

A REVIEW ARTICLE ON NIDANA PANCHAKA OF PANDU ROGA (ANEMIA)

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ABSTRACT

Pandu Roga is described elaborately by all *Acharyas* of *Ayurvedas* a specific disease with its own pathogenesis and treatment. In *Pandu Roga* there is predominance of paleness all over the body due to *RaktaAlpata*. Due to its similarity, it can be co-related with Anemia in modern science. Anemia is most common blood disorder, affecting about a third of the global population. Anemia increases costs of medical care and lowers a person's productivity through a decreased ability to work. It is therefore important to search scientific reason behind the disease. The Anemia is a reduced quantity of red blood cells or haemoglobin which, in turn causes pale skin. This article is based on *NidanaPanchak* of *Pandu Roga* from *Laghutrai* and *Brihatrai* with all commentaries. The changing life-style of human being plays a major role in manifestation of various diseases. *Pandu Roga* is also one of them. Our faulty dietary habits and lifestyle produces *Ama* and further *Agni Dusht*, which causes improper *Rasa Dhatu* formation which further hampers the *Rakta Dhatu* formation and leads to *Pandu Roga*. The detail knowledge of *NidanaPanchak* of *Pandu Roga* will help in its diagnosis and management.

Keywords: *Ahara, Ama, Anaemia NidanaPanchaka, Pandu Roga, Vihar.*

INTRODUCTION

A detail explanation of *PanduRoga* is found in almost all *Ayurved Samhitas*. *Pandu Roga* is known from the Vedic period. This disease was described in ancient Hindu treaties like in *Ramayana, Mahabharata, Agnipurana*, etc. It is called *Pandu Roga* because of predominance of *Pandubhava* (paleness) all over the body. *Acharya Charaka* described *Pandu* after *Grahani Dosh Chikitsa* due to aggravation of *Pitta* in *Grahani* and the aggravation of *Pitta* constitutes a predominant factor in the causation of *Pandu*. *charyaSushruta* has mentioned after *Hridaroga* due to same *Samkhya, Samprapti* and *Chikitsa* of

Hridaroga like *Tikshna, Amla, Katu* etc may cause for development of *Pandu*. *Acharya Vagbhata* mentioned *Pandu Roga* after *UdarRoga* due to same *Doshanghnata*. All *Acharyas* explain the word "*Pandu*" as *Shweta, Dhusara, Shwetavabhasa, Pitavabhasa*. *PanduRogi* suffers from decreased blood count, *Bala (strength), Varna (complexion), Sneha, Meda and Oja*. Patient becomes *Nihara* (loss of natural integrity, tone and strength) and *Shithilendriya*. In this there is vitiation of *Pitta PradhanaVatadiDosh* and *Raktadhatu* in the body. *Rakta* gets vitiated by *Doshas*, mainly by *BhrajakaPitta Dosh* and create

Pandu Roga. *Pandu* is described under *Rasa-Pradoshaja Vikara*. *Utpatti of Pandu by Amrakosha*² A white colour mixed with yellowish tinge. According to *Vachaspatyam*³-*Pandu* is like whitish yellow colour of pollen grain of *Ketaki* flower. *Acharya Gangadhara*⁴ describes *Pandu Varna as Malana Varna*. *Nirukti of Pandu Roga* according to our *Acharyas*, among the different kinds of colours such a *Pandu*, *Harita*, and *Haridra*, *Pandu* being more common among this so, disease is called as *Pandu Roga* itself⁵. Origin of the word Anemia which means lack of blood the name Anemia accurately described this condition as the reduced quantity of red blood cell or Haemoglobin⁶. Anemia is a blood disorder characterized by abnormally low levels of healthy RBC cells that delivers oxygen to tissues throughout the body. Red blood cell carry oxygen around the body using a protein called Haemoglobin. When Anemia comes on slowly, the symptoms are often vague and may include feeling tired, weakness, shortness of breath, and a poor ability to exercise. Symptoms may occur depending on the underlying causes. Anemia can also be classified based on the size of the red blood cell and amount of haemoglobin in each cell. When cells are small, it is called Microcytic Anemia; if they are large, it is called Macrocytic Anemia; and in normal size, it is called Normocytic Anemia. Anemia is diagnosed on a complete blood count. Four parameters RBC count, haemoglobin concentration, MCV and RDW are measured, allowing others Hematocrits, MCH and MCHC to be calculated. When the cause is not obvious, use other tests, such as: ferritin, serum iron, ESR, transferrin, serum vitamin B₁₂, Haemoglobin electrophoresis, RBC folate level and RFT (e.g. serum creatinine). A bone marrow examination allows direct examination of the precursors to red cells, when the diagnosis remains difficult.

A detailed review of *Nidana Panchaka* (i.e. *Nidana*, *Purvarupa*, *Rupa*, *Upashaya* and *Samprapti*) will be helpful for clear understanding of minute aspects connected to disease. Therefore, in this article *Nidana Panchaka of Pandu Roga* has been reviewed from *Ayurved Samhitas* and textbooks.

Nidanapanchak of Pandu Roga-

Nidana⁷ (Etiology): Knowledge of *Nidana* is of prime importance in the prevention as well as cure of disease. For diagnosis of disease one should know the actual reason for manifestation of disease. Here the *Nidana* (causative factors) of *Pandu Roga* is broadly divided in 3 types.

1) Aharaja Nidana (Dietary Causes)-Atisevan of *Kshara*, *Amla Lavan*, *Katu*, *Kashaya*, *Atiushna*, *Tikshan*, *Ruksha*, *Viruddha*, *Nishpava*, *Mansadi Sevana*, *Tila*, *Tilataila*, *Vidagdha Bhojana*, *Mrid Bhakshanam*, *Asatmya Bhojana* may be taken as food items to which and individual is not adopted or suited. It may be considered as sudden change of food style or habit or also as junk food used today, as they are not beneficial.

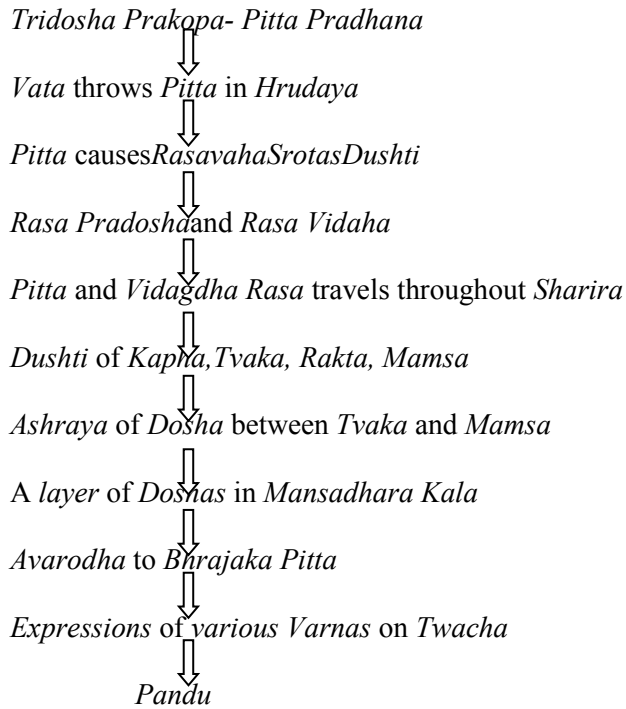
2) Viharaja Nidana (Habitual Cause) -Atinidra, *Ativyayam*, *Ativyavaya* *Atishrama* *Dushta Raktanigarha* in *Raktarsha*, *Diwasvapana*, *Ratrijagarana*, *Rituvaismya*, *Sneha Atiyoga*, *Vegavrodha*, *Vegavidharanain Vamana Karma*.

3) Manasika Nidana (Mental Cause) - Chinta, *Bhaya*, *Krodha*, and *Shoka Atisevan*.

Other *Hetu* includes *Bija Dushti Rakta*, *Mamsa* and *Medaare Matruj Avayava* therefore any *Dushti in Matruja Bhaga* can cause *Pandu Roga*.

Nidanarthakara Roga: In Ayurvedic literature *Pandu Roga* has been indicated either as a symptom of any disease or as *Upadrava Rupa*. So, all these diseases can be considered as *Nidanarthakara Rogas of Pandu*. These are *Rakta Kshaya*, *Rakta Srava*, *Raktarsha*, *Rasa Pradoshaja Roga*, *Kaphaja Arsha*, *Raktarbuda*, *Raktapradara*, *Grahani*, *Jeerna Jwara*, *Punravartaka Jwara*, *Plihodara*, *Vyavaya Shoshi*, *Sannipatodara*, *Shotha*, *Santarpanjanya Roga*, *Upadrava of Rakta Pitta*, *Vedhan of Raktavahi Dhamni*, *Yakrita Pliha Vedha*.

Samprapti Chakra⁸:



Samprapti Ghataka:

- *Dosha – Pitta Pradhana Tridosha*, mainly *Sadhaka Pitta*.
- *Dushya – All Dhatu and Oja*.
- *Srotas – Rasa, Rakta*
- *Agni – Dhatwagni*
- *Sroto Dushti- Sang, Vimargaman*
- *Udbhava Sthana – Amashaya, Hridaya*.
- *Sanchara- Sarva Sharira*
- *Vyakta Sthana – Tvaka*
- *Swabhava – Chirkari*
- *Rogamarga – Madhyam*.

Poorva Rupa⁹: These are the symptoms which are produced in the body before the arrival of the disease when there is accumulation of *Dosha* and *Dushya* in the body they produce some sign and symptoms. In *Pandu Roga* Premonitory Sign and Symptom are as follows-*Tvaka Sphotana* (cracking of the skin), *Sthivana* (spitting of sputum), *Gatrasada* (general body malaise), *Mridabhakshana* (liking for mud intake), *Prekshana Kutshottha* (swelling over eyelid) *Vinmutrapita* (yellowish discolouration of faecal matter and urine), *Avipaka* (indigestion), *Hridaya Span-*

dana (palpitation of heart), *Rukshata* (roughness), *Swedabhava* (absence of sweat), *Shrama* (exhaustion).

Rupa (Samanya Lakshana)¹⁰: These are signs of disease. After aggravation of *Doshas* and formation of the disease the sign of disease is seen. General sign and symptoms of *Pandu Roga* are as follows-*Karnakshveda* (tinnitus), *Durbalata* (debility), *Annadwesa* (aversion towards food), *Shrama* (exhaustion), *Bhrama* (giddiness), *Gatrashula* (body ache), *Jwara* (fever), *Shwasa* (dyspnoea), *Gaurava* (heaviness), *Aruchi* (anorexia), *Shunakshikuta* (swelling over orbit), *Harita* (complexion become greenish), *Shirnaloma* (hair fall), *Hataprabha* (loss of lustre), *Shishirdweshi* (dislikes cold things), *Nidralu* (oversleep), Spitting, diminished speech, Cramps in calf muscles, Patient suffers from pain in waist, thighs and legs, Patient feels exhausted while climbing stairs.

Bheda (types) of Pandu Roga: According to *Acharya Charaka¹¹*, *Pandu* is classified into 5 types, *Vataja Pandu*, *Pittaja Pandu*, *Kaphaja Pandu*, *Sannipataja Pandu*, *MridBhakshajanya Pandu*. According to *Acharya Sushruta*, *Pandu¹²* is classified into 4 types, *Vataja Pandu*, *Pittaja Pandu*, *Kaphaja Pandu*, *Sannipataja Pandu*.

1) Vataja Pandu- Due to consumption of *VataPrakopaka* diet and activities leads to aggravation of *Vata* and manifest *Vataja Pandu Roga*, produces *Lakshana* (features) like *RukshaAnga*, *Angamarda*, *Toda*, *Kampa*, *Parshavruja*, *Shiroruja*, *Varchashosha*, *MukhaVairasya*, *Shopha*, *Anaha*, *BalaKshaya*.

2) Pittaja Pandu- *Pitta* is already disturbed in *Pandu Roga*, in such circumstances if patients consume *Pitta* aggravating *Ahara* and *Vihara* and having *Pitta Prakriti* then *Pitta* exacerbates. Due to intake of *Nidana*, *Pitta* aggravates in excess and brings abnormality in *Rakta* and manifest *Pittaja Pandu Roga*. *Lakshana* (features) – *Peeta Harita Varna*, *Jwara Daha*, *Trushna*, *Murccha*, *Pipasa*, *Pita Mutra*, *Svedanaha Sheeta Kamita*, *Annam Abhinandati*, *KatukaAasya*, *Amla Ud-gara*, *Vidaha*, *Mukha Daurgandhya*, *BhinnaVarchas*, *Daurbalyama*.

3) Kaphaja Pandu- Excessive consumption of *Kapha Prakopak* dietetics and activities leads to development of *Kaphaja Pandu Roga*. *Lakshana* (features) -

Gauravam, Tandra, Chardi, ShvetaAvbhasa, Prasekam, Lomaharsha, Murccha, Bhrama, Klama, Shvasa, Kasa, Aalasya, Aruchi, Katu Ruksha Ushna Kamata, Shyvathu, Madhurasya.

4) Sannipataja Pandu- If a person consumes all kinds of food substances without following rules and regulations of *Ahara* leading to exacerbation of all the three *Dosha* sand manifest *Sannipataja Pandu Roga*. *Lakshana* (features) - All the symptomatology of *Tridosha* appears in this disease and it is extremely intolerable because it develops complications.

5) Mrid Bhakshana Janya Pandu¹³- One who consumes mud (clay) habitually may be considered as either oral ingestion or use of articles contaminated with mud as unclean hands and fingers or as improperly washed vegetables or eatables causes aggravation of either *Vata* or *Pitta* or *Kapha*. *Kashaya Rasa* of *Mrid* aggravates *Vata*, *Usara Rasa* of *Mrid* aggravates *Pitta* and *Madhur Rasa* of *Mrid* aggravates *Kapha*. Due to its unctuousness it brings dryness in the *Rasadi Dhatus*. Undigested mud fills of *Srotas* and brings obstruction in them as a result loss of function of senses, strength and lustre, energy and *Ojas*. This type of *PanduRoga* further deteriorates strength, complexion and power of *Agni*. *Lakshana* (features) of *Mrid-Bhakshana Janya PanduRogas* are as follows-*Shuna Ganda AkshiKuta* (Oedema around cheek, eye sockets and eyebrows), oedema in the feet, umbilical region and genital parts, *KrimiKostha* (development of intestinal worms), *Atisara* (diarrhoea associated with blood and mucous).

Upadrava (Complications): If the disease is not treated in early stage, the following complications may arise- *Aruchi* (anorexia), *Pipasa* (thirst), *Chhardi* (vomiting), *Jwara* (fever), *Shiroruja* (headache), *Agnisada* (dyspepsia), *KanthaShotha* (oedema in throat), *Abalatva* (debility), *Murcha* (fainting), *Hridaya Pidana* (discomfort in the region of heart).

Sadhyasadyata (Prognosis): The signs, symptoms and other conditions indicate incurability of *Pandu Vyadhi* is as follows -*Chirotapanna*- When the *Vyadhi* becomes chronic. *Kharibhuto*- When excessive dryness has been appeared in the patient. *Kalaprakarshashuno*- When the patient is afflicted

with oedema owing to chronicity of this disease. *Pitani Pashyati*- When the patient gets yellow vision. *BadhaAlpa Vita*- When the patient is fully or partially constipated. *SakaphaHaritaAtisara* - When the patient passes loose stool, which is green in colour and mixed with mucus. *Deena*- when the patient feels exceedingly prostrated. *Shwetatidigdhangha*- When the body is exceedingly white as if is smeared. When the patient is exceedingly afflicted with *Chhardi* (vomiting), *Murchha* (fainting), and *Trishna* (morbid thirst). *AsriKaKshaya*- when the body of the patient becomes pale on account of loss of blood. If patient is suffering from swelling in the extremities and emaciation in the trunk or swelling observed in extremities, trunk, anus, penis and scrotum.

Upashaya and Anupashaya¹⁴:

Upashaya/Pathya: Rice prepared by old *Shali*, food prepared by *Purana Yava* and *Godhuma* should be prescribed with *Yusha* and *Mudga*, *Masura* and *Jangala Mamsa*. Specific medicines are to be administered depending on the predominance of *Dosas*. *Panchagavya Ghrita*, *MahatikaGhrita* and *Kalyanaka Ghrita* are useful for the purpose of *Snehana* therapy. *Arishta* prepared from *Guda*, *Madhu* and *Sharkara*, *Asava* prepared from *Mutra* and *Kshara*. *Jangala Mamsa* fried with fat and processed with *Amalakior* cooked with *Kola* and the recipes prescribed for *Shotha* should be taken by the patient of anaemia. *Vamana*, *Virechana* and *Dagdha Karma* through below the naval, in the forehead, in the bottom of the hands, in the joints of the legs, in the armpits and around the middle of the breast should be done. The patient should take the following edibles -*Purana Yava*, *Godhuma*, *Shali*, *Mudga*, *Adhaki*, *Masura*, *Yusha*, *Jangala Mamsarasa*, *Patola*, *Kushmanda*, *Kadaliphala*, *Jivanti*, *Ikshu*, *Guduchi*, *Tanduliyaka*, *Punarnava*, *Dronapushpi*, *Lashuna- dwaya*, *Pakva Amra*, *Bimbiphala*, *Kakdashringi*, *Matsya*, *Gomutra*, *Amala*, *Takra*, *Goghrita*, *Tiltaila*, *Sauvira*, *Tushodaka*, *Makhana*, *Shweta Chandana*, *Haldi*, *Nagkeshara*, *Yavakshara*, *Lauhabhasma*, *Keshara*, *Kashaya Rasa Pradhana Dravya*.

Anupashaya/ Apathya: Following etiological factors should be avoided in *Pandu Roga*. *RaktaKshaya*,

Dhumrapana, Vamana Vegadharana, Swedana, Maithuna. Pandu Roga should avoid consumption of *PatraShaka, Atyambupana, Tiladi Khali, Tambula, Sura, Mitti, Divashayana*, spicy and salty foods, food items that are heavy to digest and cause burning sensation etc. Patient should avoid staying around fire, sun, hard work, exercise, anger, suppression of natural *Vegas*.

DISCUSSION

Causative factors of *Pandu* are widely described in *Samhitas*. According to *Acharya Sushruta Rakta* gets vitiated by *Diwasvapa, ViruddhaBhojana* and *Krodha*. He has also mentioned that *Krodha, Shoka, Bhaya, Vidagdha Anna Sevana, Ati Maithuna* and *Tila Tailand Pinyaka* leads to vitiation of *Pitta Dosha*. *Ativyayama, Ratrijagarana, Nidranasha, Ativyavaya* and *AtiAdhvagamana* leads to *VataPrakopa*. *Acharya Charaka* has mentioned *Pandu Roga*¹⁶ caused by suppression of *Chhardi, Vegavarodha, Viruddha Anna Sevana* and of excessive use of *Ati Amla* and *Lavana Rasa*. *Acharya Charaka*¹⁷ has emphasised bad effect of *Chinta, Bhaya*, etc. on digestion. All these causes improper digestion of food which leads to improper *Rasa Dhatu* formation and further hamper *Rakta Dhatu, Mamsa Dhatu* formation and so on and thus leads to *Pandu Roga*. *Nidanarthakara Roga* also play important role as cause of *Panduroga* according to various classical texts. Diseases like *Raktakshaya, Raktati pravartana, Raktarbuda, Raktarsha, Raktapradara, Yakrita plihavedha* etc. condition is directly or indirectly related with *Rakta Dhatu Kshaya* which further results in all *Dhatu Kshaya*. While *Punaravartaka Jwara Grahani, Jeernajwara, Shotha, Udararoga, Rajyakshma* etc. involving vitiation of *Agni* and *Ama* production, which in next step obstructs the *Dhatuvaha Srotas* which leads to disturbance in *Dhatuposhan Krama* and ultimately produces *Pandu*. Also, *Acharya Charaka* has mentioned *Pandu* as a *Santar-panoththa Vikara*¹⁸, for which *Samprapti* may be same as described above. Only difference is, in this case obstructing factor may be *Kapha* as it is related with *Santarpana*. The features described as *Purvarupa* of the disease are some of the general feature itself as

Hridspandana (palpitation), *Shrama* (fatigue), *Angasada* and *Gatrasada* (weakness). Some *Purvarupas* are related to features of digestive system or *Agnias Avipaka, Aruchi, Alpavahnita, Vidamutrapitata* etc., indicating that *Agni* is getting disturbed here and production of *Mala SwarupaPitta* is increasing here resulting in the increased yellow coloration of urine and stool. *Raukshya* and *Twaksphutita* are the features of *Raktakshaya* which are developing here. There is vitiation of *Agni* resulting in features of *Mandagni* and decreased production of *Rakta Dhatu* with increased production of *Mala-Pitta*. *Shthivanadhikya* is a feature described in the manifestation of *Ama*. *Mridabhakshana* is also the aetiology of the disease and viewing it as an individual could well forecast the future development of worm and anaemia in an individual. This is also a symptom found present in iron deficiency anaemia as pica or unusual cravings for eatables. *Sweda-abhava* is a feature which is interpreted by commentators as *Vyadhiprabhava*, meaning the effect of disease itself. In *Rupavastha*, there is also the simultaneous involvement of other *Dhatu*s of the body resulting in their decline in quality as well as quantity wise. It is appealing to note that though the disease is *Pitta* predominance, the features developing also here includes *Shishira Dwesha* which is neither a feature of *Raktakshya* or *Pitta Vriddhi*. *Acharya Sushruta* has classified *Panduroga* in 4 varieties, but *Acharya Charaka* has mentioned one additional variety of *Panduroga* that is *MridaBhakshanjanya Pandu*.

Acharya Sushruta has mentioned that *Pandu Bhava* is caused by vitiation of *Twaka* through the vitiated *Rakta* in one who indulges in *Ahita Ahara Vihara*.¹⁹ *Acharya Vagbhatta* has mentioned the *Samprapti* given by *Acharya Charaka*. Thus, the pathology of *Panduroga* is mainly concerned with vitiation of *Pitta* which in turn vitiates the *Rakta*, leading to condition of *Pandubhava*. So, *Pitta* being the main factor in the causation of *Panduroga*, all the fivefold functions of it are affected more or less, but as the main seat of the disorganization is the *Rakta* and complexion of body, the *Ranjan* and *Bhrajan* function of *Pitta* is to bear the brunt. Thus, *Pitta Dosha* takes leading part in the production of *Dhatushaithilya* and *Dhatugaurava*.

This leads to *Balakshaya*, *Varnakshaya* and *Ojakshaya*. Ultimately, the *Panduroga* is stated to be afflicted with *Raktalpata*, *Medalpata*, *Nihsarata*, *Vivarnata* and *Shithilendriyata*. It has also been stated that *Santarpana* which broadly means anabolism, brings about an increase in *Kapha* and *Ama* production which leads to *Mandagni* and change in complexion of body i.e., *Panduta*. Vitiation of *Kapha Dosha* is responsible for *Gaurava*, *Nidraluta*, *Mandagni*, *Alasya*, *Alpavaka*. The symptoms such as *Aruchi*, *Jwara*, *Panduta*, *Gaurava* and *Tandra* are indicative of *RasaDhatuDushti*. *Angamarda* indicates the involvement of both *Rasa* and *Rakta Dhatu*. *Karshya* is indicative of *Mamsa Dhatu Dushti*. *Atisveda* and *Svedabhava* are suggestive of involvement of *Twaka*, *Mamsa Dhatu* and *Medo Dhatu*. *Shirnalomata* is an important indicative of *AsthidhatuDushti*. The loss of lustre and debility are suggestive of depletion of *Oja*. *Nidanaparivarjana* is the best treatment for any disease. This principle also can be applied in the *Pandu* which will be the first step in the treatment of disease. Further as per condition of *Doshas*, treatment should be applied.²⁰ As mentioned in the early pages of disease part, *Panduis* a *Pitta* predominant *Tridoshaja Vyadhi*. Chief pathogenesis taking place during *Sampraptiis Srotorodha* which generates disturbance in *Dhatu- poshana* and lastly *Dhatukshaya*.

CONCLUSION

NidanaPanchak is a great tool for diagnosing a disease at various stages, in which disease a manifest itself and every stage has its own importance in the treatment and its effective prognosis. From this article Majority of *Nidanas* is *Pitta* and *RaktaPrakopaka*. These *Nidanas* causes *Mandagni* and *RasavahaSroto Dushti* which further causes less production of *Poshaka* from the *Rasa Dhatu* and depletion of *Rakta* and ultimately *RaktaAlpata*. In second type of pathogenesis *Prakupita Pitta* of *Hridaya* expelled through *Dasha Dhamani* by powerful *Vata* which further vitiates *Vata*, *Rakta*, *Kapha*, *Twak* and *Mamsa* and results as *Pandu Varnata* and ultimately *Pandu Roga*. *NidanarthakaraRoga* also play important role as cause of *Pandu Roga*. Disease which are directly and indirectly

related with *Rakta Dhatu Kshaya* which further leads to all *Dhatu Kshaya*. Five types of *Pandu Rogam* may be clearly differentiated based on the predominance of *Doshas*. These are *Vataja Pandu*, *Pittaja Pandu*, *Kaphaja Pandu*, *Sannipataja Pandu* and *Mrittikabhakshana- Janya Pandu*. In acute stage all *Pandu Roga* are curable or manageable but in chronic stage they are incurable. So *Pathya* and *Apathya* should be followed in early stage. Each component of *NidanaPanchak* individually as well as collectively helps in diagnosis of disease.

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