



## NOSOLOGY, AYURVED AND PUBLIC HEALTH

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### ABSTRACT

Nosology is a branch of medicine that deals with classification of diseases. Diseases may be classified by etiology (cause), pathogenesis (mechanism by which the disease is caused), or by symptom(s). Alternatively, diseases may be classified according to the organ system involved, though this is often complicated since many diseases affect more than one organ. The effort made in this article is to define and elaborate the concept of Nosology in Ayurvedic through perspective.

Ayurveda possess his own system of classification of disease. In allopathic science classification of disease began in 19<sup>th</sup> century. Emil Kraepelin and then Jacques Bertillon developed their own neologies. Bertillon's work, classifying causes of death, was a precursor of the modern code system, the International Classification of Diseases.

Ayurveda classifies the diseases on certain basis like types of disease, origin wise classification of disease whether from Amashaya i.e. from gastrointestinal origin or Pakvashyotha i.e. from recto-colonological origin, numerological classification as described in sutrasthan of carak samhita for e.g. Ashtodariya chapter in which classification as per the descending number of types of disease is described.

**Keywords:** Nosology, Ayurveda, adibal pravrutta rog, janmabal pravrutta rog

### INTRODUCTION

The development of classification of diseases began in the 10th century, when the Arabian psychologist Najab ud-din Unhammad classified a nosology of nine major categories of mental disorders, which included 30 different mental illnesses in total. Some of the categories he described include obsessive-compulsive disorders, delusional disorders, degenerative, involution melancholia, and states of abnormal excitement. In the 18th century, the taxonomist Carolus Linnaeus, Francois Boissier de Sauvages, and psychiatrist Phillipe Pinel developed an early classification of physical illnesses. Thomas Sydenham's work in the late 17th century might also be considered a nosology. In the 19th century, Emil Kraepelin and then Jacques Bertillon developed their own nosologies. Bertillon's work, classifying causes of death, was a precursor of the modern code system, the International Classification of Diseases<sup>1</sup>.

### Objective

To identify the nosological situation in Ayurvedic Text and to put them systematically to compare with modern Nosology that will showcase the completeness of Ayurvedic science.

### Review of Literature

The early nosological effort grouped diseases by their symptoms, where as modern systems (e.g. SNOMED) focus on grouping diseases by the anatomy and etiology involved<sup>2</sup>. Nosology is used extensively in public health, to allow epidemiological studies of public health issues. Analysis of death certificates requires nosological coding of causes of death.

Nosological classifications are used in medical administration, such as filing of health insurance claims, and patient records, among others

- Statistical analysis of diseases and therapeutic actions
- Reimbursement; e.g., based on diagnosis related groups.

- Knowledge-based and decision support systems
- Direct surveillance of epidemic or pandemic outbreaks

### Types of classification

The classifications have been prepared by the World Health Organization and approved by the Organization's governing bodies for international use<sup>3</sup>

- International Classification of Diseases (ICD)
- International Classification of Functioning, Disability and Health (ICF)
- International Classification of Health Interventions (ICHI)

Diseases may be classified by etiology (cause), pathogenesis (mechanism by which the disease is caused), or by symptom(s). Alternatively, diseases may be classified according to the organ system involved, though this is often complicated since many diseases affect more than one organ.

A chief difficulty in Nosology is that diseases often cannot be defined and classified clearly, especially when etiology or pathogenesis is unknown. Thus diagnostic terms often only reflect a symptom or set of symptoms (syndrome).

### Ayurvedic Classification of diseases

Numerological classification in descending order

There are forty eight diseases which are classified on the basis of total number of types of disease and described in descending order in the sutrasthan of carak samhita under chapter Ashtodariya Adhyaya<sup>4</sup>.

### Diseases which are of twenty types

In this category there are 3 disease having twenty type, namely Prameha (Diabetis), Krimi (worm or germs or visible bacteria) and Yonirogas (Diseases of vagina and vaginal path).

One disease has eighteen types – Kshaya (wasting or loss of one or all types of cell or tissue inside or outside the body

### Diseases which are of eight types

Eight Udar rogas (meaning the diseases of abdomen) eight Mutraghat (eight types of disease caused due to suppression of urine), eight Kshirdoshaj rogas (eight types of disease caused due to defective breast milk), eight Retodoshaj (eight types of disease caused due to defective semen).

### Diseases which are of seven types

Kushtha (leprosy), Pidaka (Diabetic boils), and Visarpa (Erisipelas) are classified in to seven types.

### Diseases which are of six types

Atisara (Diarrhea), Udavarta

### Diseases which are of five types

Gulma (an endogenous regular/irregular tumor like structure or swelling), Pleehadosha (Disorders of spleen), Kasa (cough), Shvasa (Dyspnea), Hicca (hiccup), Trishna (Thirst), Vaman (Vomiting), Aruchi (Anorexia), Shiroroga (Diseases of Head), Hridaya Roag (Diseases of Heart), Panduroga (Anemia), Unamadroga (Insanity)

### Diseases which are of four types

The diseases like Apasmar (Epilepsy), Akshirogas (Eye Disease), Karnrogas (Ear Diseases), Pratishtaya (common cold), Mukharogas (Diseases of Mouth), Grahanirogas (Diseases of Duodenum and Intestine), Mad (Narcosis), Murchcha (Fainting), Wasting, and Napunsakta (Impotency) have four type each.

### Diseases which are of three types

The diseases like Shofa (Swelling/edema), Kilas (Leucoderma) and Lohitpitta (Internal hemorrhage) are of three types each.

### Diseases which are of two types

Jwara (Fever) and Vrana (Wound), Ayaam, Gughrusi (Sciatica), Kamala (Jaundice), Aamadoshha (endogenous toxins form as a results of metabolism), Vatarakta (Gout), Arsharoga (Piles or haemorrhoids). Each of this disease has two types.

### Diseases which are of one type

The disease mentioned in this category has one type. They are Urustambh (thigh stiffness), Sanyas (coma) and Mahagad or Atatvabhinesh (one great disease).

### Classification Based on the Nature of Disease

#### Diseases caused by endogenous and exogenous factors<sup>5</sup> are of two types.

- Endogenous diseases caused by disequilibrium of internal factors like pathological or biochemical abnormality of blood, other fluids like csf, pleural etc.
- Exogenous diseases (caused by external factors like stabbing, trauma, injury by any mean, drowning, worm-germ etc.

#### As per Sushruta concept diseases are of four types.

- Aaganturoga (suddenly occurred disease due to accident, trauma, injury etc.)
- Sharirroga (somatic disorder caused due to endogenous factoral and like anatomical and physiological disorder)
- Manasroga (psychological disorder)
- Swabhsikroga or Natural diseases Hunger, Thirst, old age etc<sup>5a</sup>

### Classification according to Origin of Disease

#### Sushruta describes seven types of disease that originates from various factors<sup>6</sup>

- Aadibal-pravratta rogas (diseases due to genetic disorder from maternal or paternal factor)
- Janmabal-pravratta rogas or garbha-janya rogas (diseases due to non congenial rasas (tastes like sweet, sour, salty, bitter etc) or inappropriate consumption of diet, exercise etc, and misconduct for e.g. intercourse, heavy exercise, journey by vehicle, and lack of rest during gestational period by mother or non fulfillment of longings – Daurhad).
- Doshbalbal – pravrtta or jatjany diseases arising from stomach or large bowel, located in body and mind developing due to santarpan (over nutrition) or apatarpan or under nutrition.
- Sanghatbala pravratna or pidakar (traumatic disease) caused by any instrument/weapons and animal bite.
- Kalabal pravratna (ecological diseases) due to seasonal condition like normal and abnormal weather(excessive conditions) for e.g. common cold, fever, etc, during winter season and sunstroke, dehydration diarrhea etc in summer season. Such diseases are Vyapannakruta disease. Unexpected weather in regular season may cause disease and they are termed as Avyapannakruta disease.
- Daivabala pravratna disease or diseases caused by supernatural power like God's wrath, curse of sages, Athervan's (magic spell) and calamities; they are of two types 1) caused by lightning, thunderbolt, earthquake, sutsanmi etc. 2) those caused by evil's spirit(demons) etc; again they are of two types – contagious(or infectious) and accidental.
- Swabhavabal pravratna or natural disorder that come hunger, thirst, senility, death etc. They are also of two types. Timely and Untimely. Timely are those which take place in spite of full precautionary or protective measure and opposite are untimely.

#### Classification based on the Location and Prognosis of disease

1) Psyche 2) body<sup>7</sup>

#### Classification based on the prognosis or curability of disease

Curable 2) incurable 3) palliable each of which are again divided in to two 1) mrudu or mild 2) daruna or severe<sup>8</sup>

#### Classification based on the mode of treatment

Treatable by 1) instrument (treated by surgery) 2) medicine<sup>9</sup>

### DISCUSSION AND CONCLUSION

The classification is done according to location, etiology and treatment etc. Etiological diseases have been classified in to two – endogenous and exogenous disease<sup>10, 11</sup>. According to location they are again two, Sharirik or physical diseases and Manasik<sup>7, 12, 13</sup> manasik or psychological diseases. According to location and etiological factor both are classified in to four, i.e. exogenous and vat, kaph, pitta with location in body and mind<sup>10</sup>.

To summarize the above, the diseases are classified in to three category, Nij or endogenous diseases, Agantu or

exogenous diseases and manasik or psychological diseases. The Nij or Endogenous diseases are caused by vitiated vat, pitta and kaph. The Agantu or exogenous diseases are caused by bhuta i.e. micro and macro bacteria, viruses, any kind of accidental injury or accident etc and sudden elevation in raj and tam attribute of mind making person hyper or hypoactive state of mind<sup>14,13</sup> A forth category termed as Swabhavik diseases or natural diseases hunger, thirst, death, has also been mentioned<sup>5a</sup>.

Diseases are further classified on the basis of prognosis as curable, incurable, and palliable<sup>8</sup>. Curable and incurable are further sub classified in to two as mrudu i.e. mild and daruna or severe. Vagbhata have classified these curable, incurable as a easily curable (such-sadhya), curable with slight difficulty (sadhya), palliable (kashta-sadhya meaning difficult to cure) and incurable (Asadhya or Anupkramaniya meaning not to be treated)<sup>15</sup>

According to mode of treatment the diseases are classified in to two, treatable by surgical procedure and treatable by medicine<sup>9</sup>. Sushrut and Vagbhat have described six types of diseases which are again sub divided in two types.

Adibal pravratna (as per Sushrut) or Sahjanyarog (As per Vagbhat) are same disease and are of two types, 1) due to abnormalities or genetic defect of ovum i.e. maternal 2) due to abnormalities or genetic defect of sperm i.e. paternal. Modern science describes them as hereditary diseases.

Janmabalal pravratna(Sushrut) or Garbhjanya(Vagbhat) are prenatal diseases due to unwholesome or harmful behavior of mother during gestation resulting the birth of defective child in the form of lame, blind, deaf, dumb, with nasal voice, dwarf etc. These are of two types, nutritional prenatal diseases and other diseases due to unwholesome behavior or non fulfillment of longings or cravings during pregnancy. Animal study proved the fact that "diet, glucose levels in the mother, and vitamin intake, prior to ovulation and conception, can have long-term effects on fetal growth and adolescent and adult disease."<sup>16</sup>

Doshbal pravrutna or jatjanya diseases are post natal diseases caused by behavioral disorders and faulty diet resulting in various diseases. These diseases arise either from stomach or intestines and are of two types somatic and psychics. A recent study by By A.M. Bauer|T.M. Shea reveals that there are several disorders that have been related to a biological basis. Among the most common of these disorders are Tourette's disorder, Attention Deficit Hyperactivity Disorder, obsessive compulsive disorder, and depression<sup>17</sup>.

Sanghatbal pravrutna or Pidajanyaroga (pain associated disease) or Traumatic are exogenous disease that originates in weaker person fighting against stronger one. They are of two types – instrumental and those caused by fierce (micro or macro) animal.

Kalbal pravratna are ecological diseases caused by cold, heat, air, rains, sun-heat etc. They are of two types – caused by abnormal seasons and by normal seasons. These diseases are epidemiological one and may spread rapidly. Factors in normal seasons affect human health in positive and negative way.<sup>18</sup> Negative environmental factors are threats to health, and controlling them is public environmental health. They include:

- Environmental conditions favoring disease vectors (endemic and exotic vectors);
- Invasive biota (viruses, Bacteria, etc), their hosts and vectors;
- Environmental disruptions: floods, droughts, storms, fires, earthquakes, volcanoes;

#### Courtesy of WHO

Air quality: pollen and pollution leading to respiratory diseases or cancers;

Water quality: biotic and abiotic contaminants; integrity of water transport and treatment

Infrastructure; Monitoring and management of municipal, agricultural, industrial outflows to the environment (gases, liquids, solid wastes);

Human changes of the environment create conditions that favour disease;

- Disturb and release noxious levels of previously bound chemicals (e.g. mercury released becomes poison) or biota (e.g. methane released from thawed peat contributes to climate change);
- Create temporary, intense, life-threatening heat islands (e.g. urban heat waves exacerbated by climate change);
- Result from nuclear, biological or chemical warfare or terrorism;

Disruption caused by other war and violence.

To summarize, the knowledge of diseases mentioned under various groups or category will help the policy maker in governmental organization to take appropriate decision as regards to human health so that future problems of health can be prevented.

Nosology is found in Ayurved in scattered form from chapter to chapter (as mentioned above) and Ayurvedic scientist were well aware of classification of disease for therapeutic purpose. WHO has adopted same concept in different way.

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