APPLICATION OF VARIOUS DIAGNOSTIC METHODS OF AYURVEDA IN CURRENT CLINICAL PRACTICE

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ABSTRACT

According to *Ayurveda* the method of diagnosis mainly depends on the understanding of *Dosha* and *Dooshya* and the concept of *Samprapti*. The process of diagnosis begins when the patients consults the doctor and presents a set of complaints. Once the physician has completed the diagnosis, he explains the prognosis to the patient and suggests a treatment plan which includes therapy and follow-up, usually according to the guidelines provided by the medical field on the treatment of the particular disease. **Aims & Objectives** – This review article aims to focus on diagnostic methods viz. *Roga Pariksha* and *Rogi Pariksha* given in *Ayurveda* texts. **Methodology –** All the references regarding diagnosis methods in *Ayurveda*, *Nidana* and *Pariksha* are collected from *Samhitas*, classical textbooks (Diagnostic Methods of *Ayurveda*, Fundamentals of *Kayacikitsa*), article from journals and authentic websites. **Result –** *Ayurveda* texts have defined different types of Diagnostic methods (*Pariksha*) viz. *Nidana panchak, Trividha Pariksha, Sadavidha Pariksha, Asthavidha Pariksha, Dasavidha Pariksha, Dvadashavidha Pariksha* which are very precise, elaborative and very practical. **Discussion –** The diagnosis of a patient is very much necessary because based on the diagnosis only the treatment of disease will be planned. Proper diagnostic approach is very essential to prevent disease or disease prognosis. **Conclusion –** Today with the progression in the medical field, the diagnosis of disease can be done from the beginning and the progress of the diseases can be stopped. But sometimes the patient can't afford costly imaging techniques like ECG, CT-scan, USG, MRI etc. Thus we have to know the diagnosis according to *Ayurveda* which helps in reducing the economic burden on the suffering patients.

Keywords: *Ayurveda*, diagnosis, *pariksha*, *dosha, nidana, roga, rogi*, disease.

INTRODUCTION: The principal objectives of *Ayurveda* include maintenance and promotion of health, prevention from diseases and cure of disease. The word *Nidana* has two meanings - one is Etiology and second is Diagnosis of disease in broad aspect. *Ayurvedic* diagnosis (*pariksha*) is based on various etiological factors and scientific principles. The approach of diagnosis involves investigation of causes and their correlation with sign and symptoms for the identification of disease. The concept of diagnosis in *Ayurveda* is based on *Prakriti* (constitution of an individual) and progression of the disease[1]. Another important aspect of diagnosis is understands the pathology of *Dosha, Dhatu, Mala* and their combination with *Ama*, if it is present. Diagnosis is both a science as well an art[2]. There is a need of knowledge, examination skill, logical thinking and continuous practice. The science of *Ayurveda* doesn't only depend upon the symptoms as told by the patient relatively it believes in a detailed

examination to find out the root cause of the illness in the patient body.[3]

AIMS AND OBJECTIVES:

1. This article is to highlight the techniques which and all our *Acharyas* used to practice since olden days and to utilize all *Ayurvedic* diagnosis techniques in present days.

2. This review article describes about early diagnosis which helps in complete and faster recovery.

3. This review describes about early and correct diagnosis which saves money and reduces mental stress of the patient.

MATERIALS AND METHODS:
Data are collected from *Brihattrayi* (*Charak samhita, Sushruta samhita, Astanga hrdayam* and *Astanga samgraha)*, *Laghuttray* (mainly *Madhava Nidanam* and *Bhavaprakash*) and their main commentaries manually on the basis of memory. Recently published articles have been thoroughly studied and analyzed to present information about *Roga Pariksha* and *Rogi Pariksha*. These articles are searched and referred from research portals including Ayushdhara, other search engines like Google and available research publications from institute library. Classical terms (*Nidana, Roga, Rogi, Upashaya, Aptopadesa, pariksha* etc.) used here have been thoroughly explained on the basis of methods of understanding the classical *Ayurvedic* texts in *Samskrit*.

VARIOUS METHODS OF DIAGNOSIS [4]:
The diagnostic method which was mentioned in our ancient texts and said by *Acharyas* includes two main things:-

1. *Rogi Pariksha*
2. *Roga Pariksha*

1. *Rogi Pariksha* – The patient according to *Acharya Charaka* is *karya-desh* or the site for administration of therapies with a view to bring stability of *dhatus*. The principle of *Rogi Pariksha* is to obtain knowledge regarding the strength of person and intensity of the morbid role in deciding the dose of medicine. This *Rogi Pariksha* can be done by *Trividha Pariksha, Asthavidha Pariksha, Dasavidha Pariksha & Dvadashavidha Pariksha*.

2. *Roga Pariksha* – *Ayurveda* defines the *roga* as derangement of *dhatu* or physical principles. The equipoise of *dhatu* is positive health. *Roga* will cause obstruction to the worldly pursuits by inflicting pain[5]. Even the exogenous causes of disease in their later stage produce the inequity of *dhatu*. For practical reasons *roga* is deemed to be nothing but it is a particular state of vitiation of *dosha*. Disease should be examined through *Nidana panchaka, Trividha Pariksha & Sadavidha Pariksha*.

Rogi Pariksha

1. *Trividha Pariksha* (Three folds examination) [6, 7]

The patient is to be examined by:-

1) Darsana (**Inspection, Seeing**) – Things identified by direct observation of patient either directly or indirectly is called *Darsana pariksha. Darsana pariksha* helps to detect the changes in color, structure, size, shape, deformities etc.

2) Sparsana (**Palpation, Touching**) – It is palpation method helps to understand the temperature variations, palpitations, consistency, softness & hardness of various body parts.

3) Prasna (**Interrogation, Questioning**) – Principle of this approach based on the detailed discussion as questions and answers between physician and patients which helps to correlates with the instances of *dosha* imbalance. Pain sensations, sensory functions, aversions etc. are learnt through interrogation.

2. *Asthavidha Pariksha* (Eight folds examination) [8]

Acharya Yogaratnakar described eight varieties of *Rogi Pariksha* for the diagnosis purpose of diseases:-

1) Nadi Pariksha (Pulse Examination) – Examination of the *nadi* is necessary to diagnose altered condition of *doshas* like diminished functions or hyper functions or mixed or normal functions of *doshas. Nadi pariksha* sheds light on entire condition of disease.

2) Mutra Pariksha (Urine Examination) – The urine is examined by naked eye to check for its color, consistency, frequency, sediments if any.

3) Mala Pariksha (Stool Examination) – Direct examination of the fecal matter by naked eye, we can check and know the color, consistency, floating nature, smell, presence of blood or mucus can give a lot of clues about various *doshas* imbalances.

4) Jihva Pariksha (Tongue Examination) – The color, shape, coating can be indicative of many *dosha* abnormalities.

5) Sabda Pariksha (Speech or Voice Examination) – The person's ability or strength to speak, continuity, hoarseness etc. can give hint about many underlying disease processes.

6) Sparsa Pariksha (Skin Examination) – skin temperature, its color, tenderness, abnormality in pattern can inform about many chronic conditions.

7) Drik Pariksha (Eyes examination) - The colour of sclera, conjunctiva, size of eye ball, dryness, shape, area around eyes give insight into various serious metabolic diseases.

8) Akriti Pariksha (Built or General appearance examination) - An experienced *Vaidyas* can get a lot of information from general appearance from the person. The overall built is indicative of the amount of strength, stamina and life force. Examination of hairs, nails and other body organs can reveal many signs which point towards different diseases.

3. *Dasavidha Pariksha*[9]

It is very much essential to prescribe the therapy to the patient, which constitutes *Karya-desa* or the site for the administration of therapies with a view to bring back the normalcy among *dosha, dhatu* etc. The purpose of examination is to obtain knowledge regarding the span of life, the degree of strength and the intensity of morbidity, because if a physician having not examined properly administers intensely potent drug suddenly, it may kill the patient. Hence, this approach utilizes following ten factors for making decision regarding disease.[10]

1) *Prakriti* (Physical constitution)
2) *Vikriti* (Morbidity)
3) *Sara* (Constitution of *dhatus*)
4) *Samhanan* (Compactness of organs)
5) *Pramana* (Measurement of the organs of the body)
6) *Satmya* (Suitability)
7) *Satva* (Psychic condition)
8) *Ahara-sakti* (Power of intake and digestion of food)
9) *Vyayam-sakti* (Power of performing exercise)
10) *Vaya* (Ageing)

4. *Dvadashavidha Pariksha*[11]

A physician should first observe the vital condition (*Ayu*) of the patient before commencing the medical treatment. Hence, this approach utilizes following twelve factors for making decision regarding the patient.

1) *Ayu* (Examination of life span)
2) *Vyadhi* (nature of the diseases)
3) *Ritu* (Examination of seasons)
4) *Agni* (Digestive power)
5) *Vaya* (Examination of age)

6) *Deha* (Examination of general health or body physique)

7) *Bala* (Strength)

8) *Satva* (Examination of psychic condition)

9) *Satmya* (habits)

10) *Prakriti* (Examination of constitutions)

11) *Bhesaja* (medicines)

12) *Desha* (Examination of geographical locality)

Roga Pariksha

1. *Nidana Panchaka*[12-15]

The disease is to be examined by its:-

1) *Nidana* (**Aetiology, causes**) – *Nidana* considers the disease causing factors like; diet, life style, environmental factors and injuries as sources of any diseases which overall leads the imbalance of *doshas*.(See table no. 1)

2) *Pragrupa* (**Prodromal symptoms**) – *Purvarupa* consider initial sign and symptoms of disease. These symptoms may term as warning symptoms for any particular disease.

3) *Lakshana* (**Specific signs and symptoms**) – *Rupa* considers main sign and symptoms of a disease as actual manifestation process. E.g. *Santap Jwar.*

4) *Upashaya* (**Therapeutic tests**) – Many diseases having special preliminary signs and symptoms these are the basic consideration of *Upashaya* applied for the some special type of disease. The investigational and treatment option involve utilization of proper diet, medicine and regimens. E.g. in *Amavata*, symptoms decreased after giving *Baluka swed* is confirmed as *Amavata*. This is confirmative test for disease.

5) *Apti or Samprapti* (**Pathogenesis**) – *Samprapti* is to get the proper knowledge about the pathway of disease manifestation.

2. *Trividha Pareeksha* (**Three folds examination**) [16]

There are three fold sources of knowledge about disease characters. They are –

1) *Aptopadesa* (**Authoritative instruction**) – comes from a teacher who has had much experience in determining the cause and nature of constitutions and illness.[17]

2) *Pratyaksha* (**Direct observation or perception**) – Perception is the knowledge which is directly received by the self and the sense organs. Self perceived are pleasure, pain, desire, aversion etc., while sound etc. are perceived by the sense organs.[18]

3) *Anumana* (**Inference**) – Inference is the reasoning supported by invariable concomitance such as the knowledge of *agni* by the power of digestion, that of strength by the power of exercise, auditory organ etc. by the perception of sound etc.[19]

3. *Sadavidha Pariksha*[20]

There are six methods of clinical examination. They are as follows; by the five special senses (*Panchendriya*) and by interrogation (*Prasna-pariksha*).

1) **Examination by hearing**- This way of examination helps to obtain the abnormalities in different diseases by hearing. For example, frothy blood coming out accompanied with sound, forced by *anila (Vayu).*

2) **Examinations by touch** - The objects of examination by the organ of touch (skin) are - cold, heat, smoothness, roughness, softness, hardness etc. in fever, edema and other diseases.

3) **Examinations by sight** - Those obtainable through the organ of sight (eye) are proper nourishment or emaciation, signs of age, strength and disorders of complexion etc.

4) Examinations by taste - The special objects of examination by the organ of taste are the different tastes in diabetes and such other diseases.

5) Examinations of smell - Those obtainable through the organ of smell (nose) are - the different odors appearing along with fatal signs, in ulcers and non ulcerous diseases.

6) Examination by interrogation- Things obtainable through questioning are nature of the habitat, time, caste, causes for onset of diseases, exacerbation of the symptoms, aggravation and relieving factors, strength and nature of *agni*, elimination or non-elimination of flatus, urine and stool etc.

DIAGNOSIS OF NEW OR UNKNOWN DISEASE [21]

The concept of understanding a new or unknown disease has been described by *Acharya Charaka* based on *Aptopadesa Pariksha* (Authentic statement). Each and every disease has such aggravating factors, pathogenic material, aetiology, specific feature, location, chief complaint, symptom, sound, touch, vision, taste and smell; complications, aggravations, stasis and diminution, consequences, name and association. Thus is the procedure for its counteraction or otherwise. All this is known from instructions of authority.

Table no. 1 -Elements of *Ayurvedic* diagnosis [22-30]

1.	*Hetu*	*Asatmendriyarthasamyog, Pragyaparadh, Parinama, Mithya aaharvihar, Sannikrushta, Vipraprushta, Doshhetu, Vyadhihetu, Ubhayhetu*
2.	*Dosh*	*Sthana* (location), *Atmarupa* (cardinal symptom), *Prakopa Lakshana* (symptoms of aggravated humor), *Gati* (movement)
3.	*Dooshya*	*Rasa- Raktadi saptadhatu, mala*, *Khavaigunya* (genetic defect or defect in tissues)
4.	*Srotas*	Systems deformity like *Annavaha srotas* etc., *Srotas mool* (Root), *Srotodusti nidana* (Etiological factors), *Srotodushti lakshana* (symptoms of vitiation of channel)
5.	*Agni*	Responsible for digestion, metabolism, strength, health, longevity and vital breath. Almost all diseases arise due to sluggish functions of *Agni*.
6.	*Srotodushti*	*Atipravriti* (Enhanced flow), *Sanga* (obstruction), *Siragranthi* (Formation of nodules), *Vimarg-gaman* (Flow of contents in wrong direction)
7.	*Rogamarga*	*Sakha* (periphery), *Marmasthi-Sandhi* (vital parts along with bone & joints), *Koshtha (*GIT)
8.	**Others**	*Prakruti, Desha, Kala, Bala, Vaya* are also element which affect the disease prognosis.

CONFORMATION OF THE DIAGNOSIS: After the complete examination of patient, for further confirmation the physician can take help of confirmatory tests.

Few confirmatory tests, which helps in the final diagnosis mentioned in classic are-

1. *Dushita Rakta Pariksha* (examination of vitiated blood) i) By crow or dog ii) Stain test.[31]

2. *Mala Pariksha – Purisha Nimajjana pariksha* (stool sink test).[32]

3. *Mutra Pariksha* (examination of urine) - *Tail Bindu Pariksha,* color change in urine.[33]

4. *Stanya Pariksha* (examination of breast milk)[34]

5. *Shukra Pariksha* (examination of semen)[35]

6. *Artava Pariksha* (examination of menstrual fluid).[36]

7. *Acharya Sushrut* has described *Nadi yantra* and *Salaka yantras* which applied for visualizing and finding out hidden diseases as well as *Shalya,* e.g. Probe (*Eshani*) for finding the direction of sinus and fistula.[37]

Current Practice[38]: There are two types of diagnosis viz. provisional and final.

According to **Vaidya C.P. Shukla** (Gujarat Ayurveda university, Jamnagar), diagnosis is of 3 types:-

a. Direct or straight forward diagnosis: Diagnosis made purely on the basis of clinical feature told in the classics. E.g. *Kamala, Amavata, Vataja Gulma.*

b. Indirect: Some features of disease matches with disease explained in the classics. E.g. *Grahani* = IBS, *Galaganda* = goiter, Wet gangrene = *Kardama Visarpa,* Leukemia/Hodgkin's Lymphoma = *Granthi Visarpa.*

c. Diagnosis of unknown disease: It is made with the help of *Aptopadesa Pariksha Bhava.* e.g. Hypertension, Fibromyalgia, SARS.

Vaidya C.P. Shuklaji opines that, the deeper understanding of disease pathology in terms of modern helps in the *Ayurvedic* diagnosis as well as prognosis. e.g., in case of Prostate Cancer if the physician doesn't know the symptoms of *Mutravaha Srotodushti* are due to *Arbuda* (*Vata Ashteela*) and he simply treat on the lines of *Mootraghat*, finally it will lead to metastasis and death. In case the physician fails to arrive at final diagnosis, then he can take the help of modern diagnosis. Some hard core practitioners of *Ayurveda* think that there is no need of modern knowledge. But I think that modern knowledge enables the physician to know the subtle changes in *Dooshya,* prognosis and management.

Table no. 2 - *Ayurvedic* correlation of lab tests [39, 40]

	Ayurvedic correlation	Lab Tests
1.	*Rasa Dhatu*	Serum Electrolytes, Plasma, Lymph
2.	*Rakta Dhatu*	Hb%, RBCs, WBC, Platelet count, MCV, MCH, MCHC
3.	*Mamsa Dhatu*	Serum creatinine, Electromyography, Protein Substances
4.	*Medo Dhatu*	Lipids, Lipoproteins, Adipose tissue
5.	*Asthi Dhatu*	Serum alkaline phosphate, Osteocalcin, Acid phosphate, urine calcium
6.	*Majja Dhatu*	Bone marrow density
7.	*Sukra Dhatu*	Semen analysis, Testosterone, FSH, LH
8.	*Vata Vriddhi* or *Prakopa*	Eosinophilia
9.	*Saama Kapha* and *Pitta*	Neutrophilia
10.	*Nirama Kapha*	Lymphocytes
11.	*Rasagata Sneha (Abaddha Meda)*	Lipid profile
12.	*Rakta Dhatu, Pitta dosha*	LFT (Liver function test)
13.	*Prana Vayu*	PFT (Pulmonary function test), EEG, MRI
14.	*Vyana Vayu*	ECG, ECHO, TMT
15.	*Mutravaha srotas*	RFT (Renal function test)

DISCUSSION: *Ayurvedic* texts have described different types of *Pariksha* viz. *Roga Pariksha* and *Rogi Pariksha* which are very specific, elaborative and very practical. Also, these diagnostic approaches are inexpensive. Present imaging methods like CT-scan, MRI, ECG, USG, EEGetc. are useful tools for the diagnosis of the deep seated diseases in a particular organ. However, they are expensive and not afforded by all patients. Also in the reporting of these investigations, it is written in the end "Please correlate clinically", which shows that *Aptopadesa, Pratyaksha* and *Anumana pariksha* are most important. So, it is the need of time to increase our ability in clinical diagnosis. We should try to instruct the knowledge of clinical diagnosis and explain the utility of diagnosis. Knowing the use of modern diagnostic methods is appreciable, but it is more important to know the conditions in which these investigations should be used. Overuse of laboratory investigations must be discouraged. So, for better understanding and treatment of patients, the physician should practice the clinical examination methods told in *Ayurvedic* classics and prefer judicious use of modern tools and methods of diagnosis.(See table no. 2)

CONCLUSION

1. Diagnosis can usually be established on three pillars – Proper history, thorough examination and necessary investigations, a correct treatment can only be given upon a correct diagnosis.

2. It is the duty of the physician to detect the disorders and adopt appropriate measures to correct those disorders. A proper diagnosis forms the basis for proper treatment whereas ignorance of disease or improper diagnosis leads to inefficient treatment, so the diagnosis of disease is first and foremost.

3. The success of that physician is doubtful who though possessing a good knowledge of drugs or treatment administers them without diagnosing the disease earlier.

4. If necessary the physician can use modern apparatus, imaging techniques and methods of diagnosis sensibly.

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