*.

3. *Kshayaja Rajayakshma* (due to depletion of tissues)

Kshaya means depletion or discretion. It is characterized by *Acharya Sushruta* as a synonym for "*Shosha*," and he says that the loss of a body's capacity for work is known as "*Kshaya*". *Yogendranath* claims that *Rajayakshma* relates to the depletion of *Shukra*, *Oja*, and *Sneha*, whereas *Gangadhara* thinks it refers to the depletion of *Rasa Dhatu* and *Shukra*. This could be a result of *Rasa* and *Oja* being used interchangeably. Both *Acharya Charaka* and *Acharya Sushruta* claimed that there are two methods for the depletion of *Dhatu* to occur:

- 1) *Anuloma Kshaya*
- 2) *Pratiloma Kshaya*

Anuloma Kshaya denotes that the depletion of *Dhatu* occurs in the order of their sustenance, i.e., *Rasa*, *Rakta*, *Mamsa*, and so forth followed by *Majja*, followed by *Asthi*, and so on, is the direction in which *Dhatu* are depleted according to the *Pratiloma Kshaya* theory. According to *Acharya Charaka*, they fall into two categories:

- I. Psychological (such as *Bhaya*, *Shoka*, *Chinta*, *Udvega*, etc.)
- II. Nutritional (such as *Ruksha Anna Pana*, which is consumed when one consumes a small amount of food, fasting when one has a weak body, and *Ativyavaya Anahara*), both of which, despite providing nourishment for the body, deplete the *Dhatu*s by increasing *Vata Dosha*.

4. *Vishamashanaja Rajayakshma* (due to irregular dietary habits)

Vishamashana refers to eating without taking *Ashtavidhi Vishesha Ayatanani* into account. As an example, *Prakruti* (food's nature), *Karana* (wrong preparation), *Samyoga* (food combination), *Matra* (amount), *Deha* and *Kala* (opposite of *Desha* and place and time), not partaking in *Shadrasayukta Bhojana*, and not adhering to *Aharavidhi Vidhana*. All of these factors cause the intake of *Viruddha Aahara* to become tainted. These *Doshas* spread throughout the body and get into the bloodstream. Instead of the *Dhatu*s, the full amount of food consumed by the person is transformed into stool and urine.

4. POORVA-ROOPA (PREMONITORY SYMPTOMS):

1.	<i>Pratisyayo</i> (Coryza)
2.	<i>Dorbalyam</i> (Debility)
3.	<i>Doshadarshnam adosheshu api bhaveshu</i> (not picking or an inclination to find faults where there is no reason to)
4.	<i>Kaaye bibhatsdarshnam</i> (Morbid appearances on the body)
5.	<i>Gharnitvam</i> (Feeling of disgust)
6.	<i>Balmansaparichhaya</i> (Loss of strength and flesh, in spite of consuming adequate food)
7.	<i>Streemadhyamansa priyata</i> (Craving for women, wine and meat)
8.	<i>Priyata ch avgunthne</i> (Desire to be always covered by something (Feeling of cold)
9.	<i>Makshikaghunkeshanama trinanaam patani ch praayo annpaane</i> (Imagined feeling of one's food being infested with insects, flies, hair)
10.	<i>Keshanaama Nakhanaam ch abhivardhnama</i> (Rapid growth of hairs and finger nails)
11.	<i>Patryebhi patengyesh ch shavpadyesch abhigharshnam</i> (Imagined feeling of being attacked by birds, wasps and animals)
12.	<i>Swapne keshasthirashinaam bhashmn se ch adhirohnam</i> (Seeing dreams of climbing heaps of hair, bones and ashes)
13.	<i>Jalashyanaam shailanaam vananaam jyotishamapi shushyataam</i> (Dreaming of dried or withered ponds, mountains, and forests)

5. SAMPRAPTI (PATHOGENESIS)

Acharya Charaka has mentioned the pathogenesis of all four types of *Rajayakshma* in detail in *Nidana Sthana*. However, a common pathogenesis has been described in *Chikitsa Sthana*. The *Samanya Samprapti* of *Rajayakshma* has been very precisely defined by *Acharya Charaka*. According to him, a properly formed *Agni* results in a properly formed *Dhatu*s. These *Dhatu*s continue to exist in their own *Srotasa* and with *Agni's* assistance, help form further *Dhatu*. However, when the *Srotamsi* is blocked, it causes the *Dhatu*s, particularly *Rakta*, to become depleted. *Dhatvagni* was reduced as a result, and all of these factors added up to *Rajayakshma*.

Samprapti Ghataka:

caused by vitiated three Doshas, hence the physician

- *Dosha (humur) – Vata Pradhana Tridosha-Janya Vyadhi*
- *Dushya – Rakta, Twaka, Mamsa*
- *Srotasa (channel)– Raktavaha, Asthivaha, Majjavaha*
- *Srotodusti – Sanga, Vimargagamana*
- *Agni – Agnimandhya*
- *Udhhavasthana – Pakvashya*
- *Vyaktasthana – Sandhi (Visheshata Kara Pada Sandhi)*
- *Rogamarga – Madhya*

6.CHIKITSA:

Despite the availability of extremely effective treatment, tuberculosis remains the world's worst infectious killer, posing a severe health danger. Ayurveda is a living science that promotes a healthy lifestyle and provides treatment based on universal principles. It's past time to perform more systematic research on *Trirupa*, *Shadrupa*, and *Ekadashrupa Rajyakshma*, which can help with TB management and increase quality of life. All types of *Rajyakshma* are

(i) *Snehana evama Swedna*

(ii) *Balwana evama Ahhika-*

(iii) *Mridu Vamana evama*

(iv) *Anuvasana Vasti*

(v) *Nasya karma*

Snehana: During this procedure, heated therapeutic coils loaded with herbal components are massaged into the agitated *Dosha*. It helps to liquefy and expel *Ama* (toxins) from the body's finest channels.

Swedana: Uses a number of methods to get you to perspire. Additionally, it assists in balancing the *Dosha* and eradicating *Ama*.

Vamana: It is a technique to cause vomiting, which helps to eliminate *Ama* and balance the *Dosha*. In case, if patient is strengthfull and *Doshas* are in intensively aggravated condition, then emesis (*Vamana*) should be induced. Additionally, it helps to clear mucus from the chest and *Naadi* (channels). Only *Mridu Vamana* is advised in *Rajyakshma* when *Dosha* are more prominent.

7.PATHYA – APATHYA:

Pathya	Apathya
<p>Aahara- Cereals like the old Barley, wheat, <i>Mugda</i>, <i>Saali</i> as well as <i>Shashtika</i> Rice, wine and meat of wild animals and birds, soup prepared from <i>Mulaka</i> and <i>Kulattha</i>, Goat's milk, meat, ghee with sugar.</p> <p>Vihara- Living with goats and sleeping in the midst of them.</p>	<p>Aahara- Brinjal, bitter guard, <i>Bilva Phala</i>, <i>Rajika</i> etc.</p> <p>Vihara- Sexual intercourse, excessive exercise, anger, sleep during day time etc.</p>

8.CONCLUSION:

Rajyakshma is a prime example of *Madhyama Roga Marga* since it is a *Tridoshaja Vyadhi* with *Vata* and *Kapha Dosha* dominance. In contrast to *Kshayavasta*, where all *Dhatus* are present, all *Sapta Dhatus* are involved in this manifestation of *Rajyakshma*. According to the involvement of *Sahasa* (by excessive stress and strain), *Vegasandarana* (suppressing the natural impulses), *Kshaya* (diminishing of dathu), and *Vishamashana*, the symptoms of *Rajyakshma* vary (opposite to dietary regimen). Depending on the way the *Dhatus* are depleted, *Kshaya* manifests *Rajyakshma* through one of two possible channels. Understanding the role of causes in diseases and the pathogenesis process is crucial before designing a treatment plan. Avoid therefore all *Nidana* that are accountable to produce *Rajyakshma*. There are a number of *Rajyakshma* treatments that Ayurveda has provided for us that have proven to be effective and promising. In addition to reducing symptoms without jeopardizing the person's health, they must avoid such problems with effective results. A number of natural herbs and pharmaceuticals have been shown to have promising anti-tubercular actions, to help alleviate the disease's unpleasant symptoms, and to function as immune boosters; these discoveries may have a significant impact on the allopathic drug industry.

9.CONFLICTS OF INTEREST:

This work is not published anywhere. The authors declare no conflict of interest.

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