



AYURVEDIC MANAGEMENT OF SCHIZOPHRENIA – A CASE SERIES

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ABSTRACT

INTRODUCTION: Schizophrenia is a devastating clinical syndrome among various morbid psychic manifestations involving drastic impairments in cognition, emotion, perception and behavior. Usually the disease commences before the age of 25 years which mostly persists throughout one's life span. The lifetime prevalence of schizophrenia appears to be approximately 0.3% - 0.7% with some geographic variation. WHO reports that schizophrenia affects more than 21 million people worldwide. The prevalence rate in India is observed as 2.3 per 1000.

Unmāda explained in Ayurveda classics, under which majority of the unsound or diseased states of mind are grouped. Many of the characteristic features of Schizophrenia are similar to that of *Unmāda*. This disorder affects mind as well as body because of having *adhishthāna* in both *sarīra* and *mana*. It influences a person's day to day activities and exhibits abnormal and bizarre behaviors. In this work, five cases of Schizophrenia were taken and managed by Ayurvedic principles including *śodhana* and *śamana* therapy, selected on the basis of *roga-rogi parīksha*.

METHODOLOGY: Five cases of Schizophrenia diagnosed as per DSM V from IPD of Government Ayurveda Research Institute of Mental Health and Hygiene & IPD of Manassanthi, Vaidyaratnam PS Varier Ayurveda College, Kottakkal were included. In all the five cases, severity of symptoms was assessed by using Positive And Negative Syndrome Scale (PANSS) before and after the treatment. Managements such as *śodhanānga snehapāna*, *vamana*, *virecana*, *vasti*, *nasya* and *śamana aushadha* were selected on the basis of predominance of vitiated *dosha* and *lakshana* at the time of admission.

RESULT: Ayurvedic management was found to be effective in reducing the symptoms of schizophrenia. Improvement was noted in PANSS while comparing the scores before and after treatments.

KEYWORDS : Schizophrenia, *Unmāda*, *Śodhana*, *Dhūpana*, PANSS**INTRODUCTION**

Schizophrenia causes psychosis and is associated with considerable disability and may affect all areas of life including personal, familial, social, educational, and occupational functioning. Stigma, discrimination, and violation of human rights of people with schizophrenia are common^[1].

According to DSM V, the life time prevalence of Schizophrenia is 0.3 – 0.7%^[2]. World Health Organization opines that more than 21 million people around worldwide are suffering from Schizophrenia^[3] and its prevalence in India is 0.4% based on National mental health survey^[4]. Antipsychotics are the mainstream treatment for Schizophrenia. Even though these medications have a promising result in minimizing the symptomatology, a wide range of adverse effects^[5] are being reported from authentic sources such as movement disorders, life style diseases including obesity, diabetes mellitus etc.

Ayurveda have a great role in this arena, along with effective management of symptomatology, good quality life can be provided to the patients^[6].

METHODOLOGY

Five cases diagnosed with Schizophrenia as per DSM V taken from IPD of Government Ayurveda Research Institute of Mental Health and Hygiene & Manassanthi IPD of VPSV Ayurveda College, Kottakkal.

Table 1 – PRELIMINARY DETAILS OF THE PATIENTS

Case	1	2	3	4	5
Gender	Female	Female	Female	Female	Female
Age	26	42	46	32	15
Duration	9 years	18 years	4 months	10 years	3 years
Psychotropic medication	Sizodon LS Nexipride 50mg	Alkepin 150mg	-	Qutipin 400mg Sizopin 50mg	Sulpidon 200mg Parkinta 2mg Zeptol 400mg
Family history	Present	Present	Present	Present	Present

All the five cases had presenting complaints of hallucination and delusion, three of them presented with disorganized speech. While considering the negative symptoms, asociality and anhedonia were present in all the five cases, avolition was present in two cases.

Disturbance in sleep, reduced concentration, increased anger and tension were reported by all the patients. Suicidal ideations were there in two cases.

To diagnose a psychiatric disease, history taking and mental status examination (MSE) are inevitable. On MSE, four of them showed impairment in speech, thought, mood, and affect. Higher mental functions such as attention and concentration were impaired in all the five cases. Abstract thinking, and judgement were impaired in four cases. For all, insight lied in the range grade 1 to 3.

Śodhanānga snehapāna, *vamana*, *virecana*, *vasti*, *nasya* and *śamana aushadha* were selected on the basis of predominance of vitiated *dosha* and *lakshana* that were present at the time of admission. Most of the symptoms of schizophrenia can be explained under the broad term *Unmāda* as there is *vibhrama* in the domains of *mana*, *buddhi*, *śeela*, *ceshta* etc. A protocol has to be framed to treat this disease comprising of *rūkshana*, *snehana*, *śodhana*, *śamana*, *satvāvajaya*, and *rasāyana*. But this protocol may vary from person to person based on *roga-rogi parīksha*. So an individualized approach is necessary in each case.

Out of these five cases, three cases were diagnosed as *vātika unmāda* with *anubandha* of *kapha dosha*, one case as *kaphaja unmāda* with *anubandha* of *vāta dosha* and one case as *paittika unmāda* with *anubandha* of *kaphadosha* based on the following symptoms.

Table No 2 – LAKSHANAS OF UNMĀDA

Case 1 - Vāta-kaphaja unmāda	Case 2 - Vāta-kaphaja unmāda	Case 3 - Vāta-kaphaja unmāda	Case 4 - Kapha-vātajaja unmāda	Case 5 - Pitta-kaphaja unmāda
<ul style="list-style-type: none"> सततमनियतानां च गिरामुत्सर्ग^[7] परिसरगमजसम्^[7] शब्दानुकरण^[8] भय^[7] अशब्दश्रवण^[7] क्रोध^[7] 	<ul style="list-style-type: none"> सततमनियतानां च गिरामुत्सर्ग अङ्गविक्षेपणम्^[8] अकस्मात् रोदनं^[8] क्रोध 	<ul style="list-style-type: none"> उत्पिण्डितारुणाक्ष^[8] अकस्मात् रोदनं विनिद्रता^[7] क्रोध 	<ul style="list-style-type: none"> सततं अनियतानां च गिरामुत्सर्ग भय विनिद्रता क्रोध 	<ul style="list-style-type: none"> मुहिलोष्ट अभिद्रव^[8] अमर्षम्^[7] क्रोध सन्तर्जन^[8]

• शौचविद्वेष ^[8]	• शौचविद्वेष	• शौचविद्वेष	• शौचविद्वेष	• शौचविद्वेष
• रहम्रीति ^[8]	• रहम्रीति	• अल्प वाक् ^[8]	• अल्पाहार	• स्थानमेकदेशे ^[8]
• श्वयथुरानने ^[8]	• अल्पाहार ^[8]	• श्वयथुरानने	• अल्प वाक्	• अङ्ग गौरव ^[7]
• अरोचक ^[8]			• रहम्रीति	

Table no 3 – INTERNAL MEDICINES ADMINISTERED

Vāta-kaphaja unmāda (Case 1)	Vāta-kaphaja unmāda (Case 2)	Vāta-kaphaja unmāda (Case 3)	Kapha- vātaja unmāda (Case 4)	Pitta-kaphaja unmāda (Case 5)
<ul style="list-style-type: none"> • <i>Kalyānaka kwāda</i>^[9] 15ml , bd, before food • <i>Śweta sankhupus hpi</i>^[10] + <i>Yashṭi</i>^[11] <i>cūrṇa</i> – 3gm+ honey, bd, after food • <i>Sāraswata cūrṇa</i> – 5gm+ honey bd after food • <i>a</i>^[12], 5gm+ honey, bd, after food 	<ul style="list-style-type: none"> • <i>Śweta śankhup ushpi</i> + <i>Sarpaga ndha</i>^[13] + <i>Gokshura</i> • <i>cūrṇa</i>^[14] – 2gm, bd, after food • <i>Sāraswata cūrṇa</i> – 5gm+ honey bd after food 	<ul style="list-style-type: none"> • <i>Śweta śankhupu shpi</i> + <i>Sarpaga ndha</i> + <i>Gokshura cūrṇa</i> – 2gm, bd, after food with warm water • <i>Somalata cūrṇa</i>^[15] 5gm bd with warm water 	<ul style="list-style-type: none"> • <i>Sweta sankhupu shpi</i> + <i>Sarpagan dha</i> + <i>Gokshura cūrṇa</i> – 2gm, bd, A/F • <i>Vaca</i>^[16] + <i>Aamaya</i>^[17] <i>cūrṇa</i> 3gm, bd, A/F 	<ul style="list-style-type: none"> • <i>Drākṣhād i kwāda</i>^[18] – 90 ml bd, before food • <i>Aśwagan dha</i>^[19] + <i>Yashṭi</i> + <i>Śweta śankhupu shpi</i> • <i>Cūrṇa</i> – 3gm bd with luke warm water • <i>Tiktaka ghrita</i>^[20] – 10ml Morning before food

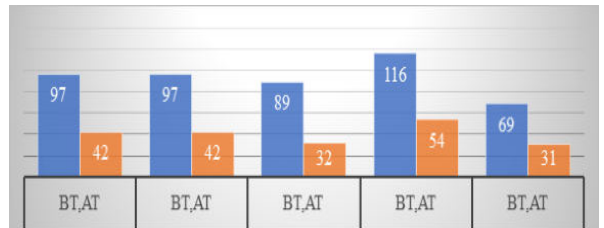
Table No 4 – PROCEDURES DONE

Procedure	Vāta-kaphaja unmāda (Case 1)	Vāta-kaphaja unmāda (Case 2)	Vāta-kaphaja unmāda (Case 3)	Kapha- vātaja unmāda (Case 4)	Pitta-kaphaja unmāda (Case 5)
<i>Virecana</i>	<i>Avipatti cūrṇa</i> ^[21] – 30gm	<i>Avipatti cūrṇa</i> – 25gm			
<i>Sirodhara</i> (7 days)	<i>Āmalaki</i> ^[22] , <i>Uśīra</i> ^[23] , <i>Yashṭi</i> , <i>Gulūci</i> ^[24]	-	<i>Āmalaki</i> , <i>Uśīra</i> , <i>Yashṭi</i> , <i>Gulūci</i>	<i>Āmalaki</i> , <i>Uśīra</i> , <i>Yashṭi</i> , <i>Gulūci</i>	<i>Kshīradhāra</i> with <i>Panchagānda ha cūrṇa</i> ^[25]
<i>Sirolepa</i> (7 days)	-	<i>Āmalaki</i> , <i>Uśīra</i> , <i>Yashṭi</i> , <i>Gulūci</i>	-	-	
<i>Rūksana</i>	<i>Takra</i> + <i>Ashta Cūrṇa</i> ^[26] , 5gm- 3days	<i>Gandharva hashtādi Kashāya</i> ^[27] 60ml Bd <i>Shad dharana</i> ^[28] Tab 2Tds – 5 days	<i>Takra</i> + <i>Ashta Cūrṇa</i> , 5gm- 3days	<i>Takra</i> + <i>Ashta Cūrṇa</i> , 5gm- 3days	<i>Takra</i> + <i>Triphala Cūrṇa</i> ^[29] 10 gm - 5 days
<i>Snehapāna</i> (7days)	<i>Pancha gavya ghrita</i> ^[30] (30ml- 220ml)	<i>Kalyānaka ghrita</i> ^[31] (30- 200ml)	<i>Kalyānaka ghrita</i> (30- 200ml)	<i>Pancha gavya ghrita</i> (30ml- 220ml)	<i>Tiktaka ghrita</i> (30ml – 240ml)
<i>Vamana</i>	Not done	Not done	Not done	<i>Dhāmārga va</i> ^[32] (5gm)+ <i>Yashṭi</i> (5gm) + <i>Vaca</i> (2gm)+ <i>Madhu</i> + <i>Saindhava</i>	Not done
				<i>Snehapāna</i> with <i>Panchaga vya ghrita</i> (50ml- 150ml) * 3days	
<i>Virecana</i> (7 am)	<i>Gandharva eraṇḍa</i>	<i>Avipatti Cūrṇa</i> -	<i>Avipatti Cūrṇa</i> -	<i>Avipatti Cūrṇa</i> -	<i>Avipatti Cūrṇa</i>

	<i>taila</i> ^[33] 40ml	25gm	25gm	25gm	25gm
<i>Vasti Sneha vasti</i> (80ml)	<i>Panchaga vya ghrita</i>	<i>Kalyānaka ghrita</i>	<i>Kalyānaka ghrita</i>	<i>Panchaga vya ghrita</i>	-
<i>Kashāya vasti</i> (720ml)	<i>Doshahara vasti</i> ^[34]	<i>Eraṇḍa mūlādi nirooha</i> ^[35]	<i>Eraṇḍa mūlādi nirooha</i>	<i>Doshahara vasti</i>	
<i>Nasya</i> (1 ml/ nostril - 7 days)	<i>Purāṇa Ghrita</i> ^[36]	<i>Purāṇa Ghrita</i>	-	<i>Purāṇa Ghrita</i>	<i>Ksheerabala 101 A</i> ^[37]
<i>Dhūpana</i> (daily)	<i>Jaṭādi varti</i> ^[38]	<i>Jaṭādi varti</i>	<i>Jaṭādi varti</i>	<i>Jaṭādi varti</i>	-
<i>Siropicu</i> (7 days)	<i>Śankhu-pushpi taila</i> ^[39]	<i>Śankhu-pushpi taila</i>	<i>Śankhu-pushpi taila</i>		-

RESULT

Figure No 1 BT -AT CHART on PANSS



Ayurveda management in Schizophrenia was found to be effective in the domains of reducing the symptomatology, improving quality of life and tapering the dose of psychotropics without any side effects. Percentage of relief on PANSS in these cases was 56.70, 56.70, 64.04, 53.44, and 55 respectively.

CONDITION AT THE TIME OF DISCHARGE

Sleep was improved in all cases. Laziness, delusions and hallucinations reduced. In two cases, they could able to taper the dose of psychotropics, in one case involuntary hand movements reduced. In the case diagnosed as *paṭtika unmāda*, no impulsivity was noted during the course of treatment.

DISCUSSION

An initial *Virecana* (without *snehapāna*) helps to impart improvement in *nidra*, reducing *ushnata* and aggression^[41], which was reported by a study done by Rajena et al., in 2005. This is also for making the patient adaptive for further treatments. *Virecana* was performed only in two cases, the remaining three were not ready to accept any kind of internal medications since they believed somebody will mix poison in their medicine. For these kind of patients, the best approach is either *Sirodhāra* or *Sirolepa*.

DEEPANA and PĀCANA

Deepana and *pācana* was done in all cases prior to *shodhana*, to correct agni. In three cases having vitiation of *Vāta* and *Kapha*, it was done with *Ashta cūrṇa* (5gm) mixed with *takra* after assessing the doshic predominance. In one case patient had complaints of *śakritgraha*, *ādhmāna* and *aruci*, hence the affected was given with *Gandharvahastādi kashāya* and *Shaddharaṇa gulika*. In *paṭtikomāda* case, *Triphala cūrṇa* and *takra* was administered as the patient had complaints of *śakritgraha* and *sthoulya*.

SNEHAPĀNA

Ghee is suitable for those who wish to enhance *dhi*(intellect), *smṛiti*(memory), *medha* (discriminative ability) etc. For *snehapāna*, *ghrita* was selected because of its lipophilic action, so that *ghrita* can easily pass blood brain barrier. *Kalyānaka ghrita* given for *vāta-kaphajomada* patients, besides *dosha samanata*, they also had complaints of *alpamedhasi* (low intellect), *alpa pāvaka* (poor digestive power), *pāṇdu* (anaemia) and *skhalat vāci* (slipping voice). *Laghu, ushṇa, tikṣṇa* and *Kaphahara* nature of property of *Panchagavya ghrita* itself shows its *srotośodhaka* property, and also it has been used since many years, in which thought abnormalities are predominant^[42]. Conventionally *tiktaka ghrita* showed an immense result in reducing the symptomatology of *paṭtika unmāda*, so it was given in patient with predominance of *Pitta*.

VAMANA

The procedure *Vamana* was undertaken in *kaphaja ummāda* patient with *Dhāmargava*, which is specifically mentioned for *vamana* in *mānasika roga*. Regarding the mode of action of *vamana*, the chemical constituents present in the *vamanoushadhi* activate enterochromaffin cells of GIT mucosa, which in turn results in the secretion of 5 HT, which acts on 5HT₂ receptor of vagal afferents. This afferent fibres transmit excitation to the Nucleus tractus solitarius(NTS) and chemoreceptor trigger zone(CRTZ). To induce vomiting, 5 HT acts both secretory and peristaltic reflexes. It shows some effect on serotonin to secrete more during process of emesis or to induce vomiting. Same way vomiting area contains GABA and Dopamine. This may stimulate during vomiting^[43]. Since imbalance in neurotransmitter as being one among the cause of Schizophrenia, *vamana* can help up to an extent in reducing the symptoms of schizophrenia. Since the patient started to talk without hesitation after *vamana*, we can interpret the improvement in negative symptoms such as *alogia* and *asociality*.

VIRECANA

Virecana was done with *Avipatti cūrṇa* in all the four cases because of *alpa vyaapat* and *sukha virecaka*. In one case *virecana* was done by *Gandharva eranda*, as the patient had complaints of back pain radiating to left leg and *ādhmāna*, so in order to make *vāta anulomana*, this medicine was selected. After *virecana* marked improvement was noted in the hallucinatory behaviour of patients. In all the three *vāta ummāda* cases, their delusion of reference became ideas of reference. Quality of sleep improved in *kaphaja ummāda* patient and no use of abusive words reported after the *virecana* in *paittika ummāda* patient.

VASTI

Even though all the patients were timid towards the procedure *vasti*, improvement was noted in negative symptoms (*anhedonia*) in *Kapha-vatikonmāda* patient and no crying spells reported in other two patients. Action of *vasti* can be explained as large scale production of gut microbiota i.e., butyrate producing bacteria such as *firmicutes*, *proteobacteria* etc after to this procedure. These bacteria has close connection with sense of well-being^[44].

NASYA

Nasya is an important procedure whenever there is a *rotorodha* in *uttamānga*. Effect of *nasya* can be explained on the basis of neurovascular, neuro endocrine and neuropsychological action^[45]. For *nasya*, *Purāṇa ghrita* was selected in *Ummāda* having vitiation of *vāta* and *kapha* as *pradhaana dosha*, because of its *tikṣṇa* and *srotośodhaka* property. *Ksheerabala 7Avarti* was selected in *paittika ummāda* after all other *śodhana* procedures by considering its *br̥mhana*, *srotośodhana* and *rasāyana* property. After *nasya*, concentration was improved in two cases, repetitive hand movements was reduced in one case and lightness of head reported by one patient.

DHŪPANA

Dhūpana shows a great role in managing the psychotic features of Schizophrenia, this was very evident in a study conducted by Aswani et al., In *Ummāda cikitsa*, *dhūpana* is ideal in *vāta-kapha* dominant conditions. In these patients *Jataadi varti* was used (*jadāmansi*, *vaca*, *hingū*, *haridra* and *dāruharidra*). Through *nāsa*, *dhūpa* directly enters into *śīras* and removes *āvaraṇa* caused to the *indriya* and *manovaha srotas* and brings an equilibrium of *rajas* and *tamas* and *tridosha* and then reduces the symptoms caused by *ashtāvibhrama* of *mand*^[46].

The mode of action of inhalation is explained in a study conducted by Dalinda Isabel et al., as the essential oils coming out of the drugs during inhalation can be reached in circulatory system via blood capillaries of nose and bronchi. While inhaling the fumes it touches olfactory epithelium and directly stimulates the brain. In the olfactory bulb it arouses limbic system and hypothalamus and in olfactory cortex it regulates neurotransmitter release and helps in controlling the symptoms^[47]. During *dhūpana*, marked changes were noted in reduction of auditory hallucination.

SIRODHĀRA and SIROLEPA

Śirodhāra is classically advised for many diseases including insomnia, attention deficit hyperactivity disorder, anxiety disorders, phobia, depression, essential hypertension and other psychosomatic disorders^[48]. Studies supported the action of *śirodhāra* on central nervous system. Due to the dripping of medicated liquid over the forehead, prolonged and continuous pressure causes tranquillity of mind and reduces stress by modulating nerve stimulation^[49].

Even though procedure *Śirolepa* is effective in managing the symptomatology, the exact mechanism of action is not known. *Śirodhāra* were done in four cases and *śirolepa* only in one case. During these procedures, tension and irritability of patients got reduced and their sleep improved.

SIROPICU

Śiropicu was done in all the *vātika ummāda* cases with *śankhupushpi tailam* as it has an effect on *kānṭhi*, *medha*, *dhṛiti* and *pushṭi*. After *śiropicu* both the quality and quantity of sleep got improved and reduction of tension reported by the patients.

CONCLUSION

Even though Schizophrenia can be seen under the purview of *ummāda*, Ayurvedic management towards the diagnosed cases of Schizophrenia will vary according to *nidāna*, *dosha dushṭi*, *lakṣhaṇa*, *bala of roga and rogi*. The severity of symptoms of Schizophrenia was reduced after *Sodhana cikitsa* and also the improvement was noticed in the quality of life of patients in terms of their communication and working skill.

Large sample studies should be conducted to generalize these results and to explore the possibilities of Ayurveda in managing the symptomatology of Schizophrenia and reported for the benefit of the society, so as to improve the quality of life of the affected.

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