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THE INDIVIDUALIZED HOMOEOPATHIC MANAGEMENT OF CONTINUOUS SCHIZOPHRENIA - A CASE REPORT

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Abstract:

Background: Schizophrenia is a chronic and debilitating mental health disorder affecting approximately 1% of the global population. It is characterized by positive symptoms such as hallucinations and delusions, negative symptoms including emotional withdrawal and anhedonia, and cognitive impairments. Conventional treatments, while effective for symptom management, often present challenges due to side effects and limited patient compliance. This case report evaluates the role of individualized homeopathic management in addressing the symptoms of continuous schizophrenia and reducing family burden.

Objectives: The primary objective of this case report is to evaluate the usefulness of individualized homeopathic treatment in managing continuous schizophrenia.

Case summary: A 45-year-old male patient diagnosed with continuous schizophrenia (ICD-11 code: 6A20.2) was treated at the National Homeopathy Research Institute in Mental Health, Kottayam. Diagnosis was confirmed by a consultant psychiatrist using ICD-11 guidelines. Comprehensive case-taking and repertorization were performed, leading to the selection of the constitutional remedy *Sulphur*. Symptom severity was monitored monthly using PANSS, while family burden was assessed quarterly using FBIS. Treatment spanned 12 months, with follow-up evaluations to track progress.

Results: The patient showed significant improvements in clinical symptoms and family burden. PANSS scores decreased from 143 at baseline to 39 by the 12th month, with notable

reductions in positive symptoms, negative symptoms, and general psychopathology. FBIS scores also improved across all domains, with the total family burden reducing from 39 to 16. Improvements included reduced financial strain, better family interactions, and decreased disruptions in daily routines.

Conclusion: This case report demonstrates the potential of individualized homeopathic management to reduce the severity of schizophrenia symptoms and alleviate the burden on caregivers. The findings support the integration of homeopathy as a complementary treatment modality. Further research with larger patient cohorts is recommended to validate these observations and explore the broader applicability of this approach.

Introduction:

The schizophrenic disorders are characterized in general by fundamental and characteristic distortions of thinking and perception, and by inappropriate or blunted affect.^[1] The global prevalence of schizophrenia is estimated to be approximately **1%** of the population, though rates vary slightly across regions. According to the **World Health Organization (WHO)**, schizophrenia affects more than **24 million people worldwide**, accounting for around **0.32%** of the global population.^[2]

The disorder typically emerges between the late teens and mid-thirties. For men, onset is generally earlier, often between ages 18–25, while for women, the peak age is between 25–35.^[3] Schizophrenia is slightly more common in men, with a ratio of approximately **1.4:1.**^[4]

First-degree relatives of individuals with schizophrenia have about a **10%** risk of developing the disorder, compared to 1% in the general population. The risk increases to **50%** for monozygotic twins. Prenatal exposure to infections, malnutrition, and stress, as well as complications during birth, have been implicated as contributing factors. Urban upbringing, cannabis use, and childhood adversities also increase the risk. Schizophrenia is one of the leading causes of disability worldwide, accounting for substantial social and occupational impairments.^[4]

Schizophrenia arises from a combination of genetic, neurodevelopmental, and environmental factors. Genetic predisposition accounts for about **80%** of the risk, with neurodevelopmental insults like **prenatal infections** and **birth complications** increasing vulnerability.^[5] The **dopamine hypothesis** suggests that overactivity in the mesolimbic pathway causes positive symptoms, while underactivity in the prefrontal cortex contributes

to cognitive and negative symptoms. Environmental factors such as **urban living, cannabis use**, and **childhood trauma** also increase risk. Structural brain abnormalities, such as **enlarged ventricles**, support the neurodevelopmental model.^[6]

Schizophrenia manifests through a spectrum of clinical features categorized into positive, negative, and cognitive symptoms. **Positive symptoms** include hallucinations (commonly auditory), delusions (e.g., paranoia or grandiosity), disorganized thinking, and erratic or catatonic behavior. **Negative symptoms** encompass affective flattening (diminished emotional expression), alogia (reduced speech output), anhedonia (loss of pleasure), and avolition (lack of motivation). **Cognitive symptoms** involve impaired executive functioning (difficulties with planning and organization), attention deficits, and memory impairments. These symptoms collectively impact an individual's ability to function effectively in daily life.[3][4]

Schizophrenia can lead to significant complications impacting various aspects of life. These include impaired social and occupational functioning, with challenges in maintaining employment and relationships. Comorbid conditions such as depression, anxiety, and substance use disorders are common, with a heightened risk of suicide.^[7] Cognitive impairments, such as difficulties with attention and memory, further hinder daily functioning.^[8]

The family burden of schizophrenia can be substantial, including emotional stress, financial strain, and social isolation. Caregivers often face increased responsibilities, such as managing medications and coordinating care, leading to frustration and burnout. Families may also encounter stigma and discrimination, further complicating their challenges. Support services and psycho-education are vital to help alleviate these burdens and improve quality of life for both patients and their caregivers.^[9]

Schizophrenia is classified differently across various systems: ICD-10 (International Classification of Diseases, 10th Revision) includes several subtypes such as paranoid, disorganized, catatonic, undifferentiated, residual, and simple schizophrenia^[1]. DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) does not use subtypes but focuses on the overall symptom profile and severity of the disorder^[3]. ICD-11 (International Classification of Diseases, 11th Revision) consolidates schizophrenia into a single category, eliminating subtypes and emphasizing a range of positive, negative, and cognitive symptoms.^[11]

The Positive and Negative Syndrome Scale (PANSS) is a widely used clinical tool for assessing the severity of symptoms in schizophrenia, encompassing positive symptoms (e.g., hallucinations, delusions), negative symptoms (e.g., emotional withdrawal, blunted affect), and general psychopathology (e.g., anxiety, depression). Each of the 30 items is rated on a scale from 1 (absent) to 7 (extreme), providing a comprehensive measure of symptom severity that is frequently used in both research and clinical settings to track treatment outcomes. [11]

The Family Burden Interview Schedule (FBIS) developed by Pai and Kapoor (1981) is a tool used to assess the burden experienced by families of individuals with mental illness. It evaluates different areas of burden, including financial strain, disruption of family routines, disruption of family leisure, disruption of family interactions, and the effect on physical and mental health of family members.^[12]

Treatment of schizophrenia typically involves a combination of antipsychotic medications, psychosocial therapies, and support services. Antipsychotics, such as clozapine, risperidone, and olanzapine, are used to manage symptoms like delusions and hallucinations.^[13] Psychosocial interventions, including cognitive-behavioural therapy (CBT), family therapy, and social skills training, help address functional impairments and improve quality of life.^[14]

Due to multiple side effects of conventional anti-psychotic medications, recent trends are towards complementary and alternative medicine (CAM). Homoeopathy is the leader in this field of CAMs. Homoeopathy, the holistic medicine, considers and treats person as a unique individual entity and it focuses on use of individualization in every case. Recent literature on the homeopathic management of schizophrenia suggests that homeopathy has shown beneficial effects as an adjunct or alternative treatment.^[15] Reviews and studies indicate that individualized homeopathic treatments can potentially alleviate symptoms of schizophrenia, including delusions and paranoia.^{[16][17][18]} The primary objective of this case report is to demonstrate the scope of individualized homoeopathic treatment in managing symptoms of continuous schizophrenia with probable changes in PANSS and FBIS scales.

MATERIALS AND METHODS:

A case of paranoid schizophrenia managed with homeopathic medicines is presented here. The diagnosis was made by a Consultant Psychiatrist in accordance with ICD-11 guidelines. After obtaining patient consent, a comprehensive case-taking was performed to gather the

full range of symptoms. Repertorisation was carried out using Radar Opus 2.0 software with the Synthesis repertory, focusing on general and mental symptoms. Medicines were selected based on consultations with the Materia Medica. The patient was scheduled to visit the outpatient department (OPD) every 30 days. The severity of the illness was evaluated every three months using the Positive and Negative Syndrome Scale (PANSS), and family burden was assessed through the Family Burden Interview Schedule (FBIS), with evaluations conducted by a caregiver who had at least one hour of contact with the patient per week. The highest FBIS score indicates the greatest perceived burden of care. Additionally, the Modified Naranjo Criteria were used to analyse causal relationships more thoroughly.

CASE SUMMARY:

Patient information:

45 years old male patient brought by a relative to the psychiatry outpatient department of (OPD) of National Homoeopathy Research Institute in Mental Health (NHRIMH), Kottayam on May 19, 2023. He exhibited symptoms such as a tendency to wander, poor personal hygiene, aversion to take bath, discarding homely food and suspects everyone that they would harm him and hearing imaginary voices of unknown person telling him to avoid food from home because it is poisoned, self-talking and self-laughing, reduced communication, anger at trifles with hurting tendency, increased religiosity and with the belief that he is able to predict future of others.

History of presenting complaint

23 years ago, his complaints started as increased religiosity, reduced communication, social withdrawal, restlessness, reluctance to work, poor self-care, refusal to take bath, self-laughter, and self-talk. He also displayed a tendency to harm others, persecutory delusions, and believed he possessed supernatural powers, claiming he could predict the future. The patient was hospitalized for three months and was under conventional anti-psychotics. However, the patient frequently refused to take his medications and began using Ganja, a form of Cannabis, which contributed to a gradual deterioration in his condition. He developed the habit of smoking ganja (cannabis) and tobacco (nicotine). His symptoms worsened, including a tendency to wander, frequent visits to temple, false belief of superiority, and increasing suspicion toward family members, accusing them of attempting to poison him. He became verbally abusive, developed false beliefs of being under control, and experienced

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imaginary voices commanding him frequently. He also displayed inappropriate behaviour, such as urinating in public and changing his clothes in front of others, regardless of the presence of women. He was admitted to a psychiatric hospital for a month and was taking medicines including Tab. Clozapine 100 mg, T. Risperidone 2 mg, T. Valproate 200 mg, and T. Pantop 40 mg, which provided only partial relief of the symptoms. The course of the illness was continous.

Past illness

The patient had a history of a testicular abscess 10 years ago, for which he underwent incision and drainage. He developed the habit of smoking Ganja (cannabis) and tobacco (nicotine) at 23 years of age.

Family history

Both of his parents had passed away. His father died from a cardiac arrest, while his mother died due to chronic renal failure.

Life space investigation

He was born in an economically poor family. He had one elder sister and a younger brother. His father worked as a manual labourer, and his mother was employed as a home maid. His mother died when he was 4 years old and father died when he was 8 years old. Siblings took care of him afterwards. He had a good relationship with his family members and maintained an active social life with a significant number of friends. He was workholic and used to help everyone at home and outside. He was good in his studies and was interested in singing and acting. After completing 12th std he joined for BSC Chemistry. However, during his final year, he began frequently skipping classes and ultimately did not attend his exams. He subsequently took up employment as a storekeeper.

Premorbid personality

By nature, he was an extrovert, had many friends. He was workholic, hardworking, prior to disease development. His favourite hobby was singing.

Physical generals

His appetite and thirst were reduced. He desired coffee.2+ Thermally he was more towards hot. His other generals were normal.

Mental Status Examination

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On examination, the patient was conscious and co-operative but displayed poor personal care and grooming and rapport was difficult to establish due to poor interpersonal relationship. His psycho-motor activity was reduced. His speech was irrelevant, with reduction in rate, volume, and tone; and with an increased reaction time. His affect was appropriate, stable, reactive, congruent; but restricted in range. The patient's mood was subjectively and objectively sad. He exhibited delusion of persecution, delusion of grandiosity and commanding auditory hallucinations. He was oriented to time, place, and person. Memory functions, including immediate, recent, and remote memory, were adequate, though he demonstrated poor general knowledge and intelligence. His attention and concentration were sustained, but his abstract thinking was poor. His social and test judgment were also impaired. He lacked insight into his condition and demonstrated complete denial of illness (grade 0).

Diagnosis and Assessment

Case was diagnosed as Schizophrenia, Continuous code-6A20.2 as per ICD-11 guidelines by the Consultant Psychiatrist. The severity of the illness was evaluated every month using the Positive and Negative Syndrome Scale (PANSS), and family burden was assessed through the Family Burden Interview Schedule (FBIS).

Therapeutic Intervention

Totality was formed and subjected to repertorization in RADAR 10 (synthesis) repertory. Based on the totality of symptoms (Figure 1) a single dose of Sulphur 200C was prescribed on the first visit. The rubrics considered and the repertorial totality can be referenced in Figure no.1.

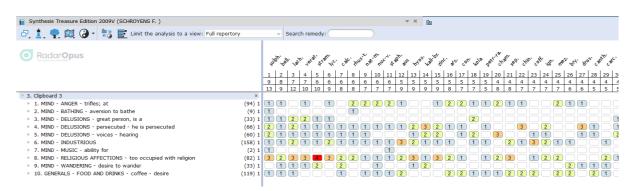


Figure 1: Repertorization of the case

Table 1: Changes in scores of positive and negative syndrome scale (PANSS) from baseline to twelfth month

PANSS SCORES	BASELINE	3 rd MONTH	6 th month	9 th month	12 th month
Positive Scale	38	31	23	17	10
Negative Scale	38	30	24	16	11
General Psychopathology Scale.	67	56	44	30	18
Total score	143	117	91	63	39

Table 2: Changes in scores of individual domains of positive and negative syndrome scale (PANSS) from baseline to twelfth month

DOMAINS	Baseline	Third Month Score	Sixth Month Score	Ninth Month Score	Twelfth Month Score
Delusions	6	5	4	4	2
Conceptual disorganization	6	4	3	3	1
Hallucinations	7	5	4	2	1
Excitement	1	1	1	1	1
Grandiosity	6	6	4	2	1
Suspiciousness/Persecuti on	7	6	4	3	2
Hostility	5	4	3	2	1
Total score	38	31	23	17	10
Blunted affect	2	1	1	1	1
Emotional withdrawal	6	5	4	2	2
Poor rapport	5	3	2	1	1

Passive/apathetic social	6	5	4	3	2
withdrawal					
Difficulty in abstract thinking	7	6	5	4	2
Lack of spontaneity and flow of conversation	5	4	3	2	1
Stereotyped thinking	7	6	5	3	2
Total score	38	30	24	16	11
Somatic concern	2	2	2	1	1
Anxiety	5	4	3	2	1
Guilt feelings	1	1	1	1	1
Tension	4	3	2	2	1
Mannerisms and posturing	1	1	1	1	1
Depression	5	4	4	2	1
Motor retardation	5	4	3	2	1
Un-cooperativeness	6	4	2	1	1
Unusual thought content	3	3	3	2	1
Disorientation	1	1	1	1	1
Poor attention	5	4	3	2	1
Lack of judgment and insight	7	6	4	3	2
Disturbance of volition	5	4	3	2	1
Poor impulse control	4	4	3	2	1
Preoccupation	6	5	4	3	2
Active social avoidance	7	6	5	3	1
Total score	67	56	44	30	18

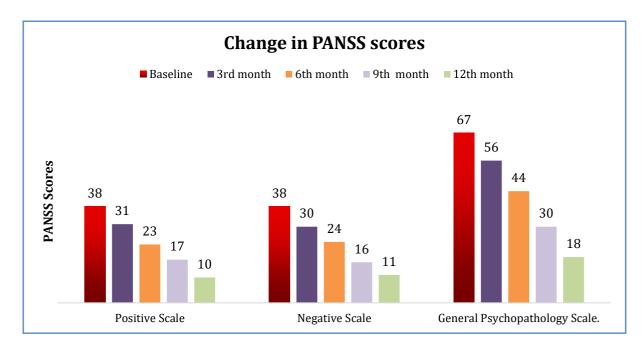


Figure 2: Changes in scores of Individual domains of PANSS scale from baseline to twelfth month

Table 3: Changes in FBIS Score from Baseline to 12th month

DOMAINS	Baseline	3 rd month	6 th month	9 th month	12 th month
FINANCIAL BURDEN	10	8	7	6	5
DISRUPTION OF ROUTINE ACTIVITIES	9	8	6	5	3
DISRUPTION OF FAMILY LEISURE	6	4	3	3	3
DISRUPTION OF FAMILY INTERACTION	9	7	5	4	3
EFFECT ON THE PHYSICAL HEALTH OF OTHERS	2	2	2	1	1
EFFECT OF MENTAL HEALTH ON OTHERS	3	2	2	2	1
TOTAL SCORE	39	31	25	21	16

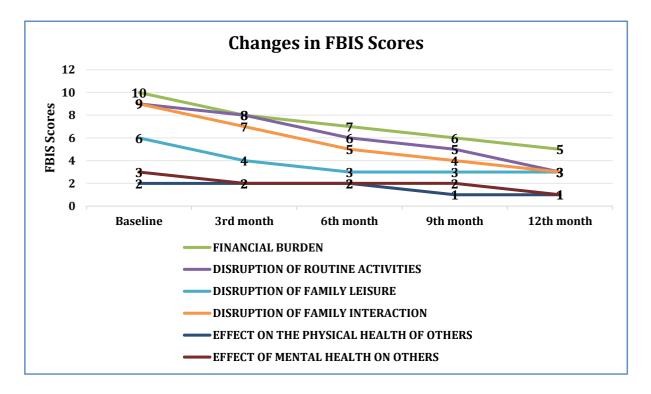


Figure 3: Changes in individual domains of FBIS score

RESULTS:

The patient showed significant improvement in both clinical symptoms and family burden over the 12 months of individualized homeopathic treatment. The treatment began with a single dose of *Sulphur* 200C, followed by regular follow-ups every month, during which assessments were conducted using the *Positive* and *Negative* Syndrome Scale (PANSS) and the Family Burden Interview Schedule (FBIS).

The Positive and Negative Syndrome Scale (PANSS) scores showed a marked reduction across all domains. Positive symptoms, including delusions, hallucinations, and suspiciousness, decreased significantly, with scores improving from 38 at baseline to 10 by the 12th month. Negative symptoms such as emotional withdrawal, poor rapport, and stereotyped thinking also improved substantially, with scores reducing from 38 at baseline to 11. General psychopathology, which encompasses anxiety, depression, and poor impulse control, showed a dramatic improvement, with scores reducing from 67 to 18 over the same period. Overall, the total PANSS score decreased from 143 at baseline to 39 by the 12th month, reflecting a significant reduction in the severity of psychotic symptoms.

From baseline to the 12th month, significant improvements were observed across all domains of the Family Burden Interview Schedule (FBIS) score. The financial burden

decreased progressively from 10 at baseline to 5 by the 12th month. Similarly, disruption of routine activities showed a marked decline from 9 at baseline to 3 at the end of the study period. Disruption of family leisure reduced from 6 initially to 3 by the third month, with no further changes thereafter. The disruption of family interaction score also improved steadily, dropping from 9 at baseline to 3 by the 12th month. Minimal changes were noted in the effect on the physical health of others, which remained constant at 2 until the 9th month before reducing to 1 by the 12th month. The effect on the mental health of others improved from 3 at baseline to 1 by the 12th month. The total FBIS score decreased substantially from 39 at baseline to 16 by the 12th month, reflecting a notable overall reduction in family burden.

Table 4: Timeline of the treatment

Date	Observations/Symptoms	Prescription
15-03-	Anger reduced	Rx
2023	Suspiciousness to family members reduced	
	Wandering tendency persists	Sulphur 1M/1 DOSE
	Personal hygiene improving	
	Self-talking-persists	
	Increased religiosity	
	Grandiose delusion	
	Communication -poor	
	No hurting tendency	
	Commanding auditory hallucination -persists	
	Not going for job	
05-04-	Wandering tendency- nil	Rx
2023	Personal hygiene improving	
	Anger- reduced	Sac Lac
	No hurting tendency	
	Self-talking reduced	
	Commanding Auditory hallucination reduced	
	Grandiosity- persists	
	Sleep normal	
	Communication improving	
	Suspiciousness to family members reduced	

	Not going for job	
17-05- 2023	Improvement in all symptoms Suspiciousness to family members reduced	Rx
	personal hygiene improving	Sac Lac
	Anger- reduced	
	grandiosity - persists	
	No self-talking	
	No increased religiosity	
	communication improving	
	Auditory hallucination reduced	
	Not going for job	
14-06-	Delusion of persecution reduced	Rx
2023	Communication improved	
	Auditory hallucinations reduced	Sac Lac
	Personal hygiene improved	
	Not going for job	
	Disturbed sleep	
12-07-	Delusion of persecution reduced	Rx
2023	Communication improved	
	Auditory hallucinations -present++	Sulphur 10M/1 DOSE
	Grandiosity- persists	
	Self-talking- present	
	Personal hygiene improved	
	Not going for job	
	Sleep- improving	
10-08-	No wandering	Rx
2023	Personal hygiene improved	
	Persecutory delusions - reduced	Sac Lac
	No Anger or hurting tendency	
	Grandiosity-reduced	
	Self-talking reduced	
	Auditory hallucinations -nil	

	Sleep- Normal	
06-9-2023	Delusion of persecution reduced Communication improved	Rx
	Auditory hallucinations -nil	Sac Lac
	Personal hygiene improved	
	Not going for job	
	Sleep- improving	
	Patient started going to job.	
06-10-	No wandering	Rx
2023	Delusion of persecution-reduced	
	Personal hygiene improved	Sac Lac
	No Anger or hurting tendency	
	Self-talking reduced	
	Auditory hallucinations- nil	
	Patient daily attending job.	
03-11-	No wandering	Rx
2023	Personal hygiene improved	
	No Anger or hurting tendency	Sac Lac
	Self-talking reduced	
	Auditory hallucinations -nil	
	Patient daily attending job.	
01-12-	No wandering	Rx
2023	Personal hygiene improved	
	No Anger or hurting tendency	Sac Lac
	Self-talking reduced	
	Auditory hallucinations -nil	
	Patient daily attending job.	
03-01-	Personal hygiene has improved.	Rx
2024	There are no signs of anger or tendencies to harm	
	others.	Sac Lac
	Instances of self-talk have decreased.	

	Auditory hallucinations are no longer present. Patient daily attending job.	
02-02-	No wandering tendency	Rx
2024	Personal hygiene improved	
	No Anger or hurting tendency	Sac Lac
	Self-talking reduced	
	Auditory hallucinations -nil	
	Patient daily attending job.	

Table 5: Assessment of the case by the Modified Naranjo Criteria for Homeopathy-Causal Attribution Inventory (MONARCH)

Sr. No.	Criteria	Yes	No	Not sure
1.	Was there an improvement in the main symptom or condition for which the homeopathic medicine was prescribed?	+2	-	-
2.	Did the clinical improvement occur within a plausible time frame relative to the drug intake?	+1	-	-
3.	Was there an initial aggravation of symptoms?	ı	-	0
4.	Did the effect encompass more than the main symptom or condition (i.e., were other symptoms ultimately improved or changed)?	+1	-	-
5.	Did overall well-being improve? (suggest using a validated scale)	+1	-	-
6A	Direction of cure: did some symptoms improve in the opposite order of the development of symptoms of the disease?	-	-	0
6B	Direction of cure: did at least two of the following aspects apply to the order of improvement of symptoms:	-	0	-

	-from organs of more importance to those of less importance?-from deeper to more superficial aspects of the			
	individual? -from the top downwards?			
7.	Did "old symptoms" (defined as non-seasonal and non-cyclical symptoms that were previously thought to have resolved) reappear temporarily during the course of improvement?	-	0	-
8.	Are there alternate causes (other than the medicine) that—with a high probability—could have caused the improvement? (Consider the known course of disease, other forms of treatment, and other clinically relevant interventions)	-	+1	-
9.	Was the health improvement confirmed by any objective evidence? (e.g., laboratory test, clinical observation, etc.)	+2	-	-
10.	Did repeat dosing, if conducted, create similar clinical improvement?	+1	-	-

DISCUSSION

The onset of Schizophrenia is usually reported in younger population, which is consistent with findings of our case report, as age of onset was 23 years.^[3]

Patients with Schizophrenia are more prone to substances abuses, like nicotine and cannabis.[19][20] As per ICD-11 criteria, delusion of persecution and grandiosity are the commonest types of delusions found in schizophrenia.^[10] With conventional medications, the prognosis is ambiguous, hence targeted therapies like feeling safe programme are used. [21][22] In our case, homoeopathy has shown positive effects without any other interventions.

The uniqueness of this case report is use of standard ICD-11 guidelines for apt diagnosis of schizophrenia and then applying cardinal homoeopathic principles to select the constitutional remedy *Sulphur*, based on guidelines of Hahnemann.^[23] This underscores the integration of classical homoeopathic literature to the latest updated trends in diagnostic medicine.

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The PANSS is a reliable and valid tool, with strong inter-rater reliability and well-established construct and discriminant validity. In this case report, it has shown significant reduction of

symptom severity.^[11]

On assessing FBIS score at baseline, the patient's family reported a considerable burden, particularly in the areas of financial strain, disruption of routine activities, and family interactions. Over the course of the treatment, these burdens gradually lessened. By the third month, there was a marked reduction in financial strain and routine disruptions, and by the sixth month, disruptions in family leisure and interactions had also significantly decreased. Specifically, the disruption to routine activities and family interactions showed the most pronounced improvement, while the financial burden and impact on both physical and

mental health of family members also decreased considerably.

Patient started doing job and was overall improved with Homoeopathy. Use of previous

conventional anti psychotics by patient was greatly reduced.

MONARCH criteria showed score of +9, which underscores causal attribution to

Homoeopathic medicine with changes observed in this case.

In one previous study, *Sulphur* was found among the most useful medicines in managing

schizophrenic patients.^[24] Our case report confirms this previous finding.

CONCLUSION

This case report generates a preliminary evidence for beneficial effect of Individualized Homoeopathic medicine in management of Continuous Schizophrenia. Systematic research with larger numbers is necessary to confirm the findings.

REFERENCES

1. World Health Organization. The ICD-10 classification of mental and behavioural

disorders = ICD-10 : diagnostic criteria for research. Geneva: World Health

Organization; 1993.

2. Howes OD, Bukala BR, Beck K. Schizophrenia: from neurochemistry to circuits,

symptoms and treatments. Nat Rev Neurol [Internet]. 2024 [cited 2024 Sep

12];20(1):22–35. Available from:

https://www.nature.com/articles/s41582-023-00904-0

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- 3. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
- 4. Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry. 11th ed. Philadelphia: Wolters Kluwer; 2015.
- 5. Owen MJ, Sawa A, Mortensen PB. Schizophrenia. Lancet (London, England). 2016 Jan 15;388(10039):86-97
- 6. Howes OD, Murray RM. Schizophrenia: an integrated sociodevelopmental-cognitive model. The Lancet. 2014 May 10;383(9929):1677-87.
- 7. Kessing, L. V., Andersen, P. K., & Mortensen, P. B. (2018). Suicide in schizophrenia. Schizophrenia Research, 193, 89-94.
- 8. Green, M. F., Horan, W. P., & Lee, J. (2019). Cognitive impairment in schizophrenia. The Lancet Psychiatry, 6(2), 129-140.
- 9. Schene, A. H., & van Wijngaarden, B. (2000). The burden of schizophrenia on family caregivers: a review of the literature. Social Psychiatry and Psychiatric Epidemiology, 35(9), 462-470.
- 10. World Health Organization. ICD-11 [Internet]. International Classification of Diseases 11th Revision. 2022. Available from: https://icd.who.int/en
- 11. Kay, S. R., Fiszbein, A., & Opler, L. A. (1987). The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. Schizophrenia Bulletin, 13(2), 261-276.
- 12. Pai, S., & Kapur, R. L. (1981). The burden on the family of a psychiatric patient: Development of an interview schedule. The British Journal of Psychiatry, 138(4), 332-335.
- 13. Kane JM, Correll CU. Pharmacologic treatment of schizophrenia. Dialogues Clin Neurosci. 2010;12(3):345-57. p. 348-350.
- 14. National Institute for Health and Care Excellence (NICE). Psychosis and schizophrenia in adults: treatment and management. NICE Clinical Guideline CG178. London: NICE; 2014. p. 24-27. Available from:

https://www.nice.org.uk/guidance/cg178.

- 15. Gupta, G. (2023). Schizophrenia and Homoeopathy: A Review. Alternative Therapies in Health & Medicine.
- 16. Oberai, P., Gopinadhan, S., Sharma, A., & Nayak, C. (2016). Homoeopathic management of Schizophrenia: A prospective, non-comparative, open-label observational study. International Journal of Research in Homoeopathy.
- 17. Moorthi, S. K., & Devasia, M. N. (2022). Homoeopathy as an add-on treatment for schizophrenia—A case series. Indian Journal of Research in Homoeopathy.
- 18. Gilla, D., Mohan, N. D., & Sreelakshmy, S. R. (2022). A Case of Paranoid Schizophrenia Treated with Individualised Homoeopathy. Homœopathic Links.
- 19. Linszen D, Peters B, De Haan L, Castle D, Murray R. Cannabis abuse and the course of schizophrenia. Marijuana and madness. 2004;2:210-7.
- 20. Brown RW, Maple AM, Perna MK, Sheppard AB, Cope ZA, Kostrzewa RM. Schizophrenia and substance abuse comorbidity: nicotine addiction and the neonatal quinpirole model. Developmental neuroscience. 2012 Sep 1;34(2-3):140-51.
- 21. Harrow M, Jobe T, Astrachan-Fletcher EB. Prognosis of persecutory delusions in schizophrenia. Oxford University Press eBooks [Internet]. 2008 Jul 1 [cited 2024 Dec 4];73–90. Available from:

https://doi.org/10.1093/med:psvch/9780199206315.003.0004

- 22. Freeman D, Bradley J, Waite F, Sheaves B, DeWeever N, Bourke E, et al. Targeting Recovery in Persistent Persecutory Delusions: A Proof of Principle Study of a New Translational Psychological Treatment (the Feeling Safe Programme). Behavioural and Cognitive Psychotherapy. 2016 Apr 5;44(5):539–52.
- 23. Hahnemann S. Organon of Medicine 5 and 6 Edition. B. Jain; 2013.
- 24. Oberai P, Gopinadhan S, Sharma A, Nayak C, Gautam K. Homoeopathic management of Schizophrenia: A prospective, non-comparative, open-label observational study. Indian Journal of Research in Homoeopathy. 2016;10(2):108-18.