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ABSTRACT

Pariksha means examining the person from all sides. Sara is one of the examination method for assessment of Bala explained in Rogabhishagjitiya adhyaya, explained Asthavidha sara and their characteristics in individuals. Sushruta Samhita also emphasized that a physician can treat a patient more effectively, if he measures the life expectancy of patient on the basis of the criteria of measurement of each body part and Sara Pariksha. In Mamsa Sara Purusha possess well developed Mamsa Dhatu with good nourishment when compared to other Sara individuals. As Lepana is the Sresta Karma of Mamsadhatu, it covers all body parts especially bones. Mamsa sara person also have good psychological dimension. Based on classical texts and resources, a framework was created incorporating Darshana, Sparshana, Prashna, and Vyayama Kriya evaluations, including cardiovascular, body composition, flexibility, muscular endurance, and questionnaire

assessments. Based on obtained score individual into Pravara sara, Madhyama sara and Avara sara. This study demonstrates the effectiveness and efficiency of this approach in examining an individual's health status. The results provide insight into the status of Mamsa Sara, revealing that individuals with Pravara Mamsa Sara possess both physical and mental well-being. This underscores the timeless wisdom of Ayurveda, which has been refined over

centuries. To achieve successful outcomes, a skilled physician must grasp the fundamental principles of Ayurveda through experience and apply them judiciously. Furthermore, extending this approach to assess all seven dhatus would facilitate a comprehensive understanding of an individual's health status, enabling personalized treatment planning.

INTRODUCTION

In Ayurveda, Pariksha is utilized to understand the Vyadhi and plan effective management. The patient is examined to determine their life expectancy, level of strength, and morbidity.^[1] The importance of Sara Pariksha is stated in "Dasha Vidha Pariksha" by Acharya Caraka, emphasizing the evaluation of Ayusha, Bala, and Dosha Pramana. There are ten aspects in the examination: Prakriti, Vikriti, Sara, Samhanana, Pramana, Satmya, Satva, Ahara Shakti, Vyayama Shakti, and Vaya.^[2] The conceptual framework of Sara serves as a useful mirror to analyse the attributes of Dhatu. A person's intrinsic strength cannot be measured by the size and mass of their body rather be established by the Sara Pariksha.^[3] Depending on the quantity and quality of a certain Dhatu in the physique of an individual, Sara has been divided into eight types.^[4] By evaluating Mamsa Sara, one can assess the efficacy of Mamsa Dhatu. According to Acharya Caraka, a person with Mamsa Sara is characterized by Shubha, Sthira, Guru, and Mamsopachitha in various body parts, such as Shankha, Lalata, Krikatika, Akshi, Ganda, Hanu, Greeva, Skandha, Udara, Kaksha, Vaksha, Pani Sandhi, and Pada Sandhi. They are endowed with qualities such as Kshama, Dhriti, Alaulya, Vitta, Vidya, Sukham, Arjavam, Bala, and Dheerghaayu.^[5] Knowledge of a person's Sarata helps in understanding their physiology, psychology, and susceptibility to diseases. The concept of Sara serves as a valuable tool for assessing the properties and functions of Dhatu. It is clear from the above explanation that the Acharya held highly scientific principles regarding the direct detection of the Mamsa state in individuals. Mamsa Sarata analyses the efficacy of Mamsa Dhatu. The intention of this current endeavour is to establish the most objective conditions possible for the evaluation of Mamsa Sarata and to demonstrate our core understanding of Mamsa Sarata in terms of contemporary science without compromising basic principles.

AIMS AND OBJECTIVES

1. To study the various parameters of Mamsa Sara Purusha.
2. To develop parameters to assess Mamsa sara as described in Samhita.

3. To clinically evaluate the parameters of Mamsa Sara in healthy individual as explained in classics.

RIVIEW OF LITERATURE

"Sara" is referred to as "Vishudhatharo Dhatu," which means the essence of Dhatu with prime qualities that provide stability to the body. Sara Pariksha is designed for a thorough analysis of Dhatu. Dhatu Pariksha involves evaluating the quantity and quality Sara of a Dhatu in terms of its functional characteristics. The Shiva Purana emphasizes maintaining purity and high-quality Sara by advising devotees to avoid consuming certain foods, including meat, garlic, onions, and others, to preserve health and spiritual integrity.

Acharya Charaka, in Shareera Sthana has described in detail regarding Snayu and Twak, its origin, formation and Sthana. He explained Snayu and Twak, as the Mamsavaha which is among the Shakanga. In Vimana Sthana, Rogabhishagjitiya Adhyaya, Acharya deals with Roga and Rogi pareeksha.

Acharya Sushruta in Sharira Sthana, Sharira sankhya vyakarana shariram, Adhayaya explains about formation of Mamsa like the human body as a composition of various muscles and tissues which are interconnected yet distinct from each other. It highlights the structural complexity of the body, emphasizing how different parts come together to form a unified whole. In Sutra Sthana, Aturopakramaneeya Adhyaya, Acharya has explained about various Pariksha before treating a patient, there-in he explains about the Sara Pariksha of the individual. Further explained as Mamsa dhatu karma. In Sutra Sthana, Agropaharaniya Adhyaya, Acharya has explained about Dhatu sarata of all sapta dhatu. Acharya Kashyapa has described nine Sara in Sutrasthana, Lakshana Adhyaya has explained one more type of Sara i.e., Ojas Sara.

Acharya Vagbhata in Shareera Sthana, Prakritibhediya Adhyaya, has explained in detail about Ashta Sara Pariksha namely, Twak, Rakta, Mamsa, Meda, Asthi, Majja, Shukra, Satva. He elaborates that Sara Pariksha is for knowledge of the Bala of an individual before Aushadha. The term Dhatu originates from the root "Dha," signifying to bear, support, and nourish.^[6] According to Siddhantakaumudi, Dhatu is that which sustains the body, mind, and Prana the vital life force.^[7] Dhatu's are essential components of the Sharira, perform two key roles: Dharana and Poshana.^[8] Dhatu represents a stable aspect of a substance, which provides

support and sustenance. In the case of the Sharira, these are the basic building blocks that ensure the body's existence.^[9]

Mamsadhatu is third Dhatu amongst seven. It gets generated in intra-uterine life. Raktadhatu is produced in Raktavahasrotas Part of Raktadhatu reaches next srotas that is Mamsavaha srotas; it takes part in production of Mamsadhatu. Raktadhatu is fluid excel part of rasa dhatu, which reaches Mamsavahasrotas and is acted upon by Mamsadhatwagni along with Vayu, Jala and Teja to stabilize fluid Raktadhatu into solid Mamsadhatu.^[10] Mamsadhatu provides the bulk of the body and nourishes medodhatu.^[11] Upadhatu of Mamsadhatu are Vasa and twak. The mamsa dhatu is comparatively stable and more solid than rasa and rakta. It is sthira, Ghana, mrudu, shlakshna, and with a reddish in colour.^[12]

The way Lotus flower and its accessories like its stem etc grow in mud, similarly sira etc grow in Mâmsadhara kala.^[13] Mamsadhatu is similar by properties to that of lamb. Properties like not very cool, not very heavy, and not very unctuous.^[14] Organelles of Mamsa dhatu is separated by Pesi.^[15] Pesi is part and parcel of Mamsadhatu. Upadhatu, sira, snayu, Asthi, various joints and marma of body are packed well with Pesi and are therefore fit and strong.^[16] Mamsa is principle binder of sira, snayu etc and helps Asthidhatu for maintaining the body posture. That which strengthens the body is sustained and it stands upright.^[17] Mamsapesi gives strength and is meant for non-displacement of soft tissue. Tissue, which contracts and relaxes, is called Kandara.^[18]

Sharirika Lakshanas of Mamsasara- Subha will be seen in each of the body parts like Sankha, Lalata, Krikatika, Akshi, Ganda, Hanu, Greeva, Skandha, Udara, Kaksha, Vaksha, Pani Sandhi and Pada Sandhi. In these regions it also has Sthira, Guru and Mamsopachita. That means those regions it will have well developed and well covered muscle when compared to other Sara individuals.

Manasika Lakshanas of Mamsasara -They are endowed with properties like Kshama, Dhriti, Alaulya, Vitta, Vidya, Sukham, Arjavam, Bala and Deeghaayu.^[19]

Sushruta samhita adds very easily observable characteristic of Mamsa sara individual means a person who does not show cavities or depressions in body. His commentator translates this word as body with supreme quality. Bones, joints are so well covered with Mamsa dhatu that they remain hidden.^[20]

The primary objective of Sara examination is to assess the Bala of a patient at the individual Dhatu level and collectively by the Sapta Dhatu.^[21] Charaka advises critically analyzing Bala based on Sarata, rather than physical appearance alone. A person's physical strength may be misleading, as a corpulent individual may have Alpa Bala; whereas a lean person may be Balavan.^[22]

Human body has more than 600 muscles. Muscles are of 3 types based on situation-skeletal muscle, smooth muscle, and cardiac muscle. All together constitute as muscle mass formation of whole body.^[23] Which are assessed through basic 4 classification as Cardio respiratory endurance, Body composition, Flexibility and Muscular endurance. With the help of different tests explained under this, different muscle groups are assessed in detail.

MATERIALS AND METHODS

Apparently Healthy Subjects from Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital fulfilling the inclusion and exclusion criteria were selected for the study. All the available literature related to the Mamsa Sara Pareeksha was compiled and framed questions. Later tool was designed based on Darshana, Sparshana, Prashna and Vyayama Kriya (with the help of Flexibility, Cardiovascular endurance, Body composition and Muscular endurance) For each Lakshana, scores was allotted. On the basis of total scores obtained, the subjects were divided into three categories: Pravara Sara, Madhyama Sara, and Avara Sara. This is a cross section observational study. The screening for the participants perceived healthy status was done using the WHOQOL-brief questionnaire. Followed by Assessment of Mamsa Sara Lakshana as explained in Ayurveda texts in the voluntary apparently healthy individuals. Therefore, a total of 12 features were included for the assessment of Mamsa Sarata. Out of these features, 4 were purely physical and evaluated through physical examinations. The remaining 8 features were a combination of psychosomatic and psychological aspects. A scoring method was used to categorize these features into three groups. The total score for each subject was calculated by summing the scores of individual Sara features.

Objective Criteria: - Avara Sara: score < 9

- Madhyama Sara: score 9-13.5

- Pravara Sara: score 13.5-18

Subjective Criteria: - Avara Sara: score < 12

- Madhyama Sara: score 12-18

- Pravara Sara: score 18-24

माांसोपचिता – स्थिर

Cardio vascular endurance/Aerobic capacity/ Stamina-Cardiorespiratory endurance is the ability of an individual to exercise their entire body for a long time without stopping. It requires a strong heart, healthy lungs, and clear blood vessels to supply large muscles with oxygen. Example- Running.

- Step Test-with the help of 12inches bench step test done-3rep in 3min (1min-24 steps of up and down) immediately count heart rate and graded accordingly.
- One-Mile Run (thread mill)-run or jog for one mile in shortest possible time. The score is the amount of time it taken by an individual to run the full distance.

\माांसोपचिता-गुर

- Body Composition- The proportional amount of body tissues including muscle bone body fat and other tissues that make up an individual body. Waist-to-Hip Ratio (Male and Female)- To determine waist-to-hip ratio, measure (a) hips and (b) waist. To Measure waist at the smallest circumference (called the natural waist). To Measure hips at the largest point (the largest circumference of your buttocks). To calculate waist-to-hip ratio, divide the waist girth by hip girth.
- Bioelectrical impedance analysis (BIA) is a method for estimating body composition, in particular body fat and muscle mass, where a weak electric current flows through the body and the voltage is measured in order to calculate impedance (resistance and reactance) of the body.

माांसोपचिता – शुभ-

- Flexibility is the ability to use the joints fully through a wide range of motion without injury. Individuals are flexible when the muscles are long enough and joints are free enough to allow adequate movement.

Examples of people with good flexibility include dancers and gymnasts. Includes-Hip stretch, Arm stretch, Sitting stretch, Trunk and hip stretch, Side stretch, Back and Hip stretch. etc.

माांसस्य बलां-

- Muscular Endurance-ability to use muscles many times without tiring. Muscular endurance is one part of muscle fitness, and it is different from the other parts (strength and power).

Includes- Single leg raise, Side stand, Trunk extension, Sitting tuck, Leg change.

MENTAL DIMENSIONS

क्षमाः:- Quality of forbearance/ forgiveness.

Definition- The quality or practice of patience, tolerance, forgiveness, and the ability to endure hardships and offenses without anger or resentment.

धृतिम्:- नियमः- determined

Definition-The quality or state of being determined, disciplined, and steadfast in purpose; the capacity to sustain effort and maintain focus towards achieving a goal despite difficulties or distractions.

अलौल्याः:- Satisfaction / Non greediness / Self-control.

Definition: The quality or state of being content and free from greed or excessive desire; the practice of self-control and moderation in one's desires and actions.

आर्जवमा :- दैवमानिषि, सरलस्वभाव-simplicity.

Definition: The quality or state of being sincere, honest, and straightforward; the practice of simplicity and integrity in all aspects of life.

SOCIAL DIMENSIONS

वित्तं – Wealth

Definition-wealth that serve different purposes. They include financial wealth, time wealth (freedom), social wealth such as support, and health wealth, which comes in terms of physical and mental well-being.

विद्यां- Knowledge Learning skills-to Know, to perceive, to see, to understand.

Definition: Vidyām refers to learning, knowledge, and the skills necessary to understand, perceive, see, and comprehend various aspects of the world. It is a broad concept that encompasses formal education, practical skills, intellectual understanding, and wisdom.

सुखम्– Happiness

The Sukha-Happiness Assessment Scale is a tool designed to measure an individual's general sense of happiness and well-being. The concept of "sukha" originates from Sanskrit and Pali, often translated as happiness, ease, or bliss. This scale seeks to evaluate how consistently an individual experiences these positive states, irrespective of external circumstances.

आरोग्या – Health

Definition: Arogyam refers to the state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity. It encompasses a holistic approach to health that includes physical fitness, mental stability, emotional balance, and social harmony.

DISCUSSION

According to ancient research methodology, before establishing any theory, Upanayana (Discussion) is prior step to Nigamana (Conclusion). When selecting a title for a "Developmental Tool for Mamsa Sara Pariksha" it's important to consider clarity, specificity, and relevance. Which gives a clear purpose of the study. Developmental tool implies that intended to aid in the growth, specifies the assessment related to mamsa sara. The accurate assessment of a patient's health is fundamental in Ayurveda, with the Dashavidha Pariksha helps in evaluation of persons health, lifespan, physical strength, and sama Avastha of dosha.

Sara refers to quality of bodily tissue, which influence on persons vitality, health, and response to treatment. Mamsa sara, the quality of muscle tissue, which contributes to physical strength, structural integrity, and nourishment of other tissue. Just by physical appearance cannot decide sara of an individual, hence there is a need for development of standardised tool. Standardization would ensure consistency in diagnosis, improve clinical practice and enhance the reliability of Ayurvedic treatment, bridge the gap between traditional knowledge and modern clinical practices, this approach would also contribute to Ayurvedic education by providing clear guidelines for Sara assessment and deeper understanding of Ayurvedic principles.

Mamsa dhatu is major dhatu which gives structural outfit as it covers the bony structure by compactness Mamsa Dhatu, It contributes to the body's bulk, strength, and posture by supporting muscles, tendons, ligaments, and joints. Mamsa Dhatu is Bala and Avastambha. The primary aim of Sara examination is to assess the Bala of a patient at both the individual Dhatu level and collectively across the Sapta Dhatu for which this study has been taken.

In this study, a unique approach was taken by incorporating the views of Acharya Charaka and Sushruta on Mamsa Sara Purusha as a developmental tool. A cross-sectional observational study was conducted on 50 healthy individuals, assessed using the WHOQOL. A case proforma was prepared under two headings.

Objective parameters assessed individual with help of physiotherapy and physical strength and fitness book under 4 heading as Cardiovascular endurance, Body composition, Flexibility, and Muscular endurance.

Subjective parameters questions were framed based on the definitions of individual words from Shabdha Kosha, Shabdha Kalpadhruma, and Monnier Williams. Participants were asked to self-assess and score their answers, which were then interpreted.

To develop the study's methodology, we drew inspiration from the book "Fitness for Life" and concentrated on various muscle assessment techniques. These techniques included static and dynamic exercises, body composition analysis, and cardio exercises.

We then conducted a pilot study to refine our approach, which involved: - Creating questionnaires and setting standards for healthy individuals - Estimating the time required to complete the study - Determining the best approach for conducting the study in hospital and college settings.

The results were scored under three headings: Pravara, Madhyama, and Avara Sara.

The scores were categorized as follows.

Pravara Sara: above 75%

Madhyama Sara: 50-75%

Avara Sara: below 50%

The results showed that 29 participants were categorized as Pravara Sara and 21 as Madhyama Sara in the objective parameters, while 42 participants were categorized as Pravara Sara and 8 as Madhyama Sara in the subjective parameters. No participants were categorized as Avara Sara.

OBSERVATION AND RESULT

The study "Developmental tool for Mamsa Sara Pariksha" was undertaken at Shri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Udupi with 50 healthy

volunteers. The observation was noted as according to age, sex education, socioeconomic status, marital status, religion, past history, family history, menstrual history, food habits, sleep habits, bulit, nourishment etc,,, totally 42 observation done including case sheet and assessment criteria.

The assessment was designed using both objective and subjective parameters. After conducting a pilot study, all necessary tools and methods were finalized for the main study. The Mamsa Sara Lakshana were then assessed in 50 healthy individuals. The data collected from these assessments were analysed using SPSS software, specifically employing the internal reliability scale and Cronbach's Alpha.

The reliability analysis was conducted on a set of 14 variables, including Step Test, One Mile Run, Bioelectric Impedance Analysis, Waist-Hip Ratio, Flexibility, Muscular Endurance, Kshama, Dhriti, Alaulyam, Vittam, Vidyam, Sukha, Arjavam, and Arogyam. The resulted in a value of 0.738.

| Mamsa Sara Pariksha | Score allotment | Objective | Frequency | Subjective | Frequency |
|----------------------------|------------------------|------------------|------------------|-------------------|------------------|
| Pravara Sara | Points above 75% | 29 | 58% | 42 | 84% |
| Madhyama Sara | Points between 50 -75% | 21 | 42% | 8 | 16% |
| Avara Sara | Points below 50% | - | - | - | - |

CONCLUSION

“Rogamadou Pareeksheta Tatonantaram Aushadam”. The concept of Pariksha utilizes senses and mind as tools to determine a specific thing only after thorough inspection. Acharya Charaka's Dasha Vidha Pariksha is a vital assessment tool to evaluate an individual's condition and illness before formulating a treatment plan or administering medication. Dasha Vidha Pariksha is crucial for determining life expectancy, understanding a person's capacity, and assessing the degree and severity of illness, enabling personalized treatment plans and effective disease management. Dhatu Sarata examination reveals the state of an individual's Dhatu (physical components) and Satva (mental components), providing a comprehensive understanding of their overall health. The proforma evaluates various aspects, including Shubha, Guru, Mamsasya bala, Sthira, Kshama, Drithi, Aloulya, Vittam, Vidyam, Sukham, Arjavam, and Arogyam, to determine the grade of Mamsa Sara as Pravara, Madyama, Avara. While the current study's small sample size (n=50) restricts generalizability, future research can build upon this foundation by replicating the study with a larger population to yield more accurate results. Although observational studies like this one cannot confirm or refute

hypotheses, they can serve as a valuable starting point for quantitative research approaches, providing a developmental tool for further research.

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