

**SCHIZOPHRENIA (UNMAD) AND ROLE OF AYURVEDA IN ITS MANAGEMENT**

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**ABSTRACT**

Worldwide about 1 percent of the population is diagnosed with schizophrenia. Schizophrenia is a mental disorder that is characterized by disturbances in thought (such as delusions), perception (such as hallucinations), and behavior (such as disorganized speech or catatonic behavior), by a loss of emotional responsiveness and extreme apathy, and by noticeable deterioration in the level of functioning in everyday life. Unmad is a similar clinical condition described in Ayurveda. The causative factors vitiate the Doshas which afflict Hrudaya (heart), which is the abode of intellect of a person having less of Sattva (intellect), and while being located in the Manovaha srotas (Channels carrying Psychic impulses), they afflict the mind. This causes perverted intellect, restless eyes, impatience, and incoherent speech, loss of memory, intellect and perception. Modern Antipsychotic drugs are usually effective in relieving symptoms of psychosis in short term. The long term use of antipsychotics is associated with side effects and contraindications. Ayurveda believes in balancing dosha to remove the root causes of the disorders and normalize brain. It is achieved by Ayurvedic approach that includes shaman, shodhan, sattvavajaya chikitsa. By using this line of treatment we can not only treat but also can minimize the adverse effects of the same.

**KEYWORDS:** Schizophrenia, Unmad, Ayurveda.

**INTRODUCTION**

Schizophrenia is among the most disabling and economically catastrophic medical disorders, ranked by the World Health Organization as one of the top ten illnesses contributing to the global burden of disease.<sup>[1]</sup> Characteristics of schizophrenia typically include positive symptoms, such as hallucinations or delusions; disorganized speech; negative symptoms, such as a flat affect or poverty of speech; and impairments in cognition, including attention, memory, and executive functions. The illness is commonly associated with impairments in social and occupational functioning.<sup>[2]</sup> Antipsychotic medications are first-line treatment for schizophrenia. Evidence-based psychosocial interventions in conjunction with pharmacotherapy can help patients achieve recovery. Ayurveda explains imbalance in three doshas Vata, Pitta and Kapha singly

or all of them together can cause *Unmad*. The aggravated *Doshas* in an individual with *Alpa satwa* (weak psyche) mounts upwards through *Manovaha srotas* vitiate the *Hridaya* which is the seat of *Buddhi* and disturb the *Manas*. There by the *Manovahasrotas* gets occluded. As a result *Citta* gets disturbed and in turn causes impairment of *Budhhi*. Due to this, the individual person feel different sign and symptoms like loss of confidence, irrelevant talk, biased willing and thinking, deprived memory/ decision/ orientation and responsiveness.

**MATERIAL AND METHOD**

Conceptual study- For this all the verses that dealt with Schizophrenia w.s.r to *Unmad* were taken under specific headings. The aetio-pathogenesis, symptomatologies were taken from *Ayurveda* & modern medical texts, research articles, internet sources, *Ayurveda* data base.

**DISEASE REVIEW**

**Aetiology of Unmad (Nidan)<sup>[3]</sup>**

<i>Aaharaj Nidan</i>	<i>Viharaj Nidan</i>	<i>Mansika &amp; Indriyarth Nidan</i>	<i>Doshaj Nidan</i>
• Intake of mutually contradictory,	• Disrespect of God, teachers and elders	• Mental disturbance caused due to trauma	• Vitiated doshas (vata, pitta and kapha singly

polluted and impure food and drinks	• Unwholesome physical activities		or all doshas)
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**Aetiology of Unmad (Modern sciences):**<sup>[4]</sup> There are a number of factors that contributes to the development of schizophrenia in a person. This includes;

**Heredity:** The greatest risk for developing schizophrenia is having a first-degree relative with the disease (risk is 6.5%); more than 40% of monozygotic twins of those with schizophrenia are also affected. There is high possibility of children developing schizophrenia passed from parents as the illness tends to run in a family.

**Abnormality in brain:** Abnormal brain structure is another factor contributing to the development of schizophrenia in a person.

**Environment:** Schizophrenia is likely to occur when a person is undergoing physical and hormonal change especially when these changes occur under stressful situations or poor social.

**Brain chemistry:** Lack of chemical balance in the brain is other factor that contributes to the development of schizophrenia. Example is dopamine chemical which act as neurotransmitter that helps in sending of messages between nerve cells.

**Substance abuse:** A number of drugs have been associated with the development of schizophrenia, including cannabis, cocaine, and amphetamine. About half of those with schizophrenia use drugs or alcohol excessively.

Cannabis is associated with a dose-dependent increase in the risk of developing a psychotic disorder. Amphetamine, cocaine, and to a lesser extent alcohol, can result in psychosis that presents very similarly to schizophrenia.

**Prenatal:** Factors such as hypoxia and infection, or stress and malnutrition in the mother during fetal development, may result in a slight increase in the risk of schizophrenia later in life. People diagnosed with schizophrenia are more likely to have been born in winter or spring (at least in the northern hemisphere), which may be a result of increased rates of viral exposures in utero.

**Pathogenesis (Samprapti) By Ayurvedic Literature:**<sup>[5]</sup> Due to etiological factors *Doshas* get aggravated in individual with *Alpasatva* (weak mental strength), mounting upwards through *Manovaha srotas* and vitiate heart, which is seat of *Buddhi* and disturbs the *Manas* and occlude *Manovaha srotas*, as a result *Chhita* become disturbed. Thus in turn causes loss of *Buddhi*. Due to this, the individual losses the power of discrimination and indulges in faulty activities.

**Pathophysiology (According to modern medical sciences)**<sup>[6]</sup>

Anatomic, neurotransmitter, and immune system abnormalities have been implicated in the pathophysiology of schizophrenia.

#### Anatomic abnormalities

Neuro-imaging studies show differences between the brains of those with schizophrenia and those without this disorder. For example, the ventricles are somewhat larger, there is decreased brain volume in medial temporal areas, and changes are seen in the hippocampus.

Interest has also focused on the various connections within the brain rather than on localization in a single part of the brain. Magnetic resonance imaging (MRI) studies show anatomic abnormalities in a network of neocortical and limbic regions and interconnecting white-matter tracts. A meta-analysis of studies using diffusion tensor imaging (DTI) to examine white matter found that 2 networks of white-matter tracts are reduced in schizophrenia.

In the Edinburgh High-Risk Study, brain imaging showed reductions in whole-brain volume and in left and right prefrontal and temporal lobe volumes in 17 of 146 people who were at high genetic risk for schizophrenia. The changes in prefrontal lobes were associated with increasing severity of psychotic symptoms.

In a meta-analysis of 27 longitudinal MRI studies comparing schizophrenic patients with control subjects, schizophrenia was associated with structural brain abnormalities that progressed over time. The abnormalities identified included loss of whole-brain volume in both gray and white matter and increases in lateral ventricular volume.

#### Neurotransmitter system abnormalities

Abnormalities of the dopaminergic system are thought to exist in schizophrenia. The first clearly effective antipsychotic drugs, chlorpromazine and reserpine, were structurally different from each other, but they shared antidopaminergic properties. Drugs that diminish the firing rates of mesolimbic dopamine D2 neurons are antipsychotic, and drugs that stimulate these neurons (eg, amphetamines) exacerbate psychotic symptoms.

Hypodopaminergic activity in the mesocortical system, leading to negative symptoms, and hyperdopaminergic activity in the mesolimbic system, leading to positive symptoms, may coexist. (Negative and positive symptoms are defined elsewhere; see Presentation.) Moreover, the newer antipsychotic drugs block both dopamine D2 and serotonin (5-hydroxytryptamine [5-HT]) receptors.

Clozapine, perhaps the most effective antipsychotic agent, is a particularly weak dopamine D2 antagonist. Thus, other neurotransmitter systems, such as norepinephrine, serotonin, and gamma-aminobutyric acid (GABA), are undoubtedly involved.

Much research focuses on the *N*-methyl-D-aspartate (NMDA) subclass of glutamate receptors because NMDA antagonists, such as phencyclidine and ketamine, can lead to psychotic symptoms in healthy subjects. Some researchers consider schizophrenia, in large part, a hypoglutamatergic disorder.

### Inflammation and immune function

Immune function is disturbed in schizophrenia. Over activation of the immune system (eg, from prenatal infection or postnatal stress) may result in over expression of inflammatory cytokines and subsequent alteration of brain structure and function. For example, schizophrenic patients have elevated levels of proinflammatory cytokines that activate the kynurenine pathway, by which tryptophan is metabolized into kynurenic and quinolinic acids; these acids regulate NMDA receptor activity and may also be involved in dopamine regulation.

### Symptoms

Symptoms/Signs <sup>[9]</sup>	Lakshan <sup>[10]</sup>
Disorganized speech	Irrelevant talking (saying illogical things)
Hallucination (mainly auditory)	<i>Swan Karnyo</i>
Bizarre behavior	Talk to themselves, laughing, dancing, singing suddenly without explanation, maintain rigid pose for hours
Social withdrawal	Less talkative, less movements
Deterioration of personal hygiene	<i>Shaucha dvesha</i>
Insomnia	<i>Nidranasha</i>
Excited motor signs- shout, talk rapidly, act out in violence	Irritation, anger, excitement on inappropriate occasions

### Role of Ayurveda in the Management of Schizophrenia (UNMAD)

Patient suffering from *Unmad* first he/she should be treated with *Sneha* (unction) and *Sweda* (sudation) and then subjected for evacuation with drastic emetics, purgatives and *shirovirechan*.<sup>[11]</sup>

**Shodhan Chikitsa:** The described principle of management is as follows.

*Vataj Unmad:* *Snehan* followed by *mridu shodhan*

*Pittaj Unmad:* *Virechan* (purgation)

*Kaphaj Unmad:* *Vaman* (emesis)

After elimination therapy *Samsarjan Krama* (dietic) regimen should be followed.

**Shaman Chikitsa:** It includes oral use of different single and compound herbal and herbo-mineral formulations.

Insulin resistance and metabolic disturbances, which are common in the schizophrenic population, have also been linked to inflammation. Thus, inflammation might be related both to the psychopathology of schizophrenia and to metabolic disturbances seen in patients with schizophrenia.

**Classification of Schizophrenia:**<sup>[7]</sup> There are four sub types of schizophrenia.

1. Catatonic type schizophrenia: This type describes patients whose clinical presentation is dominated by profound changes in motor activity, negativism and echolalia or echopraxia.
2. Paranoid type schizophrenia: This type describes patients who have a prominent preoccupation with a specific delusional system.
3. Disorganised type schizophrenia: This type of describes patients who have disorganized speech and behaviour are accompanied by a superficial or silly affect.
4. Residual type schizophrenia: In this type, negative symptomatology exists in the absence of delusions, hallucinations, or motor disturbance.

**Types of Unmad according to Ayurveda:**<sup>[8]</sup> Five types of *Unmad* are as follows: *Vataj*, *Pittaj*, *Kaphaj*, *Sannipataj* and *Agantuj*.

**Physical and mental shock therapy:**<sup>[12]</sup> *Ayurveda* especially emphasis on physical and mental shock therapies in *Unmad* patients for restoring the derailed thought process. The methods advocated in principle are as *Bhaya darshan* (causing fright), *Vismapana* (surprise), *Vismarana* (obligation of memory), *Kshobhana* (administration of irritants), *Harshana* (elation of spirits), *Bharthsana* (threats), *bandhan* (bindings), *swapna* (induction of hypnosis) and *samvahan* (gentle massage).

**Bhutonmada Chikitsa:** Use of old *Ghrta* (10-100 years old) and *Rakshoghna dravyas*.

**Sattvavajaya Chikitsa:** It is a non pharmacological approach for treating the mental disorders and equal to psychotherapy.

**Ayurvedic formulations for management of Unmad:**

Following single and compound formulations can be used for the management of *Unmad*.

Type of formulation	Name of Formulation
Single drugs	<i>Vacha</i> <sup>[13]</sup>
	<i>Jyotishmati</i> <sup>[14]</sup>
<i>Churna</i>	<i>Saraswat churna</i> <sup>[15]</sup>
<i>Ghrita</i> <sup>[16]</sup>	<i>Hingwadi Ghrita</i>
	<i>Kalyanak Ghrita</i>
	<i>MahaKalyanak Ghrita</i>
	<i>Mahapaishachik Ghrita</i>
	<i>Lashunadi Ghrita</i>
<i>Shiva Ghrita</i>	
<i>Tail</i> <sup>[17]</sup>	<i>Shiva Tail</i>
<i>Bhasma/Rasaushadhis</i> <sup>[18]</sup>	<i>Unmad Parpati Rasa</i>
	<i>Unmadbhanjani Vatika</i>
	<i>Unmadgajakesari Rasa</i>
	<i>Unmadgajankusha Rasa</i>
	<i>Unmadbhanjan Rasa</i>
	<i>Chaturbhuj Rasa</i>

**DISCUSSION**

*Ayurveda* has described three types of management for every disease viz; *Daiva Vyapashrya Chikitsa* (Spiritual Therapy), *Sattvavajaya Chikitsa* (Ayurvedic Psychotherapy) and *Yukti Vyapashraya Chikitsa* which includes *Shodhan* i.e. elimination of vitiated *Doshas* by *Panchkarma* therapy and *Sanshaman* that is alleviation of *Doshas* by different type drugs, diets and activities. *Ayurveda* has many herbal and herbo-mineral formulations in different dosage forms. Majority of these drugs are either *Ghrita* preparations or *Rasaushadhis*. *Ghrita* have nootropic action as the *Mastiska* (brain) is made up of *Meda* (fatty substances). The *Rasaushadhis* are chiefly made up of minerals and metals. Due to small doses, tastelessness, quick action and *Rasayan* properties *Rasaushadhis* are more popular and superior over the other medicines. Beside above mentioned formulations so many herbal and herbo-mineral formulations are described in various *Ayurvedic* texts for the management of *Unmada*. The safety and efficacy of these drugs are depending upon the manufacturing of these drugs. By using these drugs as alone or in proper combinations or as adjuvant to allopathic drugs we can not only control but also cure the *Unmada*.

**CONCLUSION**

On the basis of above study it is concluded that a detailed description regarding etiology, pathogenesis, sign and symptoms along with treatment of *Unmad* is also given in *Ayurveda* as given in modern medical science. *Ayurveda* has many herbal and herbo-mineral formulations in different dosage forms for the treatment of *Unmad*. Modern antipsychotic drugs do not cure the disorder completely and having adverse effects, contraindications and sometimes requires lifetime

treatment *Ayurveda* believes in balancing humours (*Dosha*) to remove the root causes of the disorders and normalize the brain activity. By using these drugs alone or as adjuvant with antipsychotic drugs we can not only control but can cure the *Unmad*.

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