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Open pilot study of stimulative tablets in augmenting immunity to benefit children with autism

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Abstract

Autism is an umbrella terms in which child have difficulty to express itself with poor communication skill, poor socialization and many sensory as well as behavioral issues. There is lots of intervention available in the medical field such as sensory integration therapy, brain training with neurofeedback and medical treatment in form of drugs to overcome the clinical symptoms and improve quality of life of these children. In this study we applied stimulative table with standard therapy to the selected five subjects for one month periods and we saw great result in term of improve eye contact, reduce hyperactivity and change in behavioral issue. We concluded it can be used as supplement drug to improve general health and some extend its act as neural repair and improve perception in neurological condition.

Keywords: Autism, stimulative table, neural repair

1. Introduction

Stimulative tablet is a drug extracted from *Phyllanthus niruri*. One tablet of stimulative is the composition of Kalmegh (50 mg), bhringraj (100 mg), bhumi amala (200mg), katuki (100mg), guduchi (100mg) sarpunkha (100mg), kumara (100mg), nimba (100mg), chitrak (50mg). Its main element *phyllanthus niruri* (*P. niruri*) is a member of the euphorbiaceae family. Its medicinal plant usually grow in winter weed throughout the tropical area such as China, India and Pakistan. It is used as medicated drug or food to nourish good health, improve intestinal problems, liver, hair condition ^[1] related issue, kidney functions and skin cancer ^[2]. In last decayed *P. niruri* reported as powerfull medicine in the treatment of antitumor ^[3], antiviral ^[4] and anti-inflammatory. It has potential to reduce chemical induced papilloma with its antioxidant defense property.

Autism Spectrum Disorder is a distinct brain damage disorder that produces a characteristic range of behavioral abnormalities. ASD is a severely incapacitating lifelong developmental disability that typically appears during the first three years of life. It occurs in approximately 1 out of every 50 births ^[5]. The causes seem related to genetic predisposition triggered by pollution affecting the mother (high contamination found in breast milk) or the child after birth through air, food, water, insecticides, pesticides, heavy metal exposure in drugs and daily use chemicals and household goods.

Autism is multi-genetic factor with trigger by environmental pollution, low immunity leading to gut disbiosis and frequent respiratory infection. Research on natural killer cells and GC-macro phase activate GCMAF has shown 17% of children with autism can be caused by the use of GCMAF. These children found to be colonized with certain viral infection that will contribute to the disease. Indian literature survey identify that *phyllanthus nururi* does have the same antiviral property and work in the same manner. This study is a pilot open study began as objective parameters to study if immune protection in feaver in autistic children complicated by frequent infection and the effect it has on mitigating autistic behavior pattern.

2. Methods and materials

2.1 Subjects

Diagnosed cases of autism by clinical psychologist according to childhood autism rating scale (CAS) and after clinical screening were recruited for the study. The inclusion criteria followed was-willingness to participate in the study, age group 2-10 years and diagnosed cases of autism, not under any other medication and the participant age group more than 10 and below 1 year, not willingness the participation and any other health related issue were excluded for the study. Total five subjects from the outpatient department of UDAAN-for disabled, Delhi were selected for the study.

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2.2 Methods

Before recruiting the subjects informed consent from the parent of selected children was collected and the procedure of using the stimulative tablet explained to their parents. Total one month course and two tablets per-day (total sixty tablets) were provided to the parent of all selected children for this study. Before starting the use of stimulative tablet pre information according to UDAAN self-designed checklist for parent use was collected from all the parent of selected children in different domains such as respiratory infection, appetite, bowel upset, general health, attention deficit, hyperactivity, socialization and behavior. Similarly post information after the use of stimulative tablet was collected on same checklist through the parent of selected child. All collected data were analyzed by using statistical package for social sciences (SPSS) for the data analysis.

2.3 Statistical analysis

Statistical analysis was performed using SPSS 20.0 (IBM Inc., Chicago, USA) software to calculate the statistically significant changes in *p* values for pre vs. post assessment scores. $p < 0.05$ considered as significant results.

3. Results

Statistical analysis is summarized in table-1. The *p*-value obtained from different domains according to outcome measures such as UDAAN self-designed checklist for parent use. It suggested that behavioral problem ($p < 0.03$), hyperactivity ($p < 0.02$) and attention deficit ($p < 0.05$) have significant results.

Table 1: statistical analysis of outcomes

| Items | p value |
|--|---------|
| Respiratory infection | 0.3 |
| Socialization | 0.48 |
| Behavioral problem | 0.03 |
| Hyperactivity | 0.02 |
| Attention deficit | 0.05 |
| Studies | 0.21 |
| * $p < 0.05$ considered as significant | |

4. Conclusion

We found that stimulative tablet which made by extraction of *Phyllanthus niruri* has property to overcome the hyperactivity, improve behavioral issue and increase activeness. It can be used as major form of drug for neural repair in many neurological conditions such as cerebral palsy, autism and Alzheimer's. In future it can be used in large scale to treat many neurological as well as psychological diseases.

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