

**CRITICAL ANALYSIS OF MAMSA DHATU IN THE CONTEXT OF AYURVEDA & MODERN SCIENCE****Vd. Apashchim Baranth\***

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**ABSTRACT**

The physiology of human body as per Ayurveda works around homeostasis of Dosha, Dhatu and Mala. These are described as roots of our body; Dosha acts as subtle entity that governs function of human body while Dhatu acts as structural components and give strength to the body. Ayurveda described seven Dhatus in human body namely; Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Shukra. Rasa Dhatu resembles plasma of body, Rakta Dhatu is referred to blood, Mamsa Dhatu correlated with muscular components of body, Meda Dhatu denotes adipose tissue. Among these Mamsa Dhatu is very important component in our body. It's moola sthana are Twacha and Snayu. It is widely accepted by all Ayurveda scholars who named it as Pishit, Taras, Palal, Kravyam, Amish. It helps in formation of mamsa dhatu in the body with its principle site in body as muscles, tendons and skin. Mamsa Dhatu is third one in the sequence of seven Dhatus. Panchabhautik constitution of Mamsa Dhatu is Pruthvi Mahabhut when Mamsa Dhatu (Muscle) produces in excellence condition individuals known as Mamsasara purush. Any kind of deviation in Mamsa dhatu leads to pathogenesis. So it is very important entity for the substance of life.

**KEYWORDS:** Mamsa Dhatu, Dhatu, Muscles, Twacha and Snayu.**INTRODUCTION**

Ayurveda mentioned theories of Tridosha, Saptadhatu and Mala which govern physiological functioning of body and helps to maintain general health. The equilibrium of these three is very important for healthy physical and mental state. The imbalance in Doshas and Dhatus leads pathological manifestation in body. Amongst them the concept of Dhatu is very essential for describing structural and physiological components of body.<sup>[1-4]</sup> Ayurveda elaborated seven types of Dhatus namely; Rasa Dhatu, Rakta Dhatu, Mamsa Dhatu, Meda Dhatu, Asthi Dhatu, Majja Dhatu and Shukra Dhatus. These Dhatus develop sequentially in body and nourishes each other i.e.; Rasa Dhatu is very important for the formation of Rakta Dhatu which further nourishes Mamsa Dhatu.

**Descriptions of Dhatus****1. Rasa Dhatu**

Rasa Dhatu dominant with Jala Mahabhuta thus possess Vata's mobility and circulates nutrients and other biomaterials from one place to another. Rasa (plasma) replenishes all the tissues. Rasa dhatu mainly composed of water element thus easily performs functioning of movement. As per modern science it resembles plasma and extra cellular fluid of body that helps to transport

essential elements of body from one place to another. The anatomical deficiency of Rasa dhatu leads dryness of skin, person seems to be dull, lean and easily get tired. The excess of Rasa dhatu causes anorexia, excessive salivation, nausea, laziness and heaviness, etc.

**2. Rakta Dhatu**

Rakta Dhatu is predominant to Agni and presence of Pitta gives red shade of Rakta Dhatu. It mainly transports Prana (oxygen) and nutrients throughout the body. Rakta maintain life by transporting oxygen to the all tissues. As per modern science it can be compared with bloods. It provides complexion, nourishes Mamsa dhatu and regulated by Pitta dosha. The depletion in Rakta dhatu affects functioning of Pitta dosha and causes loses of luster. The anatomical deficiency of Rakta dhatu is responsible for condition like anemia, constipation, dullness and muscular fatigue. The excess of Rakta dhatu increases quality of Pitta dosha and induces heat in body. This increases frequency of bowel movements and also increases urination frequency.

**3. Mamsa Dhatu**

Mamsa Dhatu covers all organs and provides strength as well as stability. Mamsa Dhatu facilitates movements of bones & joints. Mamsa dhatu made up of earth element

thus gives rigidity. It strengthens body, builds muscle tissue and nourishes Meda dhatu. Mamsa Dhatu regulated by Kapha dosha. The anatomical deficiency of Mamsa dhatu causes emaciation, debility of senses, joint pain and physical weakness. The excess of Mamsa dhatu is responsible for enlargement of lymph glands, increase in size of fatty organs and tumors may also observed, etc.

#### 4. Meda Dhatu

Meda Dhatu is predominant with Jala and Prithvi element, Meda Dhatu is responsible for solidity and firmness due to the presence of Prithvi element. Meda Dhatu provides site for the storage of excess of fat in the body. As per modern science it resembles adipose tissue and maintains lubrication of body, also responsible for oiliness of the tissues. Meda dhatu nourishes Asthi dhatu and it is regulated by Kapha. The depletion of Medas dhatu leads enlargement of spleen, restrict joint movements, causes emaciation of body and responsible for lean body frame. The excess of Medas dhatu is causes obesity and lethargies. Excess of Medas dhatu leads excessive sweating and shortness of breath, etc.

#### 5. Asthi Dhatu

Asthi dhatu gives stability to the body and makes person strong, it is nourishes by nutrient of Ahara. As per modern science Asthi dhatu can be correlated with bones and cartilage which provides support to the body and acts as connective tissue. Structurally it is predominant with air and space elements. It nourishes Majja dhatu and regulated by Vata dosha. The depletion of Asthi dhatu causes pricking pain in bones, weakness of teeth, diminishes strength of bones and bones become porous and fragile. The excess of Asthi dhatu leads abnormal growth of bones.

#### 6. Majja dhatu

Majja dhatu associated with nervous system and govern metabolic process in the spinal cord. As per modern science Majja dhatu can be correlated with bone marrow that fills bony spaces. Majja dhatu made up of water element thus imparts good intellectual property and memory. It is regulated by Kapha dosha and makes joints stronger. The depletion of Majja dhatu causes weakness of joint, symptoms of vertigo and giddiness.

#### 7. Shukra dhatu

Shukra dhatu is considered as essence of the Dhatus and responsible for reproductive activities. It gives life and vitality; it resembles sperm in males and ovum in females. The optimum level of Shukra dhatu provides strength and reproductive power. Shukra dhatu is regulated by Kapha dosha and made up of water elements. The diminish strength of Shukra dhatu leads loss of reproductive power, pain in testicles, weakness in body and thirst. The excess of Shukra dhatu increases desire of sexual activities and stone in the Shukravaha strotas may also occur.<sup>[5-8]</sup>

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#### Synonyms of Mamsa

Pishit, Taras, Palal, Raktateja, Medaskruta, Kravyam, Aamisha.

**Mamsa Dhatu - Muscle Tissue** - Mamsa, or as pronounced in Sanskrit Mansa (Nasal M), is the third tissue in Ayurveda, the muscle tissue.

**Mula Sthana** - Skin and sinews.

**Upa Dhatus** - Skin, Vasa - A layer of fat under the skin.

**Mala** - Khamada - External pathways (Eyes, Ears, Nose) discharges.

**Time for creation** -11 days since eating. Mamsa Dhatu is in charge of covering the body's organs and give strength.

#### Types of Muscles

In Ayurveda there are 4 types of muscles;

1. Pratana - Rectus muscles.
2. Prathu - Round muscles.
3. Kasandara - Sinews.
4. Sushira - with the ability to flex and relax.

#### The Skin (Upa-Dhatu)

In addition to covering the body and protecting the internal organs, the skin is in charge of temperature and complexion with help from Bhrajaka Pitta (which in addition, in charge of the sense of touch along with Vyana Vata). Charaka describes six layers of skin, in contrary Sushruta describes seven layers. Both described diseases for each layer, and its treatment.

#### Mamsa Dhatu Sara

Stable joints, Solid and dense look, Forgiving person, Relaxation and steadiness of mind, Straight forwardness, Long life, Patience, happiness, and giving nature.

**Mamsa Dhatu Vriddhi:** Lips, cheeks, arms and chest extremely large, Difficulty in movement, Heaviness in the body, Benign tumours.

Treatment: Fasting, Stop of exercise, Light diet, without meat or heavy foods.

**Mamsa Dhatu Kshaya:** Tiny waist, Sunken cheeks, Lips, chest, legs and arms small and dry, Very painful

movement, Craving towards meat, Joint pain, Exhaustion.

Treatment: Exercise, Cooked meat, Wheat, Lentils, Nuts, Meat of meat eating animals.

#### **METABOLISM OF MAMSA DHATU**

Mamsadhatu (muscle) is produced in his own srotas (channels) i.e. Mamsavaha srotas. Snayu and Twaka are the principle organ plays important role in production of Mamsadhatu. After digestion of diet converted in to two parts, one is Aaharas (essence part) and another is kitta (excreted part). This essence of aahar after being subjected to paka (converted) in to Mamsa Dhatu with the help of Mamsadhatwagni. The formation of mamsa dhatu in body is done by the digestion of forms rakta dhatu when it is nourished by more previous rasa dhat with the help of own dhatwagni viz. Mamsadhatwagni. This agni is responsible for conversion of spontaneously flowing rasa dhatu into own componential factor resembling properties with that of mamsa dhatu while this metabolic transformation process in on the way the rakta dhatu is converted in to mamsa dhatu along with formation of its asesory upadhatu vasa and twacha.

#### **PATHOLOGICAL ASPECT OF MAMSA DHATU**

Pathological aspect of Mamsa dhatu includes Vridhi (hyper state) and Kshya (hypo state). The vridhi or hyper functioning state of mamsa dhatu in body is manifested following features heaviness and well and extra musculature over trunk, hip, buttocks, face, thighs and lower extremity, thorax and upper extremity which clinically resembles features of extra fat deposition, muscle hypertrophy, muscle flaccidity etc. The kshya or hypo functioning of mamsa dhatu in body manifested by following features loss of fat and protein over above mentioned organs of body, lax of joints due to loosely affirmed muscles and tendons. Loose and lethargic vessels structures in body Muscles wasting and malnutritive disorders with defective protein metabolism.

#### **PHYSICAL AND CHEMICAL PROPERTIES OF MAMSA DHATU**

In the physical body, mamsa dhatu refers directly to the muscle and indirectly to the ligaments and skin, which are upadhatus formed as the unstable form of rakta dhatu (poshak rakta) is converted to mamsa dhatu. Muscle is built from earth element then motivate by air. Earth provides the substance which the bulky structure of muscle is made. Muscle is highly metabolic tissue while earth plays their fundamental role in building the tissue; it is air that inspired and initiates its motion.

#### **CONCLUSION**

Mamsa Dhatu is very important component in our body. It's moola sthana are Twacha and Snayu. It is widely accepted by all Ayurveda scholars who named it as Pishit, Taras, Palal, Kravyam, Amish. It helps in formation of mamsa dhatu in the body with its principle site in body as muscles, tendons and skin. Mamsa Dhatu

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