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Effect of wiyhania Somnifera, Aparagus racemosus and Lakshadi thailam in improving the physical and mental health of pre-school children

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Abstract: The results of a study to find out the efficacy of withania somnifera (Aswagandha) and Asparagus racemosus (shatavari) as internal medication and lakshadi thailam as external massage to enhance the nonspecific general immunity of fifty per-school aged children from an institution are presented in this paper. The study indicated that the non-specific immunity of the children is greatly enhanced as reflected in increased haemoglobin content, and decreased episodes of pyrexia of unknown origin, infectious diseases and eye infections. The experimental group children were ahead of control group in various stage of developmental schedule at the end of treatment.Med. Nutr.Res.Commun, 1994 pp15-18

Key words: withania somnifera, Asparagus racemosus, Lacardialacca, Mental health, Haemoglobin, Pyrexia, Nutrition Programmes, Mal-nutrition.

Introduction

Ayurveda, the rich cultural heritage of our ancient people, has a rich pharmacopia, which uses the naturally available herbs unlike Allopathy which uses synthetic or chemical substances, which give rise to a host of adverse reaction. Pre-school children constitute an important nulnerable segment of population from the nutrition stand-point. Protein-energy mal- nutrition (PEM) and anaemia are two of the most wide spread public health problems of pre school children. The results of communitu survey's have been shown that over 50% of toddlers in the poor socio economic groups in India are anaemic while 70%-80% of children suffer from various from of grouth retardation due to pem. Pre-school children are prone to various infication and must combat them to be healthy . although the nutritional requirements are met, the general immunity is to be improve. Ayurveda can play a vital role in this aspect. Certain drugs which improve the general immunity are mentioned in the ancient classics, under "shishu paricharya"(child care)

Of the various drugs mentioned as having resistance building properties two drugs viz Aswagandha (withania somnifera) and shatavari (Asparagus racemosus) were selected for internal medication.a medicated oil, Lakshadi thailam containing lacardialacca as the main ingredient was selected for external application and massage.lacardica lacca is found to have a cooling effect, and gives lustre to the body and used for treating skin diseases.

Ayurvedic literature indicates that aswagandha when administered to toddlers and growing children for 15 days nourishes them as "rain "does to tender crops" aswagandha was found to be a good haematinic and to have protein sparing (nitrogen retention) effect. Aswagandha when administered at a dose of 3g/day to 101 normal healthy persons for 1 year signification increased heamoglobin content and red blood corpuscles. The chemical analysis of the planyreveals that in 100g. dry weight of the sample,60-70g of iron was found. In another study, aswagandha when administered with milk to children from under nouristered home fordestitutes, significantly increased the percentage of haemoglobin serum iron and serum protein.shatavari is also having rasayana property (grouth promoting) according to the ancient classics is a good nervine tonic. It is extensively used in preparations lik shatavari ghrita and phala ghrita".

A study was undertaken in a local home for destitutes to find out the efficacy of the above drugs in improving the general physical and mental health of yhe pre school children.

Materials and Methods

Fifty children of both sexes in the age range of 2-4 years were selected from a local institution for destitutes. They were matched for age and period of stay in the home i.e a minimum stay of more than one year the children were examined for major inllness and nutrological defects which were excluded by clinical screening supplemented by basic laboratory tests children with minor nutritional deficiencies and anaemia were treated and after correctional measures were included in the study. All

the children were dewormed with mebendazol before the commencement of the treatment. After ascertatining that the nutrition and infant- care taker ratio were uniform for all the children they were allocated to the experimental and control groups of each.the medical history of each child has comprising the number of time the child has fallen ill the diagnosis and the treatment prescribed formed the baseline parameter. In addition, the following anthropometric measurements were taken , as per the standard methods.1.height 2. weight 3.head circumference. 4.chest circumferences 5.upper arm circumference.the children were also assessed on the vineland cocial maturity scale to record their social maturity in areas like 1. self help general,eating, dressing2.communication 3.socialization and general behaviour.

Aswagandha tablets and shatavari ghritham, procured from Indian medical co-operative pharmacy, madras were administered to the experimental children twice a day as per the prakriti (body constitution) of each, child, as assessed by the ayurvedic physician according to the classical treatment in ayurveda, the dose and schedule of medicine should be fixed as per the prakriti of a person to achieve the optimum results the varying doses were 1. aswangandha tablets (0.5) ½ to 2 tabs bd2. shatavari ghritham ½ to 1tsp bd the vehicle for aswangandha was either honey or milk as per prakriti lakshadi thailam (medicat oil) massage was given for the entire body the children after massage were made to stand in the sun light for 5 min and then given bath using luke- warm water the control children were given starch powder with honey (placebo) and plain gingelly oil massage to offset the effect of special attention the duration of treatment was two year.

Results and Discusssion

Comparisons were made between the initial values and values at the end of one and two year . data was analysed using the students “t” tests. Table1 presents the data on the physiological and anthropometric parameters.

The haemoglobin content was significantly inceased in the experimental group at the end of 2 yr. There was a statistically significant increase in social quotient in the experimental group at the end of 1yr and 2 yr and in the control group only at the end of one year.

Table 2 shows the data on the incidence of diseases before and after treatment. The episodes of pyrexia of unknown origin (puo) were significantly reduced at the end of two year, in the experimental group. Eye infections, infectious diseases and vitamin deficiencies show a significant decline in incidence in the experimental group at the end of one year, eyes infection were significantly decreased in the experimental group even at the end of two year period.

This study indicate that the combination of internal medication and external massage has a definite immunity enhancing property. Aswagandha,s heamatinic effect has already been well documented this study further corroborates this finding as reflected in the increased hb content. When anaemia commonly found in children is corrected it has a facilitating effect on the child’s

General health. The increase in the social quotient at the end of 2 years in the experimental group children is indicative that these children are ahead of the control group in various stages of developmental schedules. In other words, the combination of Aswagandha and Shatavari has a significant effect on enhancing the physical and motor development of children. Institutionalisation perse causes developmental lags, both physical and mental. Pre-school age is the one susceptible to minor ailments and infections. Thus the sample selected for this study is vulnerable in two ways viz they have been institutionalized and they are in the pre-school age. Hence a comparison of their history of illness before and after the commencement of the drug will throw light on their developing the natural resistance. Two important findings come out from the analysis of data on the episodes of illness. The incidence of P.U.Os and infectious disease, both viral and bacterial have come down significantly in the experimental group. Aswagandha and Shatavari have been shown to have an antiobiotic anti-protozoal activity ad enzymatic property. Hencce a conclusion can be drawn from this study that the non-specific immunity of the children is greatly increased during the course of the present treatment schedule. The decline in the incidence of eye infections and some of the clinical signs of vitamin deficiencies also point to the general well being of the children.

The results thus shoe that this particular combination of Aswagandha and Shatavari as internal medication and Lakshadi thailam as external massage can be given to growing children, mal-nourished children and children exposed to impoverished environment to enhance the non-specitic general immunity and to treat anaemia. They could be incorporated along with the various nutrition programmes and non-meal schemes to combat mal-nutrition. Baby foods could also be prepared with these drugs, supplementing cereals and pulses. The findings project the drugs as general purpose restorative tonics, and nutrients rich in natural iron, minerals, vitamins and amino acids as opposed to the chemical or synthetic ones usd in Allopathy. On other words, be it young or sickchildren or old people, these drugs are indicated as drugs of choice.

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