COMPRESSIVE REVIEW ON MEDHA (COGNITIVE ABILITIES) AND ITS RELATION WITH DOSAS AND DHATUS

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ABSTRACT:
In Ayurveda, "Medha" encompasses intellect, linked to the doshas (Vata, Pitta, Kapha) the Sapta dhatu, Agni, Prakriti, Ahara and disease. Maintaining dosha balance, particularly Vata, supports mental clarity. Nourishing Meda through a balanced diet and herbs like Brahmi enhances cognitive function. Pitta influences intellect, while practices like meditation and yoga aid Medha. Digestive fire (Agni) is vital for nutrient transformation, crucial for Medha. Overall, Ayurveda emphasizes lifestyle, dietary choices, and herbal interventions to optimize Medha, promoting a holistic approach to cognitive well-being. In modern terms, cognitive functions encompass processes like learning, memory, and decision-making. Practices such as meditation, yoga, and dietary interventions with cognitive-supportive nutrients align with holistic approaches to enhance cognitive well-being. Recognizing the mind-body connection remains a key aspect, integrating Ayurvedic insights with evidence-based strategies for comprehensive cognitive health.

KEYWORDS: Medha, Budhhi, Dhruti, Smruti, majja, Manas

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INTRODUCTION:
The word ‘Medha’ is derived from the Sanskrit root “Medhar Sangame” applying “Anu” suffix to “Medh” Dhatu i.e. to meet or to come together or harmonize, means where all the faculties converged.

Nirukti (Derivation): According to Amarkosha having proper correlation and understanding about the knowledge of the existing objects. Without Medha, knowledge cannot be understood.

PARIBHASHA (Definition)
a) According to Shabdakalpadrumam Medha means one type of Buddhi which has the power of retaining the knowledge for a long period. Due to Medha a person will be able to obtain the knowledge of existing objects and hence person becomes learned.

b) Brihaspativachyam has mentioned the Medha as the types of Buddhi, which grasps or retains the knowledge.

c) According to Shabdardha Chintamani Kosha medha indicates three types of knowledge without which the people will become idiot.

d) Chakrapani on commentary of Charaka Samhita mentioned Medha\(^1\) means it is a type of Dhi having the power of retention of knowledge.

e) Acharya Dalhana\(^2\) has commented as the meaning of perception and retention power of knowledge of the text.

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f) Hemadri too has commented on the term Medha,\(^3\) it is an unobstructed and uninterrupted perception and retention of the knowledge in all the aspects of an object.

g) Arundutta has mentioned 4 Medha means it is a faculty of Buddhi.

h) In Monnier William’s dictionary the Medha is understood by the meaning mental vigour or power, intelligence or prudence, wisdom, retention of knowledge for long period residue of which cannot be further expressed in proper time.

Practically the word ‘Medha’ is used to denote high intellect. The word ‘Medhavi’ is used for the person who is the knower of various Shastras (literature) and having Pratyutpanna Mati. Sometimes ‘Medha’ is also used for extraordinary recollection power. But according to Ayurveda, it shows just one phase of the memorizing process.

Paryayas (Synonyms) of Medha: From the Vedic era the word Medha is being used. Other words which bear almost similar meaning to it have also postulated in various classics. In Aitareya Upanishada Medha has been depicted as synonym of Paramatma. Here Medha means the ability to retain the experiences.

Manifastation Of Medha: In Sharirasthana Adhyaya 3, while describing the list of ‘Atmaja
Buddhi’s, Acharya Charaka has clearly mentioned Dharanam, Dhati, Buddhi, Smriti⁶. Maharsi Sushruta has clearly included ‘Gnyana-Vignyana’ in the ‘Atma Bhava’ too. Here commentator Gangadharma, while explaining the word Dharana, says ‘It is that which is retained for a long time by Manas’. As discussed earlier, this is the description of Medha, thus Medha is the Bhava of Atma which is manifested during gestation.⁶ While describing the monthly development of the foetus, Acharya Sushruta says that in the fifth month of the pregnancy, the foetus is endowed with mind and wakes up from the sleep of its subconscious existence. In the sixth month cognition (Buddhi) comes in solving this view it can be understand like this. In the process of foetal development Buddhi doesn’t evolve but its manifestation occurs.

**Function of Medha:** To give decision by looking at the Karya – Karana bhava or to decide acceptance or non-acceptance of a subject is the function of Buddhi. This function is also called as Vyavasaya. The fifth and final stage for production of Buddhi (knowledge) is accomplished by Manas(mind). Regarding this function Chakrapani comments that after the Uha and Vicara; ‘Adhyavasaya’ takes place, which is either a stage of Buddhi or a function of Buddhi. Further, Chakrapani has clarified ‘Adhyavasaya’ as a deciduous stage, where an individual indulges in accepting or condemning an idea decision or object. If it seems useful, the decision will be in favour of getting contracted with it while in case it appears useless, disfavour of the attachment shall occur.

**Site Of Medha:** There is no direct evidence found regarding the site of Medha but indirect references helps to predict the site of it. Sadhaka Pitta is responsible for the manifestation of the Medha and it is situated in the Hridaya (heart) so it can be said that heart is the seat of Medha also.Acharya Bhela⁸ and Charaka have considered Hridaya (heart) as the seat of Buddhi and Chitta (Mind). Medha is the faculty of Buddhi, so seat of Buddhi should be considered as the seat of Medha too.

**Relation Of Medha to Dosas and Dhatus:** According to Ayurveda Tridosas and Pancamahabhuta are the basic constituents of the body. The Tridosas namely Vata, Pitta and Kapha are not merely groups of symptoms, but they represent definite biological process that take place inside the body hence may be described as ingoing organised protoplasmic nutrient material in the circulation. These three are called Dosha as they are susceptible to vitiation and they are known as Dhatus as they support the body in their state of equilibrium. In balanced state they are claimed to influence Medha alternatively in the following manner.

**Doshas:**

1. **Vata:** Vata is not directly concerned with Medha but in the whole process of perception up to recall it plays a major role. In general function of Vata, Acharya Charaka has mentioned that it coordinates all the sense faculties and helps in enjoyment of their objects. Thus, it helps in the process of perception. Among the five types of Vata, Prana is responsible for controlling the functions of Buddhi and Manas, while Udana helps in recalling the past experiences.⁹,¹⁰

2. **Pitta:** Promotion of Medha is the generalized function of normal Pitta but Sadhaka Pitta is mainly responsible for good Medha, Buddhi and Abhiman. Adhamalla on the commentary of Sharangadhara Samhita has opined that the Pitta which remains in Hridaya means Sadhaka Pitta is responsible for Medha and Pragnya. This is done because Pitta is Agni Mahabhuta dominant and Agni Mahabhuta is formed by Sattva and Raja Mahagunas. Sattva is responsible for cognition while Rajas is stimulator of any
activity. Due to opposite properties, it dispels the Kapha and Tama which are obstructing in nature of the Hridaya and thus enables the Manosa to perceive the things. While Acharya Bhela has classified Alocaka Pitta in Chakshu vaishesika and Buddh Viasheshika. Buddh Vaishesika is situated between the two brows in a Sringata. It grasps the knowledge after knowing the knowledge and the knowable. It retains what is grasped. It illustrates well and repeats by what is retained. 11,12

3. Kapha: Proper function of Buddh depends on the normal state of Kapha. Kapha due to its Snigdha and Shhira Guna helps to retain the grasped knowledge for a long period. Intellect which is steady and capable of doing everything is due to Kapha. Tarpaka and Avalambaka Kapha in their normal state confer the knowledge and intelligence. Kapha is also responsible for the best qualities of Dhriti which controls the unsteadiness of mind. 13

Dhatu: Acharya Charaka has described examination of Sara in tenfold examination. Person should be examined with reference to Sara or the excellence of their Dhatus. Among the seven Dhatus the best qualities of Rasa (Twak), Rakta, Mamsa, Majja and Oja Dhatu improves the functions of Medha. Rasa Dhatu nourishes the Buddh whereas the best quality of Rakta is responsible for the promotion of the Medha and Mansvita. So, it facilitates the proper perception. Mamsa Sarata indicates strong Dhriti and knowledge likewise the Majja of best quality stated to strengthen the learning and knowledge. 14 Oja is the essence of all Dhatus. Ojas has direct relationship with all the faculties of Buddh, as it is held responsible for their nourishment. It confers the External and Internal organs for their own actions to be performed. External organs mean Karmendriyas while Internal possessed Mana, Buddh etc. 15 In a nutshell it can be said that the best qualities of Prana and Udana Vayu, Sadhaka Pitta, Tarpaka and Avalambaka Kapha, Rasa, Rakta, Mamsa, Majja and Ojas are responsible for the normal functioning and best qualities of Medha. A vitiation of any of these factors will reflect upon the faculties of Medha.

Relation Between Sharira Prakriti and Medha: In Ayurveda, the term ‘Prakriti has been used in the sense of personality. The words Saririka prakriti, Deha-prakriti, Kaya-prakriti or Doshaja prakriti are used in the same sense and denote the physical typology based on the principle of Tridosha of Ayurveda. These are the Vata, Pitta and Kapha. While Mānasika prakriti is known as Trignonatmaka typology as it is based on the fundamental postules of three constituents of Manas. These are Sattva, Rajas and Tamas. It is a reality that human organism behaves in a wholesome complex manner and cannot be isolated physical and psychological factors of Prakriti on different and independent substratum and so these two biases are just based on the predominance and specification of fields otherwise they are immediately related.

Vata Prakriti – In the characteristics of Vata Prakriti by its Amshamsha Acharya Charaka has mentioned that Vata Prakriti people due to the Shighra Guna of Vata seems quick in understanding (grasping) but weak in recalling things means they have good short-term memory but poor long-term memory. While Acharya Sushruta has said that they have lack of patience and less discriminative power. According to Acharya Vagbhata they are unsteady in respect of Dhriti, Smriti, Buddh and movement. 16,17,18

Pitta Prakriti– According to Acharya Sushruta Pitta Prakritiperson is highly intelligent, clever and loves to monopolise the conversation. Acharya Vagbhata has mentioned the same thing. 19,20

Kapha Prakriti– Kapha Prakriti person is endowed with self-control and having strong faith in Shastras. He is intelligent, taking more
time to grasp any subject but after that possessed with good memory.\textsuperscript{21,22}

**Agni And Medha:** In living beings, the Agni is one among the twelve Pranas. It is the key factor for any kind of transformation occurs in the environment as well as in the body. Agni works on ingested Ahara and converts it into Ahara rasa which is the nutrient of whole body. Ayu (longevity), Upachaya (anabolic activities), Varna (complexion), Bala (strength), Swasthya (health), Utsaha (enthusiasm), Tejas (spirit), Prabha (splendour), Ojas (essence of Dhatus) all these factors are depended on Agni.\textsuperscript{23} Pachaka Pitta is said to be the seat of Agni. It controls the rest of the Pittas to perform their action. Sadhaka Pitta also gets nourishment from it. Balanced state of Dhatwagni provides the proper nourishment to all Dhatus. Healthy state of Dhatu ultimately represents good quality of Medha as seen before.\textsuperscript{24}

**Relation Between Medha and Ahara\textsuperscript{25,26}:** The role of food for healthy body and mind has been mentioned for the time immemorial. From the Upanisada era lots of references are available regarding the food and its impact on mind. In Ayurvedic Samhitas certain codes and conducts for dietetics has been described vividly. Food sustains the life of living beings. All living beings in the universe require food. All the factors for the maintenance of positive health, food taken in proper quantity occupies the most important position. For that purpose, Acharya Charaka has given a separate chapter of quantitative dietetics. Quantity and quality of food, digestion power, indicated foods, contra indicated foods, proper time of food all these necessitating special study are mentioned in classics. This wholesome diet regimen should be followed to remain healthy. Medha is also conditioned by Ahara.

**Relation Of Vaya (Age) With Medha:** Ayurvedists have divided the life span into three parts. 1. Bala 2. Madhya and 3. Jirna.\textsuperscript{27} Bala Vaya covers the age upto 30 and is subdivided into two parts. The initial one is from 1 to 16 years and later stage is from 16 to 30 years. Madhyavastha covers the age upto 60 years. Sushruta sub-divides it into 4 parts viz. vriddhi (twenty years), Yauvana (upto thirty years), Sampurnata (forty years) and Hani (after forty years). Jirnavastha starts after 60 upto 100 years. Medha, Buddha and Smriti vary according to Vaya. Acharya Charaka says that in Madhyavastha Medha (retention), Buddha (discrimination) etc. psychic faculties remains balanced, because it is a stage of predominance of Pitta Dosa which is mainly responsible for Medha. Due to well determined psychic disposition a person is having good discriminative power. So, it helps to understand the subject better and initiates retention for a long time. Above qualities begin to decline as the elements of the body disintegrate in Jirnavastha. Psyche becomes unstable due to predominant Vata. So it becomes difficult to discriminate the thing properly hence retention and recollection of new experiences decrease with increasing age. In Balyavastha there is good grasping power and retention also but due to undetermined psychic disposition there is lack of reasoning and logic at the level of Buddha.

**Pariksha Of Medha:** In Ayurvedic Samhitas only Charaka Samhita has postulated the Pariksha of Medha.\textsuperscript{28} In the 4\textsuperscript{th} chapter of Vimanasthana, while describing Anumanagamya Bhavas (factors to be observed by inference) Acharya Charaka has mentioned Medha as a psychological faculty different from Buddha and Smriti. Here Charaka has ennumerated a separate examination for Smriti, Dhriti, Sangnya, Vigyana, and Medha. Specifically, Maharsi states that the Smriti should be observed by
the inference of Smarana Shakti and Medha by Grahana Shakti. Here, the whole process of Smriti should be inferred. Individual’s capacity to hold new information is examined. Both the commentators of Charaka Samhita, Chakrapani and Gangadhara have accepted Grahana as Dharana Shakti (retention power). Chakrapani clearly defines it as the retention power of texts as stated by Dalhana also, while Gangadhara opines Grahana Shakti that is the retention ability of Manus. As per these expert commentators like Dalhana, Chakrapani, Gangadhara Granthavadarana Shakti is Medha hence it should be inferred by sentence – chapter- sthana of the classics. In short, all the main commentators consider it as Avadharana Shakti.

**Role Of Medha in Health and Disease:** Acharya Charaka stated that a person whose Dhi (intellect), Dhriti (patience) and Smriti (memory) are impaired, subjects himself to intellectual blasphemy by virtue of his bad action. It is called Pragyaparadha which further aggravates all the Doshas. In Charaka Samhita Sharirasthana, it is mentioned that if something Nitya (eternal) is viewed as Anitya (ephemeral) and something Ahita (harmful) as Hita (useful) and vice versa, it is indicative of the impairment of intellect (Buddhi). Yogindranath Sen in his Carakopskara commentary opines Visama Abhiniveśa as misinterpretation; on the other hand, Chakrapani stated it as incorrect discrimination by giving the ‘Buddhi’ prime consideration. Manasa Vikaras like Irsa, Shoka, Bhaya, Krodha, Mana, Dvesha etc. are said to be caused by Pragnyaparadha. Thus, Pragnyaparadha has been considered as the causative factor for both Sharirika and Manasika Vikaras. So, to prevent such conditions a good kind of Medha, Smriti is essential for everyone.29 The wise are endowed with knowledge, intelligence, memory, skill, observance of wholesome regimen, correctness of speech, tranquillity and patience. Ignorant individuals being shrouded with illusion and Rajas are deprived or those virtues and therefore, succumb to various types of psychosomatic diseases. When Manasa becomes dominate by Sattva guna a person’s Medha or Buddhi will be very clear, he will be capable of thinking on proper lines. Certain psychological disorders like depression, self-abusive will be absent to the person having good Medha or Buddhi. So, all these references directly or indirectly establish a relationship between the health and Medha.

**DISCUSSION:**

Inter Relationship of Buddhi, Medha and Smriti

After critical examination of Buddhi, Medha and Smriti it could be pointed out that these are the steps of same process. One is incomplete without the rest. The process of recollection takes place properly only and only after the Buddhi, Medha and Smriti unites. This could be understood well by comparing the cognition process with computer. In this computerized world everybody is familiar with the utility and need of computer. The important data is first entered, stored and after some days, months or even after many years also it can be recollected just as it was stored. Human brain is also a one kind of computer. Only difference is that computer cannot think itself because it is Achetana, while human being is Chetana (conscious) with the presence of Atma (soul) and all the actions performed by the conjugation of Manas. In computers, data are first inputted externally then it interprets...
this data and converts it into binary digits 0 and 1 (computer language) for storage. Then it stores this data on Hard disk, CDs, Pen drives etc. storage devices. Then by time, as per the need this stored data gets recollected again by converting it in to general language. Here computer is able to put forward only those facts which has been entered and safely stored. Almost similar process of Memory conducts by human brain. For the cognition sense objects conjoins with senses and senses with Manas. Buddhi vyapara (discrimination) follows just after it. Buddhi works on it by reasoning and logic and reacts accordingly. If there is no action to be taken then the gained knowledge gets stored for further use. Retention of cognition takes place under the area of Medha (storage device). When any stimulant comes against, those stored experience comes in mind. Recollection happens with the help of Smriti. Thus, in humans also if the knowledge or experiences are not encoded and retained properly then all the efforts of recalling would be in vain. So, Smriti needs systematic interpretation and retention. In this way Smriti produces when encoding, retention and recollection of the experiences unites. In which Buddhi helps in encoding, Medha in retention and Smriti facilitates recollection. In short encoding is must in Smriti, only those subjects could be recalled which has been encoded before. The same way if retained knowledge is not recollected it is of no use. After this description, it can be traced out that although Buddhi, Medha and Smriti are having different meanings and functions they cannot work independently. But they work together and seem similar most of the times.

Above discussion shows that Medha is a broad term which comprises of the mental faculties like Buddhi and Smriti also, which is again interrelated with each other and accordingly the Medha can be subdivided into the following faculties.

1) Viveka Shakti (power of discrimination)
2) Grahana Shakti (power of grasping)
3) Dharana Shakti (power of retention)
4) Smaran Shakti (power of recollection)

Moreover, individual difference in the registration or encoding process also plays a major role in the retention power. So, it can be said that registration phase is more important than the retention power. Because only those subjects will retain which has been gone through the encoding process.

It is mere impossible to recall the knowledge which has not been retain. But it is not necessary that the knowledge which has not been recalled is not passed through the retention process. Because many times person seems unable to recall such things on time which he could recall at any time before.

The same thing comes into mind effortlessly after the person gets tired by recalling it.

In spite of fundamental similarities in the mankind as a whole, differentiation find from individual to individual. The factors of this differentiation are multifarious and they together exert effects on the constitutional, temperamental, psychologcal and spiritual make up of each individual. It reflects the inner dynamical characteristic of an individual which is a portrait of his important dimensions of behaviour.

CONCLUSION:
Medha refers to cognitive abilities within an Ayurvedic framework, the balance of dosas and the nourishment of dhatus may play a role in supporting optimal cognitive function. For instance, an imbalance in dosas might lead to mental disturbances, and the health of dhatus, including the brain tissue (Majja dhatu), could be linked to cognitive well-being.

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