ABSTRACT

Sarata or excellence is described with respect to Sapta dhatu (seven body tissues) viz. Rasa (skin), Rakta (blood), Mansa (muscle tissue), Meda (adipose tissue), Asthi (bone tissue), Majja (marrow), Shukra (semen) and Satwa (mind) i.e. Ashtavidhasarata (eightfold Excellency). Sarata is quality assessment of seven dhatu and Satwa. Examination of sarata is done at physical and psychological level. The present study aims at assessing and comparing sarata of mentally retarded children (study group) and healthy children (control group). The participants of the study were included 24 mentally retarded children and 24 healthy children between age group of 8 months to 12 years. A proforma, specially designed on the basis of classical descriptions of sara was utilized to assess the sarata. Findings of the study revealed that the difference in sarata between mentally retarded and healthy children was statistically highly significant (p<0.001) except in Mansa and Asthisarata. Satwa-sarata was almost nil in mentally retarded children

KEYWORDS: Mental retardation, dhatu, dhatusarata, sarata, sara, satwa.
INTRODUCTION:

People’s appearance influences both their self-concept and their relationships with others. During socialization, we develop an increasingly complex set of normative expectations, or schema, about how people should appear in their manner, speech, movement, posture, gestures, facial configuration, body size, structure, proportions and behaviour. We become accustomed to some variability, but when, we encounter someone whose appearance, manner, or behaviour exceeds the limits of our expectations, we react with emotional arousal, anxiety, and fear, and behave differently toward that person (Richardson SA, 1976). Atypical appearance is more among people with mental retardation than among non-retarded individuals (Richardson et al., 1985).

People with mental retardation experience disparaging behaviour from others due to low intellect or atypical appearance (Richardson and Koller, 1996). Atypical appearance is more among people with mental retardation that means in mentally retarded not only the mind but also various tissues of the body have been affected. The physical and health characteristics of mildly retarded persons do not differ dramatically from those of non-retarded individuals. The more severe the retardation, however, the more pronounced the corresponding physical defects and health problems (Payne and Pattan, 1989).

Sarata is the essence of dhatus (Acharya JT, 1994). Assessment of sarata is one of the most important examinations which give an idea about qualitative state of dhatu. To determine the strength of dhatu or strength of person sarata examination is essential. Dhatu which shows maximum characters which are mentioned in Ayurvedic classics are called as best dhatu of that individual. The higher percentage of characteristics represents the good quality of dhatu. The characters of dhatu are explained at structural and/or functional level. Total eight types of sara are narrated in Ayurvedic classics (Acharya JT, 1994) viz. Rasa (skin), Raka (blood), Mamsa (muscle tissue), Meda (adipose tissue), Asthi (bone tissue), Majja (marrow), Shukra (semen) and Satwa (mind). In mental retardation dhatus are affected structurally and/or functionally. Chawla Deepa N. (2000) found in a survey undertaken between retarded and normal children, sarata were poor or nil in the mentally retarded. The present study was undertaken with an objective to assess and compare sarata of mentally retarded and healthy children.

METHODOLOGY

For assessing the sarata of mentally retarded, children were selected from outpatient department of Basic Principles, Govt. Ayurveda College Hospital, Thiruvananthapuram, Kerala, India - Study group. For assessing sarata of healthy individual, children were selected from St. Mary’s School, Pattom, Thiruvananthapuram, and The Nest Day Care Centre and Kinder Garten, M.G. Road, Thiruvananthapuram, Kerala, India – Healthy (control) Group.

Total 24 children between age group 8 months to 12 years were selected for each group. Well-designed proforma, prepared by post graduate Department of Basic Principles, Government Ayurveda College, Thiruvananthapuram, Kerala, India, was used for assessing sarata. Proforma was prepared on the basis of subjective parameters (characteristics) described in Ayurvedic classics (Acharya JT, 1994).

The research design was approved by the Research Review Committee of Kerala University. Permission of concerned authority, Principal and parents was taken. Before assessing sarata parents of children were made clear about the purpose of this study and told that the result of the study would be kept strictly confidential and would be used for research purpose only.

Dhatus attain their maximum Excellency only during adulthood. They are in developing condition in the children. Hence it is always expedient to assess sarata of adults. But as
patients of study group (for clinical trial) were of the age in between 8 months to 12 years, it was not advisable to compare that group with healthy adults. Hence for comparison normal healthy children of same age were taken. Hence much limitation was there and chances of some inevitable errors cannot be denied.

Statistical Analysis

Each positive parameter (subjective characteristic) of sarata was given one score. The positive points were analysed under 8 different categories viz. Rasa-sarata, Rakta-Sarata etc separately for both groups. Mean score and its percentage were calculated for each dhatu. Percentage values of individual dhatu and satwa of the healthy (control) group were compared with the study group. To see whether the difference of each sarata is statistically significant or not, “unpaired t-test for equal samples” was used (Table 1).

<table>
<thead>
<tr>
<th>Variables (Sarata)</th>
<th>Healthy group</th>
<th>Study group</th>
<th>t Value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Score</td>
<td>%</td>
<td>± S.D.</td>
<td>Mean Score</td>
</tr>
<tr>
<td>Twaka</td>
<td>11</td>
<td>62</td>
<td>2.1</td>
<td>3.58</td>
</tr>
<tr>
<td>Rakta</td>
<td>9.12</td>
<td>39.65</td>
<td>3.6</td>
<td>5.04</td>
</tr>
<tr>
<td>Mamsa</td>
<td>3.25</td>
<td>10.15</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Meda</td>
<td>3.7</td>
<td>20.55</td>
<td>1.46</td>
<td>2.17</td>
</tr>
<tr>
<td>Asthi</td>
<td>1.58</td>
<td>9.29</td>
<td>1.95</td>
<td>1.25</td>
</tr>
<tr>
<td>Majja</td>
<td>3.87</td>
<td>24.18</td>
<td>1.5</td>
<td>1.17</td>
</tr>
<tr>
<td>Shukra</td>
<td>4.41</td>
<td>16.96</td>
<td>1.23</td>
<td>2.46</td>
</tr>
<tr>
<td>Satwa</td>
<td>2.41</td>
<td>13.38</td>
<td>1.8</td>
<td>0.17</td>
</tr>
</tbody>
</table>

OBSERVATION

Table 1 shows that percentages of each sarata were higher in healthy (control) group than study group. In healthy children, percentage of Twak sarata (62 %) and Rakta Sarata (39.65 %) were found maximum than other sarata. The difference was statistically highly significant at 0.001 level in Twak, Rakta, Meda, Majja, Shukra and Satwa sarata. Percentage of Mamsa and Asthisarata did not differ significantly in both groups. The corresponding t-values were statistically insignificant. Satwa sarata was almost nil (0.944 %) in study group.

DISCUSSION

Mental retardation is a disability characterized by significant limitations both in intellectual functioning and in adaptive behaviour manifested during the development period (American Association for Mental Retardation, 2002). In mentally retarded people, atypical appearance is more than among non-retarded one that means in mentally retarded various tissues (dhatu) of the body have been affected.

Sarata is described with respect to seven dhatu i.e. Twak (skin), Rakta (blood), Mansa (muscle tissue), Meda (adipose tissue), Asthi (bone tissue), Majja (marrow), Shukra (semen) and Satwa (mind). It is a quality assessment of seven dhatu and satwa (mind). Examination of dhatusarata is done at physical and psychological level. In Ayurvedic classics characteristics are mentioned to determine dhatusarata. The higher percentage of characteristics represents good quality of dhatu.
Assessment of sarata is important for knowing bala (strength/physical fitness) and ayupramana i.e life span of person. The objective of the present study was to examine dhatu sarata in healthy (control group) and mentally retarded (study) children.

The present study revealed that Dhatusarata in healthy children was better than mentally retarded one. Twak sarata was found more developed than any other dhatu in healthy group followed by Rakta sarata since sarata of Rasa and Rakta dhatu starts developing early in the life. Characters of Twak sarata like unctuous, smooth, soft, clear skin manifest early in the life. Likewise characters of Rakta sarata like unctuous, red and handsome ear, eye, face, tongue, nose, lips, palm etc. develop at early age. In this study, Insignificant difference in Mansa sarata and Medasarata between healthy and study group was found because their development manifest during adulthood. Characters of Mansa dhatu like temples, forehead, nape shoulder, axillae, joints etc. equipped with firm, heavy and good looking muscles develop later on during adulthood. Likewise characters of Asthi dhatu like prominent heels, ankles, knees, elbows, collarbones etc. develop during adulthood.

Satwa (mind) sarata was found very less developed in mentally retarded children. Excellence of mental faculties were almost nil in study group.

The physical and physio-psychological characteristics of different sara described in the classical texts of Ayurveda are the reflections of status of the dhatu in the form of structure and functions. The symptoms mentioned for Satwasara are the reflection of the state of mind with respect to the presence of predominant level of satwika qualities.

Sarata is mentioned for the assessment of bala (strength) and Ayu-pramana (lifespan) of individual. Bala means strength or power to perform body activities and also resistance towards diseases. Earlier Scientific study revealed the positive correlation of dhatusarata and physical fitness (Jagruti Chaple et al., 2013).

CONCLUSION

The present study revealed that dhatu sarata in mentally retarded children was less developed than healthy children. Satwa sarata was almost nil in mentally retarded children.

Inference and recommendation

Present study will be helpful to know the quality and strength of dhatu (body tissues) in mentally retarded. Further study on dhatu sarata in mentally retarded adults needs to be conducted. Clinical study to assess effect of Rasayana chikitsa (rejuvenation therapy) on dhatu sarata in mental retardation needs to be carried out.

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