



COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF SHASTIKA-SHALYADIYOGA AND VIDARIKANDADIYOGA IN THE MANAGEMENT OF KARSHYA IN CHILDREN

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ABSTRACT

In the present era, physical appearance carries an important role as it is one of the factors for a person to be fit. *Karshya* is the widest spreading health and nutritional problem in developing countries. As per WHO, poor feeding of infants and young children resulting in under nutrition is “The single most important risk factor for diseases. *Karshya* is an *ApatharpanajanyaVyadhi* where *Vata Dosha* plays a very important role in the pathogenesis along with the *vitiated Pittha*. *Pachakapittha* leads to *Agni Dushtias* a result of which *Dhathu*’s are not nourished properly leading to *AnulomaKshaya*.

Materials & Methods: An Interventional Randomized clinical study was conducted in which group A & group B contains 20 subjects each intervention has given with Shastikashalyadi Yoga and Vidarikandadi Yoga respectively, for a period of 2 months. Follow-up was done after one month.

Results: Obtained results were analysed statistically using SPSS VER.20. Parametric test was used for scale and ratio data. Nonparametric tests are used for ordinal and nominal data. Both Yoga are having significant results in Subjective Parameters and Objective Parameters like weight & MAC.

Interpretation & Conclusion: Both the Yoga’s having *Madhura, Kashaya, Katu Rasa* & also *Agni Deepaka, Brimahana, and Rasayan* property help in *RasadiDhathu Poshana*.

Keywords: *Karshya, Shastikashalyadi Yoga, Vidarikandadi Yoga.*

INTRODUCTION

Karshya is the widest spreading health and nutritional problem in developing countries. As per WHO, poor feeding of infants and young children resulting in under nutrition is “The single most important risk factor for diseases¹”. Karshya is an *ApatharpanajanyaVyadhi* where *Vatadosha* plays a very important role in the pathogenesis along with the *vitiated Pittha*. *Pachakapittha* leads to *Agnidushtias* a result of which *Dhathu*'s are not nourished properly leading to *Anuloma kshaya*². The level of a child under nutrition remains unacceptable throughout the world, with 90% of the developing world's chronically undernourished children living in Asia and Africa³. India is one of the leading country this respect where about 43% in under 5 childrens are underweight⁴. Even after a different national programme like the Balawadi nutrition programme, mid-day meal scheme, and ksheerabhagya, the, etc condition is still prevalent. Preschool age is quite vulnerable and considered to be at special risk. More importantly at this age, children develop preferences for food. This sometime ends up in the consumption of less nutritive, imbalanced food that can lead to undernourishment. Their nutritional status is a sensitive indicator of community health and nutrition. Present work was undertaken to evaluate the efficacy of *Shastikashalyadi Yoga* and *Vidarikandadi Yoga* in the management of *Karshya*. *Shastikashalyadiyogais* an indigenous preparation. *Vidarikandadi yogais* mentioned in *YogaratanakaraBalarogadikara*. These *dravya* are having *Balya*, *Brahmana*, *Agnidipana*, *Krimigna*&*Rasayana* properties.

Assessment Criteria

Objective Criteria	Subjective criteria
Weight in Kg	<i>Daurbalya</i>
Height in cm	<i>Kshuda</i>
Chest circumference Mid-arm circumference	<i>Nidra</i>

MATERIALS AND METHODS: Study Population

- 40 Subjects fulfilling the diagnostic criteria of *Karshya* attending the OPD and IPD of Alva's Ayurveda Hospital Moodbidri.
- Special medical camps and other referrals.

Reference Population: Children between the age group 3-5 years in and around Moodbidri.

Sampling Method

- Simple Random Sampling Method
- Sample Size: 40

Diagnostic Criteria

- The diagnosis was made on the basis of weight for age criteria i.e $(Age+3)^2=Ideal\ weight\ for\ age$.
- Grade 1 Malnutrition (IAP Gradings)

Inclusion Criteria

- Subjects of either gender, of the age group between 3-5yrs, were selected irrespective of caste and religion.
- Children with weight less than weight for age criteria.
- $(Age+3)^2=Ideal\ weight\ for\ age$.

Exclusion Criteria

Children suffering from

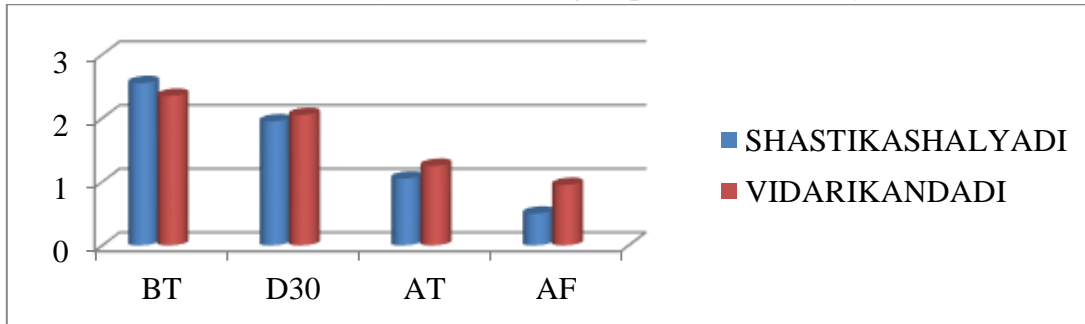
- Infectious diseases
- Systemic diseases.
- Congenital anomalies.
- Malignancies.
- Mal-absorption syndrome.
- Errors of Metabolism.
- Children less than 70 % of the Ideal weight for age will be excluded.

Biochemical Assay

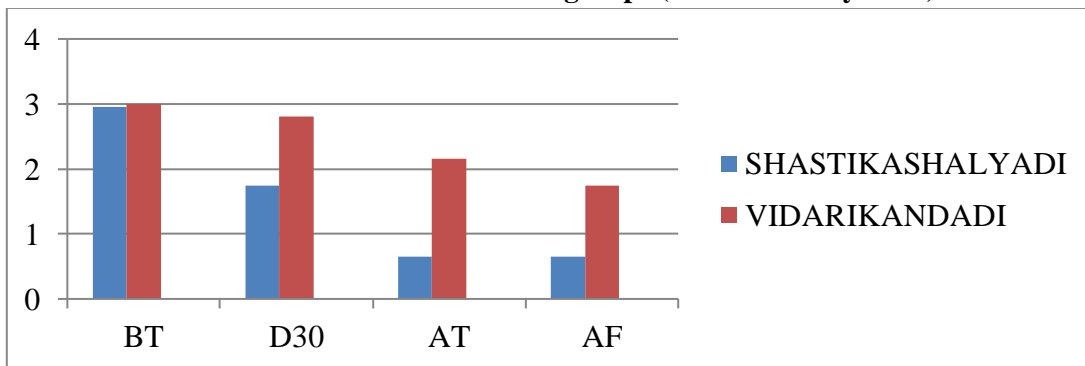
- Routine Blood investigation
- Urine Analysis
- Microscopic Examination of Stools.

Result

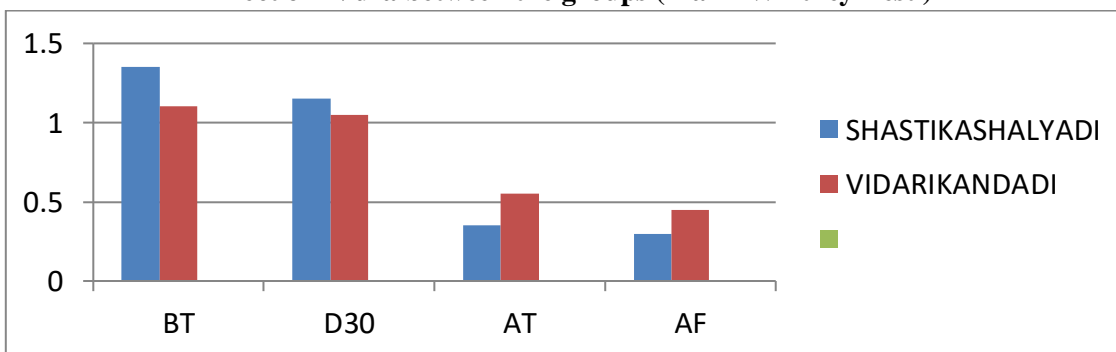
Effect on Dourbalya between the groups (Mann-Whitney Test)



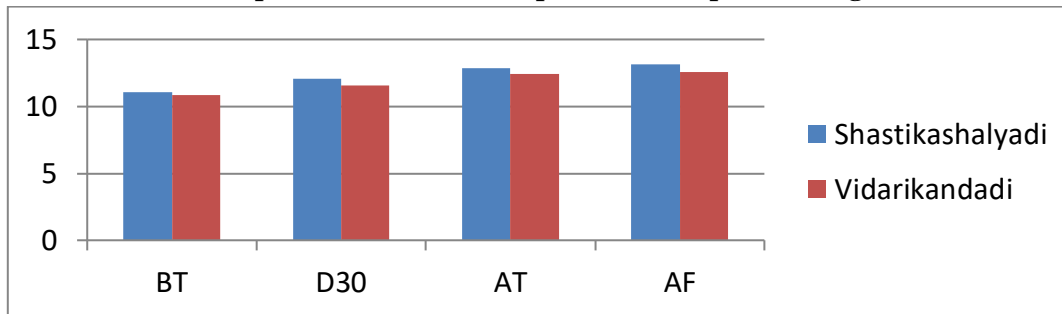
Effect on Kshudha between the groups (Mann Whitney Test)



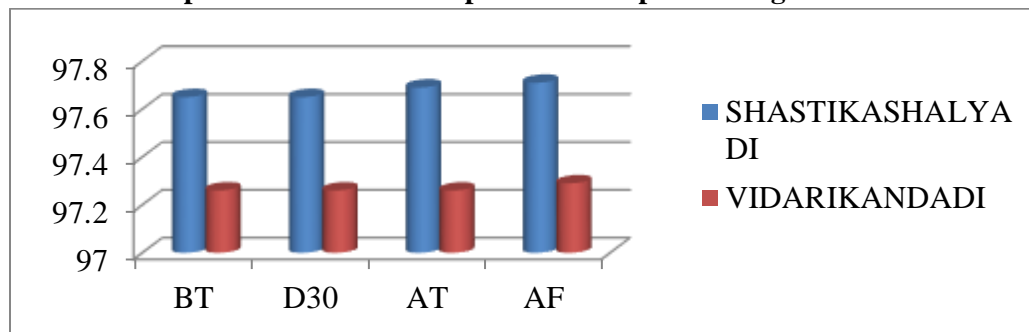
Effect on Nidra between the groups (Mann Whitney Test)



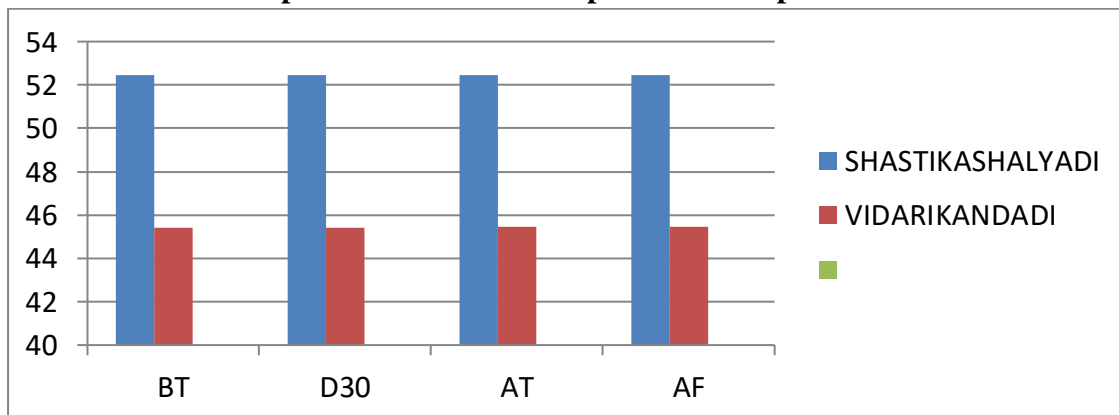
Comparison Between Group A and Group B on Weight



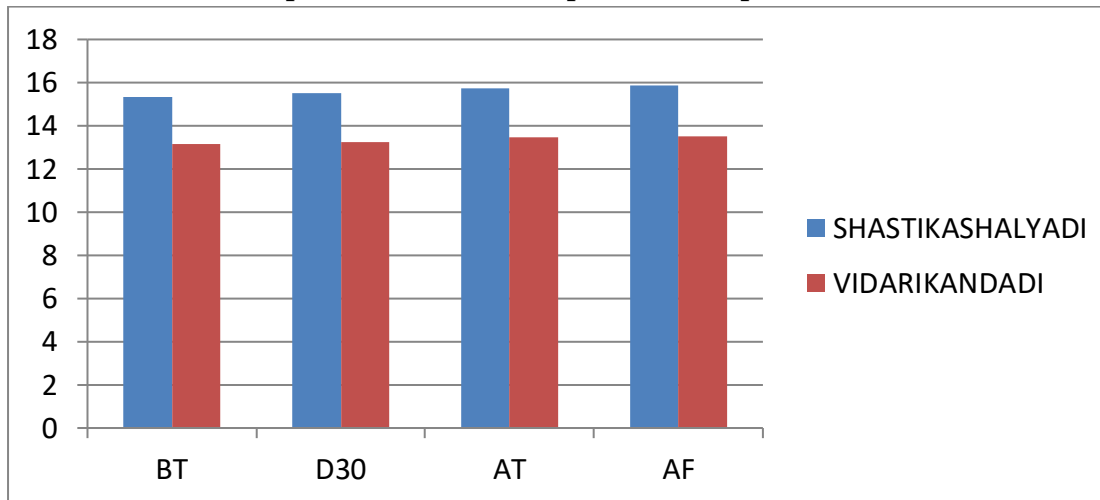
Comparison Between Group A and Group B on Height



Comparison Between Group A and Group B on CC



Comparison Between Group A and Group B on MAC



DISCUSSION

Dourbalya: Highly significant at $p=0.00$ in group A and group B. But when we compare both groups *Shastikashalyadi Yoga* shows significant results. *Shastikashalyadi Yoga* contains *Brimhana*, *Balya*, *Agnideepaka*, *Krimighna*, and *Rasayana* property, which relieves the *Dourbalya* of the patient. *Vidarikandadi Yoga* contains *Balya*, *Brimhana*, and *Rasayana* property which relieves *Dourbalya*.

Kshudha: *Kshudha* improved in both groups, but *Shastikashalyadi Yoga* shows statistical improvement with a p -value of 0.00 in the Mann-Whitney test. *Shastikashalyadi Yoga* contains *Methika*, which acts as *Agnideepaka* and *Krimighna*. It also contains *Ghritha* it acts as *Agnivardhana* as *Ghritha* is considered best among *Agni Deepanadravya*. *Ghritha* contains medium-chain triglycerides, which are an immediate source of energy. MCT improves the metabolic rate and spares the muscle glycogen.

Nidra: *Shastikashalyadi Yoga* shows significant results in *Nidra*. *Rasadi Dhathu Kshaya* and because of *Vata Dusti* patients are not getting sleep properly which is expected and essential in this age. *Brimhana*, *Balya*, *Agnideepana*, and *Rasayana* property of *Yoga* nourishes the *Rasadi Dhathu*, and there *Uttarottara Dhathu Poshana* takes place.

Weight: It was noticed that in *Shastikashalyadi* group (15.98%) and *Vidarikandadi* group (14.45%)

showed significant weight gain with a p -value <0.001 . When group A & group B were compared mean between BT & AT in group A was 1.77 and in group B was 1.57. After treatment when comparing the group insignificant difference was obtained with ($p=0.3$). It may be due to the acceleration of the body growth as a result of the *Brimhana*, *Balya*, and *Rasayana* properties present in *Yoga*. *Ghritha* contains medium-chain triglycerides (MCT), which are an immediate source of energy. MCT improves the metabolic rate, spares the muscle glycogen, and improves physical endurance performance. After following up when comparing the groups, significant difference with p -value <0.04 . After following up *Shastikashalyadi* group showed better improvement ($t=2.12$) when compared to the *Vidarikandadi* group. After following up weight gain continued in the *Shastikashalyadi* group it may be due to the correction of *Dhatwagni*, *Agni deepaka*, and *Balya Rasayana* properties of *Dravya* present in the *Yoga*.

Height: An increase in height was not statistically significant. It may be due to the short duration of the study and the physiological growth of children as subjects belong to the age group 3-5 years. The average height gain in a year is 5 cm. General body growth is rapid during foetal life till 2nd year and also during puberty. From 3 years onwards Somatic growth velocity relatively decreases, Gonadal growth

is dormant, and Lymphoid growth and Brain growth also decrease. To see the changes in the height at least a study should be conducted for more than 6 months.

Chest Circumference: There is no change in the CC in the groups. This may be due to the physiological growth of children belonging to the age group 3-5 years.

Mid Arm Circumference: Shastikashalyadi group (2.80%) and Vidarikandadi group (2.12%) showed highly significant results in MAC with p-value < 0.001. When group A and group B were compared mean between BT & AT in group A was 0.08 and, in the group, B was 0.03. After comparing the group's significant difference with a p-value < 0.13. While comparing the groups Shastikashalyadi group (t=1.53) showed better improvement than the Vidarikandadi group.

CONCLUSION

Karshya is Apatarpanajanya VataVyadhi, mainly occurring due to Dhathu Kshaya. Pharmacotherapy like Brimhana, Balya & Rasayana, has been advocated in the classics for the patients of Karshya. Both the Yoga's having Madhura, Kashaya, Katu Rasa & also Agni Deepaka, Brimahana, Rasayana property helps in Rasadi Dhathu Poshana. In both, the group children had better improvement in subjective parameters like Dourbalya, Kshudha & Nidra. Based on the Objective parameters Weight gain & MAC were found to be statistically significant in both groups. Other objective parameters like Height & CC are insignificant in both groups. When compared between the groups Shastikashalyadi Yoga shows significant results than the Vidarikandadi Yoga group. There was

no report of any adverse drug reactions during the treatment.

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