



Assessment of Relation Between Prakriti and Basal Metabolic Rate

KEYWORDS

Vata Prakriti, Pitta prakriti, Kapha prakriti, Basal Metabolic rate

Dr. Sonali L. Bagde

M.D. (Kriya Sharir) Assi. Prof. M. A. Darade Ayurveda Mahavidyalaya, Yeola, Nashik

Dr. Monali L. Bagde

M.D. (Rognidan) Assi. Prof. M. A. Darade Ayurveda Mahavidyalaya, Yeola, Nashik

ABSTRACT : **Background & objective:** Purpose of Ayurveda is to maintain health in healthy person. Prevention and cure from diseases in patients. To cure the disease one should always consider prakriti of an individual and plan chikitsa. Prakriti is the basic principle which gives guideline about physiological, morphological and psychological condition of individual. It's relation with basal metabolic rate (BMR) can suggest solutions to metabolic disorders according to prakriti. **Objective:** Conceptual study of prakriti from Ayurvedic samhitas. Conceptual study of basal metabolic rate from concerned texts. To evaluate relation between basal metabolic rate & different Prakriti by using modern method. (By calculation with the help of formula for BMR) **Material and Methodology:** selected volunteers were examined for prakriti parikshan. BMR of all volunteers calculated. data was collected. **Result:** Vata dosha is responsible for movement this physiological function increase in vata predominant prakriti and increase vata function tends to increase BMR. Kapha prakriti have tendency to delay manifestation of BMR due to its guna. BMR is significantly higher in Vata prakriti than kapha prakriti. **Conclusion:** On the basis of above study, BMR differs according to Prakriti

INTRODUCTION:

Prakriti is one's own constitution and attitude. It is an expression of body function in form of morphology, physiology, behavior of an individual. Ayurveda science principally refers to prakriti of human as dosha prakriti. The reference for this statement given in Charak samhita sutra sthana 7/43-

Doshanushayita hyesham dehaprakriti uchyate|

Anushaya means close connection or attachment. Due to non-partisan bond qualities of dosha are expressed on body, this is called as "Dehaprakriti". These expressions are by way of structures or morphology, by way of function or physiology, by way of mental reactions or psychology. There are some characters explained in different samhitas, such as apachit alpa sharira in Vata prakriti, ushnanga in Pitta prakriti etc. From these characteristics of Vata prakriti, Pitta prakriti, Kapha prakriti can affect basal metabolic rate. Metabolic rate is normally expressed in term of heat liberation during chemical reactions in cells of our whole body. Minimum calorific requirement needed to sustain life in resting individual is called as basal metabolic rate. The amount of energy required (measured in calories) expressed by body at basal condition and account for 50-60% daily energy expenditure in most sedentary work.

Factors affecting BMR:-

Genetic: some born with fast BMR.

Gender: male have higher BMR because having greater muscle mass & low body fat.

Age: After 20th year it drops about 2% per decade.

Weight: as heavier weight high BMR.

Body surface area: greater body surface area BMR will be high.

Body fat percentage: low body fat % higher will be BMR.

Body temperature: high body temperature high BMR.

Diet: starvation reduces BMR.

So, this study is designed to attempt assessment of relation between Prakriti and basal metabolic rate.

AIM:-

To observe relation between different prakriti and basal metabolic rate.

OBJECTIVES: -

1. Conceptual study of prakriti from Ayurvedic samhitas (compendia)
2. Conceptual study of basal metabolic rate from concerned texts.
3. To evaluate relation between basal metabolic rate & different Prakriti by using modern method. (By calculation with the help of formula for BMR)

METHODOLOGY: -

1. Sample size- 90 individuals.

2. Inclusion criteria-

- Age-18 to 20 years.
- Sex-Females only.
- Individuals doing same work. (students)
- Only having vegetarian diet individuals.
- Having same diet & habitat.

3. Exclusion criteria-

- Any diseased condition.
- Individuals doing regular exercise.
- Individuals having sleep disturbances.

4. Plan of work-

- Written informed consent of all volunteers was taken.
- Screening of all volunteers was done till the criteria of desired sample size are fulfilled.
- Selected 90 volunteers were examined for prakriti by M.U.H.S. prakriti format & then divided in 3 groups as-
 - A - Vatapradhan. (30 individuals)
 - B- Pittapradhan. (30 individuals)
 - C - Kaphapradhan (30 individuals)
- Basal metabolic rate of all volunteers was calculated by following formula-

Basal metabolic rate=
 $655 + (9.6 \times \text{wt in kg}) + (1.8 \times \text{ht in cm}) - (4.7 \times \text{age in Yrs})$
 (For woman)

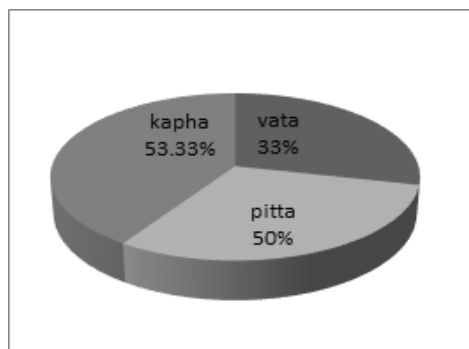
Data was recorded in tabular form.

OBSERVATION: -

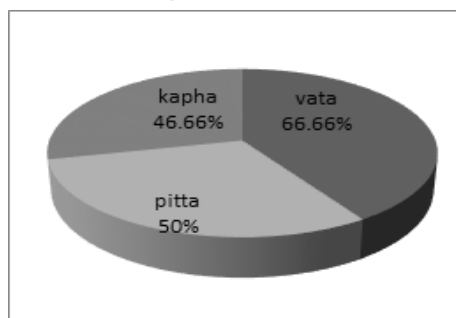
While analyzing data mean BMR was observed 1296.6 in all three groups. The difference between 3 is significant ($p < 0.05$). In intergroup comparison C and A - vata and kapha respectively was significant ($P < 0.005$). The difference between group A and C and B and C was not significant ($P > 0.05$).

Distribution of BMR Values in Prakriti

Less than average value 1296.6



More than average value 1296.6



RESULTS: -

BMR is significantly higher in Vata prakriti than kapha prakriti

DISCUSSION: -

Ayurveda is design for healthy and long life spans, this aim fulfilled by absolute principle. Prakriti one of the important principles which determine by predominant dosha combined in different proportions. Each dosha has been designed for specific group of function depending upon its guna.

Guna i.e. attributes of Vata dosha are as following:

Ruksha (dry): this property keeps balance with snigdha (unctuous) guna of kapha dosha. Sheet (cool): this property keeps balances ushna (warmth) guna of pitta dosha. Laghu (light): this guna balance with guru (heaviness) guna of kapha dosha. Sukshma (micro-effect): This guna makes vata dosha to reach ultimate units and spaces of internal body. Chala (movement): this property controls all sort of move-

ment in living body. Vishad (clean): just as any flowing stream keeps clean due to continuous movement of this dosha. Khar (Rough): this attribute act as roughen surface where needed, it balances snigdha guna of kapha dosha.

All three dosha have their general functions- movement represent Vata. Biotransformation represents Pitta, and things clogging together represent Kapha. In spite of this internal core of basic functional pattern, Ayurveda compendia allotted certain work to each Dosha. Although the biotransformation represents Pitta Dosha and Agni in living body but the Vata Dosha has specific function to keep Agni alive and controls all movement and function of Pitta and Kapha dosha. Vata dosha is responsible for all mechanical moves of body including reflex actions, moves based on electrical signals like cardiac cycle, moves based on pressure gradient like diffusion of gases extra.

Vata dosha is responsible for movement this physiological function increase in vata predominant prakriti and increase vata function tends to increase BMR. Kapha prakriti have tendency to delay manifestation of BMR due to its guna. So it is clearly indicate that if person wants to be healthy one must design diet and lifestyle opposite to prakriti.

CONCLUSION: -

BMR differs according to Prakriti.

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