

# An Etiopathogenesis of Raktagata vata w.s.r. to Hypertension

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## Abstract:

Hypertension is a psychosomatic haemodynamic disease with a multi-factorial pathology and origin of several dietary, environmental and genetic factors. In the classical literature of Ayurveda any word which gave description reflecting the raise of blood pressure are not found. The concept of disease Hypertension is new to Ayurveda because it is an instrumental disease invented in modern times. In this study Raktagatavata is considered for further evaluation. Aim of the study was to evaluate the aetiopathogenesis of Raktagatavata w.s.r. to Hypertension. 30 subjects diagnosed with Raktagatavata (Hypertension) were selected for the evaluation as per inclusion and exclusion criteria. It is a descriptive study and no intervention was done. Based on the data obtained it was concluded that many factors mainly genetic, dietary, psychological and environmental factors are the reasons for the occurrence of the disease and hence it is known as multifactorial disease.

**Keywords:** Hypertension, Raktagatavata, Nidana, Etiopathogenesis

## Introduction:

Hypertension is a psychosomatic and hemodynamic disease. It is also known as silent killer or hidden killer because of its associated hazards without expressing any symptomatology. Therefore awareness for hypertension in the society has been increased. Nearly 63% of total deaths in India are due to noncommunicable diseases, of which 27% are attributed to cardiovascular disease which affects 45% people in the 40-69 age group. Raised blood pressure is among the most important risk factors for CVDs. Moreover, it remains poorly controlled due to low awareness about hypertension, lack of appropriate care through primary care and poor follow up. Only about 12% people with hypertension in India have their blood pressure under control. Uncontrolled blood pressure is one of the main risk factors for cardiovascular diseases (CVDs) such as heart attacks and stroke, and are responsible for one-third of total deaths in India (1). In modern science the therapy for hypertension is a palliative in nature. Though the word blood pressure and hypertension are used almost like synonyms, the former is considered as a physiological phenomenon while the latter is referred to pathological one. In the classical literature of Ayurveda any word which gave description reflecting the raise of blood pressure are not found. The concept of disease Hypertension is new to Ayurveda because it is an instrumental disease invented in modern

times, but from compilation of scattered references and from coined terminologies many conditions are named which have the resemblance with hypertension like RaktagataVata, Raktacchapa, KaphapittaAvrutaVyanaVata, SirogataVata, DhamaniPraticaya, DhamaniKathinya etc.

According to Charaka a guideline to understand a new clinical entity not described in the Samhita has been mentioned as it is not necessary that each and every disease should have nomenclature. If a physician is unable to diagnose the disease, then treat the unknown disease by its Prakruti, Samutthan and Adhishtana (2). He can design a treatment protocol for such disease, the disease by ruling out vitiated dosha out of Tridoshas and main Nidana factors (3). Based on this reference if the physician could be able to understand the etiological factors, doshas and dushyas involved then he can plan for the treatment also. In this study Raktagatavata is considered for further evaluation.

Raktagatavata is a Vata pitta pradhana tridoshaja vyadhi and chief dushyas involved in this are Rasa and rakta. Some scholars have accepted the Avarana theory and some scholars accepted Dhatu-Gatavta for the pathophysiology of hypertension. In all of these processes Vataprakopa is a common thing in hypertension which can be described by thinking over the physiological conditions of Vata. This prakopa takes place in two ways according to Charaka. First two types are much related to Avarana and Dhatukshaya (4), as third type is related to pure Vataprakopa (5). Pure Vataprakopa can be categorized in two parts as Swanidanena prakopa and Dhatukshaya janya prakopa as explained earlier. Vata-Prakopa is an important phenomenon in the manifestation of the hypertension along with the involvement of morbid Kapha, Pitta, Rakta, Mansa and Meda. Following Dosha types are involved in the pathophysiology of hypertension:

**Vata** :Vyana, Udana, Prana (main types) and Samana, Apana ( primary and/or secondary types)

Vyana, Udana and Prana Vayus have a direct role in the physiology of circulation. Any type of derangement of them can cause the derangement of circulatory system; hence these Vayus are primarily concerned to hypertension. Samana and Apana types are secondarily important in the manifestation of the hypertension because hypertension is the disease mainly concerned to Madhyama Rogamarga and Bahya Rogamarga, and secondarily to Koshtha Marga. But the Karma of Samana and Apana is found to be in the separation and excretion of Kleda Part from the normal fluid which can be correlated with the 'Na' excretion and 'K' retention and thus these two types can be taken for prime importance in the manifestation of the disease.

**Pitta** :SadhakaPitta – Sadhaka Pitta is responsible for intellectual, grasping and ego (6). If Sadhaka Pitta vitiates then it can induce several psychic symptoms like Bhaya, Chinta, Krodha, Arati, Shoka, Dukkha, Vishada etc.

RaktaAshrayiPitta – Vriddhi of any Dhatu leads to vitiation of its AshrayiDosha, hence if RaktaDhatu is increased it may also lead to vitiation of Pitta Dosha. In the circulatory system the participating factors are Rasa, Rakta and Sangya. Therefore if the circulating entities like Rasa and Rakta are increasing then it will lead to vitiation of Kapha or Pitta in the circulation which manifests many symptoms according to the different dominant fractions (7).

**Kapha** :Avalambaka Kapha– It nourishes and maintains all Kapha Sthanas including Hridaya.

According to Ayurveda Mana and Purusha both generate and nourish from food. If food is un-homologous then it will cause imbalance in both Manasa and ShariraDoshas to result many diseases. Hypertension is one of disease which is the outcome of such a faulty food regimen and life style accepted generation by generation and entered in genetic predisposition group unknowingly, which now a days is being called as X-syndrome (Beeja Dosha or Santana Dosha (8). Along with all other factors aging is also the common factor in the provocation of the hypertension, this is because of senile alterations in the structures and physiologies concern to hemodynamics. Other stress related factors are also being incorporated under the triggering factors of hypertension. Excessive salt intake, excessive alcohol intake and smoking these factors are also very much

responsible in the etiopathogenesis of hypertension. Thus to avoid these Nidanas is a first step in the direction of control and management of hypertension. With this background the study was undertaken to establish a descriptive aetiopathogenesis of the disease Raktagatavata (Hypertension) according to Ayurveda.

**Aim and objectives of the study:**

To evaluate the aetiopathogenesis of Raktagatavata

**Materials and methods:**

- ❖ **Source of Data:** 30 Patients diagnosed with Raktagatavata (Hypertension) were selected from O.P.D. and I.P.D. of Major S.D. Singh P.G. Ayurvedic Medical College and Hospital, Fatehgarh, Farrukhabad, U.P. on the basis of inclusion and exclusion criteria.
- ❖ **Inclusion criteria:**
  - Patients of either sex between the age group of 30 – 60 years were selected
  - Both freshly detected and treated cases of Hypertension were selected
  - Patient with Pre Hypertension stage – SBP (120–139) or DBP (80 – 89) and Hypertension stage I – SBP (140-159) or DBP (90-99) were included for the study
- ❖ **Exclusion criteria:**
  - Patients suffering from any other systemic disorders which interfere with the course of treatment were excluded
  - Patients with Hypertension Stage II – (SBP ≥ 160 and DBP ≥ 100) were excluded.
- ❖ **Diagnostic criteria**

The diagnosis was made based on the Blood pressure measurement and the criteria for normal, Hypertension Grade I, Grade 2 and Grade 3. Isolated hypertension was also considered for diagnosis.

**Definition of Hypertension (9)**

CATEGORY	SYSTOLIC B.P.	DIASTOLIC B.P.
Blood pressure		
Optimal	< 120	< 80
Normal	< 130	85
High normal	130 – 139	85 – 89
Hypertension		
Grade 1 (Mild)	140 – 159	90 – 99
Grade 2 (Moderate)	160 – 179	100 – 109
Grade 3 (Severe)	≥ 180	> 110
Isolated systolic hypertension		
Grade 1	140 – 159	< 90
Grade 2	≥ 160	< 90

❖ **Investigations:**

Patients were subjected to the following investigations:

- Urine routine and microscopic test
- Blood – Hb%, TLC, DLC, ESR, FBS, PPBS, Serum lipid profile, blood urea and Serum creatinine
- ECG if necessary

❖ **Type of Study:** Descriptive study and no intervention of therapy

❖ **Duration of the study:** As it is a descriptive study and no intervention was carried out the duration of the study was not there.

❖ **Drug schedule, Results and Statistical analysis:**

The therapeutic intervention was not carried out in the present study as it is a descriptive one and only the clinical study was carried out to find out the incidence of the condition and relate that data to the available literatures.

**Observations and results:**

Most of the patients were females (60%), 93.33% were married, 50% patients were in 51-60 years range group, 50% were Hindus and 46.67% were Muslims, 50% of the cases were housewives, 73.33% belong to middle socioeconomic group, 80% of the patients had positive family history. Among the aggravating factors, emotional stress was present in 86.67% patients, anxiety in 73.33% patients, anger in 50%. Among relieving factors, relaxation (83.33%) and Medicine (76.67%) are the important ones. Maximum patients i.e. 53.33% were related with mental or mental + physical type of works, while 46.67% were related to physical type of work. When etiological factors were considered multifactorial nidanas are observed in the patients as mentioned in the following table.

**Nidana wise distribution of 30 patients**

Type of Nidana	No. of pts.	Percentage
<b>AharajaNidana</b>		
Tikta – Katusevana	20	66.67
Adhikalavana	27	90.00
Ushna – Tikshna	27	90.00
Vidahi	5	16.67
Viruddha	2	6.67
Atisnigdha	20	66.67
Others	2	6.67
<b>ViharajaNidana</b>		
Atapasevana	24	80.00
Analasevana	23	76.67
Avyayama	24	80.00
Adhikavyayama	1	3.33
Ratrijagarana	14	46.67

<b>Manasikabhavatmakanidana</b>		
Chinta	28	93.33
Krodha	28	93.33
Raga	29	96.67
Bhaya	27	90.00
Shoka	30	100.00
Lobha	2	6.67
Moha	28	93.33
Irshya	6	20.00
Udvega	14	46.67
Chittodveda	26	86.67
<b>Others</b>		
Bijasvabhavaka	24	80.00

**Aharaja Nidana :** Among 30 patients, 90% patients were found consuming AdhikaLavana, 90% Ushna-Tikshna Gunapradhana, 66.67% Tikta-Katu Rasa pradhana, 66.67% Atisnigdha, 16.67% Vidahi, 6.67% Viruddha and 6.67% patients were found consuming other types of Aharaja Nidana.

**Viharaja Nidana :**Atapasevana and Avyayama each was observed in 80% patients, whereas Anal sevana was observed in 76.67% patients, Ratrijagarana in 46.67% patients and Adhikavyayama was observed in only 3.33% patients.

**Manasika Bhavatmaka Nidana :**Shoka was found in all the patients, whereas Raga was found in 96.67%,Chinta, Moha and Krodha each were found in 93.33% patients. Bhaya was seen in 90% patients, Chittodvega in 86.67% patients, Udvega in 46.67% patients, Irshya was seen in 20% and Lobha was observed in 6.67% patients.

**Others:**Bijadosha was found in 80% patients.

### **Discussion:**

Hypertension is a psychosomatic haemodynamic disease with a multi-factorial pathology and origin of several dietary, environmental and genetic factors. In the present study, maximum number of patients i.e. 50% were from the age group 51-60 years followed by 36.67% of patients were recorded from 41-50 years age group. As Ayurvedic text 30-60 years are Yuva Avasthain which the Pitta Doshais dominant. This is the period when aging process starts & retraction in the tissue formation takes place. Vata is dominant in old age. Degenerative condition is characteristic of Vata and to some extent Pitta precipitation. Yuvaavasthaof pitta dominancy is very sensitive to hormonal imbalance or changes and the over strength of the higher cortex due to Vata Prakopa initiatethe disease. As stated earlier that, Essential hypertension is Tridoshajavyadhiin which Vata and Pitta may be more responsible for giving a condition of Essential hypertension in this age group.

Most patients were females with 60% incidence although based on this percentage no relation can be established and no conclusion was found in occurrence of this disease. Stress full life style may be responsible factor of

Hypertension among these individuals.

Almost equal distribution between Hindus and Muslims i.e., 50% patients were Hindu and 46.67% were Muslim community. As this could be a result of demographical factors, no specific relation can be established from this observation.

93.33% of patients under this study were married. Generally the disease Hypertension occurs during the middle age and later years and hence the incidence of married people is more. The possible reason for this may be tension arising due to the family conflicts, more responsibilities, difficulties in adjusting with the family conflicts although this specific conclusion cannot be established on the basis of these studies for developing Hypertension at this short time study.

The maximum number of patients was housewives (50%). 33.33% patients was in service both in government and private sector. Hypertension is a psychosomatic disorder. Mental stress and to some extent loneliness in housewives, tension and stressful life style in service and businessman, problem of finance for retired and labor class plays a significant role in change of psychological set-up .

Around 73.33% patients hailed from middle class. High incidence in middle class may be the geographical distribution of the people in the locality and also due to mental and physical stress in the middle socio economic people is more.

The study reveals that there is strong relationship between family history and hypertension. 80% patients were in positive family history, while 20% had negative family history. Though it is a multi-factorial disease, but genetic factor is considered as a main factor. Several studies have already proved that there is genetic predisposition to occurrence of Hypertension.

More use of lavana, Amla, Katu, Rasa are the Pitta prakopaka Rasa and causative factor for Shonita Dushti also nidana for. The pattern of use of rasa is also responsible for TridoshaPrakopa, may be considered as cause of Essential Hypertension. Excessive Madhura (sweet) Rasa intake leads to diseases related to Medasa, Shleshma, obesity, loss of appetite, coma and diabetes etc., heaviness and weakness Excessive Amla (sour) Rasa intake leads to Kapha, Pitta and AsraPrakopa, Shaithilya (loss of function), Vertigo, Raktadushti due to excessive Lavana (saline) Rasa intake and also leads to Pitta Prakopa, aggravation of Rakta and Vata-Rakta. Excessive Katu (pungent) Rasa intake leads to fainting (Murchha), vertigo (Bhrama), thirst, tremor, and contraction of blood vessels. Excessive Kashaya (astringent) Rasa intake leads to obstruction of channels and Pakshavadha (by its Khara, Ruksha and Vishada properties) These Rasas on excessive ingestion can manifest the disease HTN.

Consumption of Tikshana, Ushnaahara were found in 90% of patients, while vidahi and viruddhaaharasevana was found in 16.67% and 6.67% respectively. Atisnigdhabhojana was found in 66.67%. 80% were Aatapsevan as well as Avyayaama, 46.67% were indulged in Ratrijagarana, Analasevana was found in 76.67%. Shoka was found in all 100% of the cases whereas, Krodha and ChintaNidana each were found in the 93.33%, Raga in 96.67% and Bhaya was found in 90% patients. All the above mentioned reasons either vitiate vata or pitta doshas predominantly which in turn causes dushti of rasa and rakta thereby causing the disease. ViruddhaAhara is like Garavisha. Ati-AharaSevana leads to YugapataTridoshaPrakopa. Madyapana leads to Pitta Prakopa. Above observed data reveals the fact that maximum numbers of patients were having, to indulge the Vata-RaktaDushti and Pitta PrakopakaNidana. These are the common complains observed in the patients of HTN also.

The collective data reveals that maximum number of patients presented with Shirahshoola (90%), feeling of tension in 86.67%, Klama in 83.33%, Palpitation in 73.33%, Bhrama in 70%, Tachycardia and Swedadhikyata each with 66.67%, Ayaseshwas in 63.33%, Anidra in 56.67%, Akshiraga in 43.33%, Tamodarshana in 36.67%, Santapa in 20%, Arati and Polyurea each in 16.67%.

Akshiraag, Aruchi, Daurbalya, Klama, Shiroruka, Tandra, Tamaodarshana, Santapa are the symptoms arises due to Shonitadushti. Any type of shoolais due to Vata. In Bhrama Raja, pitta and vata are important Dosha. Vatic

hridroga symptoms are come across in hypertension. Svasa, Tandra are due to Kapha-vatadushti and Hriddravatva are due to Vata-Pitta. Dominancy of Vatadushtilakshana as Malavarodha, Alpanidra are present. These are the common complain found in patient of hypertension. These observations suggest that it is a Vata Pitta PradhanaTridoshajaVyadhi occurring with involvement of RaktaDushti. Raja and Tama is also contributory factor for thisdisease.

**Conclusion:**

Regarding the Nidana factors mainly genetic, dietary, psychological and environmental factors were observed practically, it may be, asserted that none of these factors influence the expression of the disease in segregation. They interact amongst each other in a variety of permutations to compliment and compound the resultant effect on this pathological phenomenon. Hence it is known as multifactorial disease.

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