

Effect of sankhapuspi of the physical and mental agility of institutionalized children-a preliminary study

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Introduction

Sankhapuspi (*convolvulus pluricalis*) has been mentioned as a medhya rasayana in ancient classics. According to Susruta (1) medhya rasayana tend to promote growth, strength memory, intellect and invigorate mental functions. Caraka Samhita (2) mentions four drugs in this regard, and among them, sankhapuspi is said to be the drug par excellence: this drug is an important ingredient in many ayurvedic preparations viz Brahmarasayana, Aindrarasayana, Agastyaharitaki, Medhyarasayana, Manasa Mitram Etc.

For many centuries, sankhapuspi was used by ayurvedic physicians to improve the physical and mental agility of children who exhibit deficits in these areas. The chemistry and pharmacology of this plant are dealt with extensively in the ICMR's bulletin on the medicinal and even in fairly high doses the drug is found to be non-toxic.

Sankhapuspi has been found to be effective in reducing the different types of stress including psychological, chemical and traumatic (Prasad et al, 1974) (4). The drug also exhibited significant anti-anxiety activity (Singh and Mehta 1977) (5) tranquilising effect and anti-thyroid property. (Gupta et al 1981) (6)

The ancient tradition of using this drug in growing children with regard to their physical and mental agility needs to be cross-checked. A preliminary attempt is made in this paper to study the efficacy of the plant in institutionalized children of normal intelligence pertaining to their psychomotor function, memory and general mental ability.

Materials and methods selection of cases

89 children of both sexes who were not clinically mentally handicapped in the age group of 5 to 10: residing in a local home for destitutes and studying in the school run by the home; from the subjects of this study. The nutrition, human care and curriculum were the same for all children.

Parameters of assessment

Five tests with the rationale for selecting them are given below;

1. Seguin form-board test - is the simplest performance and non language test, exercising the abilities of sensory discrimination and motor control

2. Draw a person test—is the next step in the ladder and calls for the use of child's accuracy of observation and conceptual thinking.

3 Immediate memory –is the a test that measures simple retentivity and has a high correlation to general intelligence. The above three tests pertain to mental agility. The following two tests relate to physical agility.

4Finger dexterity test-It measures the ability to make skilful controlled manipulations of small objects involving primarily finger movements.

5Tapping board test – calls for the ability to make rapid arm movements and control precisions. In both the above tests, speed, co-ordination and precision are important factors and such are important factors and as such are contributory to the child's physical agility.

These tests were selected because functions they measure were signification related to the child's academic life.

Drug administration

Sankhapuspi (whole plant) was shade dried, powdered and stored. The daily intake was 0.5. of power. The drug was mixed with honey and given in two divided doses. Honey being yogavahi, was an appropriate base.

Conduct of the study

The selected children were subjected to a detailed clinical examination and some basic laboratory investigations like TLC, DLC HB ESR and urine analysis to rule out major illnesses they were also dewormed with mebendazol. Those

children who had anaemia and nutritional deficiencies were treated and then included in the trial.

The duration of treatment period was one year. Children who could not be administered the drug for three weeks or more (at a stretch) due to ill-health etc. were consider drop-outs Assessments were repeated at the end of one year.

Results and discussion

A statistical analysis of the results seems to uphold the traditional Ayurvedic claim of the efficacy of sankhapuspi as regards the physical and mental agility of children. The effects were more pronounced in the younger age-group (vide Table). While performance on seguin From Board test improve in children studying in classes 11 and 111, performances on the finger dexterity and tapping board tests significantly improved in still younger children studying in class 1st 2st and 3st

The result thus show a definite psychotropic effect of sankhapuspi especially in the younger age group. This is in keeping with the texts. While describing the gunas of sankhapuspi, susruta (1) says that it increases Bala (physical strength) and utsaha (mental vigour). He has therefore recommended its use in infant to improve medha, bala and buddhi the fresh plant and its expressed juice contains an essential volatile oil and an alkaloid sankhapuspine which are consider to be responsible for the pontency of the drug(7)

Improved mental function increased sense of well-being, gain in body weight, correction of pulse rate and blood pressure have been reported with the use

of sankhapuspi by a number of investigators.(gupta et al 1981 (6) koushik et al (8)

Limitations of the study

There are two important limitations of this study

(1)Due to ethical consider, control group could not be created among the destitute children.

(2) It is claimed that sankhapuspi is more beneficial in younger children. The present study also show a statistically signification improved performance in the younger age groups. However as younger children tend to outgrow. Their problem spontaneously and progress rapidly , it is difficult to assess the real contribution of sankhapuspi. This preliminary study needs to be followed by elaborate research to validate this claim.

Conclusion

The result of preliminary study to assess the psychotropic value of sankhapuspi, an ayurvedic drug, given to 89 school going children of normal intelligence studying in classes 1 to 5 and staying in a destitute home, indicate that the one year long administration of the drug enhanced the physical and mental agility of the children. As no control group was used and as children spontaneously outgrow many of their problems, this preliminary study needs to be followed by the more elaborately designed research to establish the real efficacy of sankhapuspi. If found useful, this is a safe drug that can be recommended especially to educationally disadvantaged children in order to

improve motor control and co-ordination.

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