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Research Article

EFFICACY OF AADHI NASHAKA CHOORNA (AYURVEDIC COMPOUND FORMULATION) IN OBSESSIVE COMPULSIVE DISORDER: AN OPEN TRIAL

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ABSTRACT

Obsessive Compulsive Disorder (OCD) is a heterogeneous and multi dimensional disorder. The life time prevalence of OCD in general population is 2-3%. It is the fourth most common psychiatric diagnosis. There is lack of sufficient data regarding Ayurvedic strategy of managing this condition. The present study was aimed to assess the efficacy of "Aadhi nashaka choorna", a compound Ayurvedic formulation, which contains Ashwagandha (*Withania somnifera* Linn), Kushtha (*Saussurea lappa* Clarke) and Vacha (*Acorus calamus* Linn). In present study, 27 patients with OCD, satisfying the DSM-IV Diagnostic criteria were selected. Aadhi Nashaka Choorna with a dose of 4.5 gm, twice a day, after food, along with honey was given to them orally for one month. One month after completion of treatment, follow up was done. Before treatment, after treatment and after follow up, total three assessments were done. Criteria of assessment were based on the scoring of Yale Brown Obsessive Compulsive Scale (Y-BOCS) and Yale Brown Obsessive Compulsive Symptom Checklist was used to identify symptoms. Paired't' test was used for statistical evaluation. Aadhi nashaka choorna provided 24.66% of relief ($P < 0.001$) on Y-BOCS, which was considered as clinically not significant improvement.

Key Words: Obsessive Compulsive Disorder, OCD, Ayurveda, Ashwagandha, *Withania somnifera* Linn, Y-BOCS

INTRODUCTION

Obsessive Compulsive Disorder (OCD) is a heterogeneous and multi dimensional disorder. Obsession is a recurrent and intrusive thought, feeling, idea, or sensation. A compulsion is a conscious, standardized, recurrent thought or behavior, such as counting, checking, or avoiding. It can be a disabling disorder, because the obsessions can be time consuming and can interfere significantly with the person's normal routine, occupation functioning, usual social activities, or relationships with friends and family members. The life time prevalence of OCD in general population is 2-3%. It is the fourth most common psychiatric diagnosis. OCD is found in 10% of the outpatients in psychiatric clinics [1]. Even though OCD is a most prevalent condition, only few studies were conducted on this subject in Ayurvedic field.

In Ayurvedic classics, there are no clear clinical descriptions available which resembles with OCD. In Ayurvedic texts, most of the psychiatric conditions explained under the domain of Unmada (psychosis). The obsessions in OCD can be said as Mano vibhrama (disturbance of mental functions) & Buddhi vibhrama (cognitive disturbances) and compulsions as Cheshta vibhrama (disturbances in psychomotor activity). These mano, buddhi cheshta and aachara vibhramas are the pathological features of unmada [2]. Based on this, to treat OCD the drugs should be having unmadahara (anti psychotic) property.

In present study, "Aadhi nashaka choorna" was selected for treating OCD. This formulation has been in use for the management of the conditions like unmada successfully in the hospital where the present study has been conducted. Aadhi nashaka choorna contains three herbs, Ashwagandha (*Withania somnifera Linn*), Kushta (*Saussurea lappa Clarke*) and Vacha (*Acorus calamus Linn*), which have rakshoghna (protecting from germs / super natural forces) property and found useful in treating various psychiatric conditions.

Aim & Objective

To evaluate the efficacy of Aadhi nashaka choorna in the management of OCD

MATERIALS & METHODS

Selection of the patients

All patients fulfilling the inclusion criteria were selected from the OPD, irrespective of their caste, religion and economic status with their written informed consent.

Inclusion Criteria

1) The patients were selected according to the DSM-IV Diagnostic criteria for Obsessive Compulsive Disorder [3]
2) No discrimination of Sex, Caste, Religion, and Economic status
3) Age group from 16 to 60 years

Exclusion Criteria

1) Co morbid Psychosis
2) Female patients who are Pregnant or Lactating
3) Patients who are having any systemic diseases like Diabetes, Hypertension etc;

The study was cleared by the institutional ethical committee (Ref: IEC/ CL/ 04/ 07 dated 21.02.2007). Written consent was taken from each patient willing to participate before the start of the study. Patients were free to withdraw from the study at any time without giving any reason. A detailed Proforma was prepared incorporating Ayurvedic as well as Modern points. Total 27 patients were registered in the present study and all of them have completed the course of treatment without any drop outs.

Laboratory Investigations

Routine Hematological, biochemical and urine examination had been carried out according to the necessity. All or some of these investigations were carried out before the treatment to exclude organic pathology in suspected cases. If any of the abnormalities found in investigation reports those patients were excluded from the study but in present study no patient was excluded in such a manner.

Intervention

Aadhi nashaka choorna was given with the dose of 4.5 gm twice a day (i.e. 9 gm / day) along with honey through oral route after intake of food for 30 days. Follow up period was kept for 30 days after the treatment period.

Preparation of Aadhi nashaka choorna

For preparing Aadhi nashaka choorna, Ashwagandha, Kushta and Vacha root powders were collected and properly mixed in the ratio of 6:2:1. Each single dose (4.5 gm) contains Ashwagandha (3gm), Kushta (1gm) and Vacha (500mg). This powder was packed in air tight containers and dispensed to the patients.

Assessment

Before treatment, after treatment and after follow up total three assessments were carried out. A criterion of assessment was based on the scoring of Yale Brown Obsessive Compulsive Scale (Y-BOCS). It is the most common measure has been developed to assess improvement in treatment trials. It is composed of 10 Items (Questions) categorized in to 2 Domains (Five questions in obsession rating scale and five questions in compulsion rating scale). Each question is rated on a five point (0-4) scale. The questions are based on, time, handicap, frequency, controllability and discomfort due to obsessions as well as compulsions. Total score range of this scale is 0-40 [4].
Yale Brown Obsessive Compulsive Symptom Checklist (Y-BOCS-SC) was also used in the present study to identify the various types of obsession and compulsion present in the patients. This checklist includes more than 60 symptoms organized according to 15 separate categories of obsessions and compulsions. This scale comprehensively identifies all possible types of obsessions and compulsions [5].

Statistical Analysis

Statistical analysis was done by using "Student's Paired t-test". The information gathered on the basis of observations was subjected to statistical analysis in terms of Mean difference, Standard deviation (S.D), Standard error (S.E), Paired 't' test, were carried out. Statistically significant level was kept at, $p < 0.05$.

Overall Effect of Therapy

Overall effect of therapy was calculated by taking the Percentage of Relief based on the Yale – Brown Obsessive Compulsive Scale (Y-BOCS) and categorized in to,
100 % relief -- Cured.
>75 % to <100 % --- Marked improvement.
>50 % to 75% --- Moderate improvement.
>25 % to 50 % --- Mild improvement.
0 % to 25 % --- Unchanged.

OBSERVATIONS

In present study, 51.85% were female, 40.74% of subjects belong to 36-45 years age group, 62.96% were Muslims, 85.18% were from rural area, 33.33% of subjects were educated up to higher Secondary level, 92.59% of subjects belong to middle class, 77.77% were married, 66.67% were having progressive course of illness and 85.19% of subjects had negative Family history for OCD. Most of the patients i.e. 51.85% reported depressed mood and 44.44% were having anxious mood. Maximum number of the patients i.e. 62.97% was having severe to extreme range of OCD.

Maximum number of the patients i.e. 77.78% mentioned Contamination Obsessions, 59.25% Aggressive Obsessions, 48.14% Symmetrical Obsessions and 44.44% Religious Obsessions; Among compulsions, 92.59% mentioned Washing/Cleaning Compulsions, 81.48% Checking Compulsions, 48.14% Counting Compulsions and 44.44% Ordering/Arranging Compulsions.

RESULTS

Maximum i.e. 16.27% ($P<0.01$) of relief found in time spent on obsessions followed by resistance to obsessions 14.6% or relief ($P<0.01$) after treatment period. (Table 1) After follow up period maximum relief found in time spent on obsession i.e. 27.78% ($P<0.001$) followed by control over obsessions, 24.22% ($P<0.001$). (Table 2) Overall relief on total score of obsessions after treatment was 11.52% ($P<0.01$) and after follow up the relief was further improved to 22.21% ($P<0.001$). (Table 3 & 4)

Maximum i.e. 18.25% ($P<0.01$) of relief found in resistance to compulsions followed by time spent on compulsions 14.16% or relief ($P<0.01$) after treatment period. (Table 1) After follow up period maximum relief found in resistance to compulsions i.e. 31.23% ($P<0.001$) followed by control over compulsions, 30.37% ($P<0.001$). In items like time spent on compulsions and interference from compulsions relief was observed as 28.76% ($P<0.01$) and 26.14% ($P<0.001$) respectively. (Table 2) Overall relief on total score of compulsion after treatment was 12.92% ($P<0.001$) and after follow up the relief was further improved to 27.22% ($P<0.001$). (Table 3 & 4)

Overall Effect of Therapy based on Y-BOCS scoring, after treatment period, none of them got complete cure, marked and moderate improvement and 11.11% showed mild improvement whereas maximum number of the patients i.e. 88.89% were comes under unchanged or no relief category. After follow up period, some improvement was observed i.e. 3.7% showed marked and moderate improvement, whereas 33.33% got mild improvement and 59.6% were still unchanged. (Table 5)

DISCUSSION

OCD is thought to be one of the most intractable and disabling mental disorder in the community. It follows a chronic, fluctuating course and only rarely does the disorder resolve spontaneously. Despite various treatments are available many of the patients i.e. 40-60% fail to respond to an initial adequate treatment with various pharmacological agents [6]. By considering these factors for the present study, Aadhi nashaka choorna has been selected and it contains ingredients which are having various psychopharmacological actions and proved useful in the treatment of various neurotic as well as psychotic conditions.

Ashwagandha is the main ingredient of Aadhi nashaka choorna, it has the properties like, Vedanasthapana (analgesic), Mastishkashamaka (CNS depressant), Vajikarana (aphrodisiac), Balya (tonic), Brimhana (nourishing) and Rasayana (rejuvinative) [7]. Ashwagandha is as effective as Tranquilizers. Anxiety-relieving effects of Ashwagandha are similar to those achieved by the anti-anxiety drug lorazepam. Antidepressant effects were similar to those of the antidepressant drug imipramine. Ashwagandha produce GABA-like activity, which may account for the herb's anti-anxiety effects [8].

Table 1: Effect of therapy on individual questions of Y-BOCS (After treatment)

S. No	BT*	AT**	M. Diff	% of Relief	SD***	SE****	't' Value	P Value
Obsession Rating Scale								
1	2.52	2.11	0.41	16.27	0.64	0.12	3.33	< 0.01
2	2.52	2.22	0.30	11.90	0.61	0.12	2.53	< 0.05
3	2.44	2.33	0.11	4.51	0.42	0.08	1.36	> 0.05
4	2.81	2.41	0.41	14.60	0.75	0.14	2.84	< 0.01
5	2.89	2.59	0.30	10.38	0.78	0.15	1.99	> 0.05
Compulsion Rating Scale								
6	2.33	2.00	0.33	14.16	0.62	0.12	2.79	< 0.01
7	2.41	2.11	0.30	12.45	0.61	0.12	2.53	< 0.05
8	2.41	2.26	0.15	6.22	0.46	0.09	1.69	> 0.05
9	2.85	2.33	0.52	18.25	0.75	0.14	3.58	< 0.01
10	2.93	2.56	0.37	12.63	0.49	0.09	3.91	< 0.001

* Before Treatment, ** After Treatment, *** Standard Deviation, **** Standard Error

Table 2: Effect of therapy on individual questions of Y-BOCS (After follow up)

S. No	BT*	AT**	M. Diff	% of Relief	SD***	SE****	't' Value	P Value
Obsession Rating Scale								
1	2.52	1.81	0.70	27.78	0.82	0.16	4.44	< 0.001
2	2.52	1.96	0.56	22.22	0.80	0.15	3.16	< 0.01
3	2.44	2.11	0.33	13.52	0.68	0.13	2.55	< 0.05
4	2.81	2.19	0.63	22.42	0.88	0.17	3.71	< 0.01
5	2.89	2.19	0.70	24.22	0.78	0.15	4.72	< 0.001
Compulsion Rating Scale								
6	2.33	1.67	0.67	28.76	1.04	0.20	3.34	< 0.01
7	2.41	1.78	0.63	26.14	0.79	0.15	4.14	< 0.001
8	2.41	1.96	0.44	18.26	0.80	0.15	2.89	< 0.01
9	2.85	1.96	0.89	31.23	1.09	0.21	4.26	< 0.001
10	2.93	2.04	0.89	30.37	0.93	0.18	4.95	< 0.001

* Before Treatment, ** After Treatment, *** Standard Deviation, **** Standard Error

Table 3: Effect of therapy on total score of Y-BOCS (After treatment)

Domain	BT*	AT**	M. Diff	% of Relief	SD***	SE****	T Value	P Value
Obsession rating scale	13.19	11.67	1.52	11.52	2.31	0.44	3.42	< 0.01
Compulsion rating scale	12.93	11.26	1.67	12.92	1.98	0.38	4.38	< 0.001
Total score of Y-BOCS	26.11	22.93	3.18	12.18	3.98	0.77	4.16	< 0.001

* Before Treatment, ** After Treatment, *** Standard Deviation, **** Standard Error

Table 4: Effect of therapy on total score of Y-BOCS (After follow up)

Domain	BT*	AT**	M. Diff	% of Relief	SD***	SE****	T Value	P Value
Obsession rating scale	13.19	10.26	2.93	22.21	3.25	0.62	4.69	< 0.001
Compulsion rating scale	12.93	9.41	3.52	27.22	4.16	0.80	4.39	< 0.001
Total score of Y-BOCS	26.11	19.67	6.44	24.66	7.08	1.36	4.73	< 0.001

* Before Treatment, ** After Treatment, *** Standard Deviation, **** Standard Error

Table 5: Overall result of therapy

Assessment	Cured (%)	Marked Improvement (%)	Moderate Improvement (%)	Mild Improvement (%)	Unchanged (%)
After Treatment	0	0	0	11.11	88.89
After follow up	0	3.7	3.7	33	59.6

Kushta is having the properties like, Vedanasthapana, Rakshoghna, Vajikara, Avasadaka (depressant) and Aksheepashamaka (anti convulsant); it is useful in treating various psychosomatic disorders. A herbo mineral preparation in which Kushtha is one of the ingredient has given promising results in relieving the residual symptoms of Schizophrenia and is also effective in relieving symptoms of fresh cases [9].

Vacha has the properties like, Medhya (intellect promoting), Shamaka (depressant), Vedanasthapana and Akshepashamana. It is used as a sedative, anxiolytic, tranquilizer and rejuvenator. It is also used to reduce fatigue and to improve memory. Acorus calamus Linn inhibits the acetyl cholinesterase (AChE) and Mono Amino Oxidase (MAO) and having memory enhancing property in memory impairment, learning performance and behavior modifying [10].

In present study Aadhi nashaka choorna didn't provided relief. After treatment period on total score of Y-BOCS, only 12.18% relief (P<0.001) was observed which was slightly improved after follow up 24.66% (P<0.001). Even though no medicines were given during the follow up period, the improvement observed after follow up was higher than the relief obtained after treatment period. This may be because of the delayed response of OCD symptoms to Aadhi nashaka choorna.

Reasons for limited efficacy

Previous studies reported that the median time required for OCD was 16 weeks to get response to pharmacological agents [11]. Duration of treatment in the present study was only for one month. We suggest that future studies should consider longer duration.

There is often a delay of 5-10 years before the patients come to psychiatric attention [12]; it may be because of lack of awareness of this condition in general public as well as medical community. 99.59% of the subjects in the present study were having the disease chronicity of 10 to 20 years in the present study.

In present study, 66.67% of the subjects were having progressive course of the illness and 51.85% reported depressed mood and 44.44% were having anxious mood. Prolonged duration of OCD symptoms is reported to be associated with morbidity, functional impairment and increased risk of co morbidity [13]. These factors also may be the cause for poor outcome in the present study.

OCD is a chronic, recurrent illness that has an extremely poor prognosis. Better outcome was predicted by less initial severity of the disease [14]. Maximum number of the patients i.e. 62.97% was having severe to extreme range of OCD in present study. The disease itself considered as resistant to treatment or disease of Poor prognosis. 20–40% of patients either remains ill or has worsening of their symptoms [15].

All these factors might have influenced the outcome in the present study. These factors may be the reasons for poor outcome.

CONCLUSION

Aadhi nashaka choorna has shown limited efficacy in the management of OCD in the present trial.

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