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### RESEARCH ARTICLE

#### “NEAD” AND ITS MANAGEMENT THROUGH AYURVEDA & YOGA.

**Dr. Sushant Kumar<sup>1</sup>, Dr. Prabha Kumari<sup>2</sup>, Dr. Udayan Narayan<sup>3</sup>, Dr. Neeraja Sharma<sup>4</sup>, Dr. Mahesh Pd Singh<sup>5</sup> and Dr. Md. Samid<sup>6</sup>.**

1. MD(Ay), PGDYS, FINR, Asst. Prof, Dept of RS & BK, Sri Sai Ayurvedic P.G. Medical College & Hospital, Aligarh (UP)
2. Reader, Dept of Prasuti Tantra & Stri Roga, Govt. Ayurvedic College & Hospital, Chaukaghat, Varanasi (UP)
3. MD(Med), MD(Paed), DM(Neuro), Senior Consultant Neurologist, Advanced Neuro Hospital, Patna
4. Director, Advanced Neuro Diagnostic Centre, Patna,
5. Consultant Physician, Advanced Neuro- Diagnostic Centre, Patna.
6. MOIC, Community Health Centre, Deo, Aurangabad, Bihar.

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#### Abstract

NEADs (Non-Epileptic Attack Disorders) are characterized by a loss of or change in physical function without a central nervous system problem. The loss or change causes periods of physical activity or inactivity that resemble epileptic seizures. It may be compared with *yoshapatantraka* or *Yoshapasmara* mentioned in various *Ayurvedic* textbooks. It occurs in around 2 or 3 people in every 10,000. Around 3 in 4 people with NEADs have previously been diagnosed with epilepsy and have history of taking anti-epileptic drugs. A pilot study was carried out on 20 patients who fulfilled the exclusion and inclusion criteria of NEAD. These patients were divided in two groups of 10 patients each. In Gr- A, Tablet Mentat and Tablet Geriforte was given. In Gr- B, above medicines along with *yoga nidra* was carried out. *Yoga nidra* is an exercise of physical non-activity and mental relaxation. Like *Sattwajaya cikitsa* of *Ayurveda* and psychotherapy, if practiced daily for a longer duration of time, *yoga nidra* will be able to cure the patients suffering of NEADs.

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#### Introduction:-

NEAD (Non-Epileptic Attack Disorders) or psychogenic movement disorders are common (estimated 2-3% of patients in a movement disorder clinic), more frequent in women, disabling for the patients or the family, and expensive for society (estimated \$ 20 billion annually)<sup>i</sup>. It include more commonly used terms such as psychogenic non-epileptic seizures (PNES), non-epileptic events, dissociative seizures, pseudo seizures, pseudoepileptic seizures, psychogenic movement disorders, functional seizures, or conversion disorders<sup>ii</sup>. NEADs are characterized by a loss of or change in physical function without a central nervous system problem<sup>iii</sup>. The loss or change causes periods of physical activity or inactivity that resemble epileptic seizures. NEADs are usually related to a mental health problem. The physical symptoms may be caused by emotional conflicts or stress. One example of NEAD is psychogenic seizures, sometimes called pseudo seizures<sup>iv</sup>.

#### Corresponding Author:-Sushant Kumar.

Address:- MD(Ay), PGDYS, FINR, Asst. Prof, Dept of RS & BK, Sri Sai Ayurvedic P.G. Medical College & Hospital, Aligarh (UP)

By definition, NEADs or PNES are a physical manifestation of a psychological disturbance and are a type of somatoform disorder called a conversion disorder<sup>v</sup>. Yet it is estimated that PNES are diagnosed in 20 to 30% of patients seen at epilepsy centres for intractable seizures. Moreover, in the general population the prevalence rate is 2-33 per 100,000, making PNES nearly as prevalent as multiple sclerosis or trigeminal neuralgia<sup>vi</sup>. NEADs symptoms usually appear suddenly and at times of extreme emotional stress. It is believed that the symptoms of NEAD may be an attempt to reduce anxiety by not recognizing or responding to an emotional conflict. Most significantly, school difficulties<sup>vii</sup> or family adversity predominate as the major risk factors in children, rather than physical or sexual trauma<sup>viii</sup>.

There are different types of NEADs. Some people experience a number of different types of attacks. The most common type of NEAD look similar to epileptic convulsions (generalised tonic clonic seizures). These NEADs involve obvious movements of arms, legs, head and trunk as well as loss of consciousness and dropping to the floor. Some people lose control over their bladder, bite their tongue or injure themselves. Other NEADs involve less obvious stiffening or tremors. In the third common type of NEAD, people go blank or stare. They may not move at all, or only move a little. These attacks resemble epileptic "complex partial seizures".

Most people appear unconscious in NEAD, although they may show signs of being able to react to their environment to some extent (such as turning to speech, making gestures or other movements with a degree of purpose). Some may be able to talk whilst having an attack and follow commands. Some NEADs can be very short lasting only a few seconds, whilst some can be very long, sometimes lasting for hours at a time. Semiology is more commonly nonmotor in children, rather than convulsive, opisthotonic, or pelvic thrusting<sup>ix-x</sup>. Conversion Disorder is a somatoform disorder that is defined as physical symptoms caused by psychologic conflict, unconsciously converted to resemble those of a neurologic disorder. Somatoform Disorders are those conditions that are suggestive of a physical disorder, but upon examination cannot be accounted for by an underlying physical condition. NEAD or Conversion disorder tends to develop during adolescence or early adulthood but may occur at any age. It appears to be somewhat more common among women<sup>xi</sup>.

The main differences between epileptic attacks (Seizure Disorder) and non-epileptic attacks (NEADs) are:-

Symptoms	Seizure Disorder	NEADs/ Yoshapasmara
Duration	0.5 – 2 minutes	>2 minutes
Pelvic thrusting	Rare	Occasional
Eye/ Mouth positioning	Typically Open	Often Closed
Sideways head movements	Rare	More Common
Tongue movement	Occasional	Rare
Crying during attack	Rare	More Common
Talking during attack	Rare	More Common
Urinary/ Faecal incontinence	Present	Not seen
Place of attack	Anywhere	Always in presence of somebody
Falling during attack	Sudden and injurious	Careful and never harmful

It typically takes over five years to make the diagnosis of NEAD. However 2 in 3 people with NEADs, have less than half of the number of attacks, three months after the diagnosis has been explained. 1 in 2 people with NEADs become free of seizures with the right treatment. 1 in 5 people with NEADs have been taken to intensive care units with prolonged seizures erroneously considered as "status epilepticus".

The most reliable test to make the diagnosis of NEAD is video EEG monitoring. During a video-EEG, the patient is monitored (over a time-period spanning anywhere from several hours to several days) with both a video camera and an EEG until a seizure occurs. Through analysis of the video and EEG recordings, the diagnosis of NEAD can be made with near certainty.

NEAD (Non-Epileptic Attack Disorders) may be compared with *Yoshapatantraka* or *Yoshapasmara* mentioned in various *Ayurvedic* textbooks as mentioned below-

Raktakshyadva bahusho.....mato hi kalah<sup>xii</sup>.  
 Vayururdhwamvrajetsathanat.....gyeyaeshoapatantrakah<sup>xiii</sup>.  
 Smritibhutarthavigyana.....; ApasmaraetiproktahTatoayamvyadhiantakrta<sup>xiv</sup>.  
 Apasmaram punah smritibuddhisatwasamplavadbibhatsacheshtamawasthikam tamahpraveshamachakshate<sup>xv</sup>.

Smrterarapagamamprahur.....dhisatwasamplavad<sup>xvi</sup>.

*Yoga nidra* is an exercise of physical non-activity and mental relaxation. It is the simple and useful practice of the art of sleeping which the yogis know, if explained with certain modifications, can prove infinitely beneficial to many people. It is also called as psychic sleep<sup>xvii</sup>. *Yoga nidra* is a more efficient and effective form of psychic and physiological rest and rejuvenation than conventional sleep<sup>xviii</sup>. Sleep is a lower stage of *samadhi*. While sleeping, man forgets all worldly troubles, anxieties, tiresome feelings and he travels into another world; no amount of abuse will affect or enrage him. In *samadhi*, also, man is away from all the feelings and sensations relating to this world; the organs do not communicate any feelings. But there is a difference between sleep and *samadhi*. In sleep one has neither the knowledge of, nor the power to control, oneself. In *samadhi*, although organs do not communicate to the ideas connected with this world, one is quite within one's soul and has full knowledge of everything. It can be compared with the EMDR (Eye movement desensitization and reprocessing) technique, a form of psychotherapy, developed by Francine Shapiro that emphasizes the role of distressing memories in some mental health disorders, particularly post traumatic stress disorder (PTSD)<sup>xix</sup>.

### Aim and Objective:-

1. To differentiate the clinical presentation of NEAD (*Yoshapasmara*) with true seizure disorder (*Apasmara*)
2. To evaluate the role of *Yoga nidra* in NEADs.

### Material and Methods:-

In the present study a clinical trial of Tablet Mentat & Tablet Geriforte (manufactured by The Himalaya Drugs Private Company Limited) has been carried out for evaluating the efficacy on NEADs. The patients of NEADs were selected from the OPD and IPD of Community Health Centre, Deo, Aurangabad (Bihar) and Advanced Neuro Hospital, Patna. For this a clinical proforma was prepared incorporating selected symptoms and signs based on both *ayurvedic* and modern parameters.

Laboratory investigations-

1. CBC
2. Thyroid Profile
3. Metabolic Profile

### Inclusion Criteria:-

1. Patients willing for trial
2. Patients having signs & symptoms of NEAD
3. A normal Video EEG study suggesting NEADs
4. CECT & NCCT of brain suggesting no organic cause

### Exclusion Criteria:-

1. Patients with established diagnosis of Seizure Disorder, Complex Partial Seizure etc
2. NEAD associated with other complication e.g. Cardiac, DM, TB and Malignancy.
3. NEAD cases with extremes of age.

### Trial Groups:-

Total 20 patients, who fulfilled the inclusion criteria, were selected for the present study. All the selected patients were studied in 2 groups of 10 patients each.

**Group A-** Tablet Mentat & Tablet Geriforte (2 tablets of each × BD)

**Group B-** Above with *Yoga nidra*.

### Mode of administration:- Oral

Duration of trial- 90 days

Follow up- After 15 days

### Instruction to the patients:-

1. Any of the process of *yoga nidra* (as taught at Bihar School of Yoga, Munger) was advised to practice as per the convenience.

- For beginners, it was advised to do this *kriya* for even 2-5 minutes, several times a day. However it was advised to practice compulsorily before sunrise and at bedtime on regular basis.
- For excessively busy people, it was even advised to practice it in seated posture in a chair, in the midst of work.
- Patients were advised to avoid sleep during this *kriya* unless practising for insomnia.
- Before *Yoga nidra*, *Surya Namaskar*, *Shitali* and *shitali pranayams* were also advised to the patients.

#### Criteria of Assessment:-

For the purpose of assessment of improvement, a scoring system in signs and symptoms of NEAD i.e. *Yoshapasmara* was adopted, which were carried out at the time of inclusion and initiation of trial in patients and during treatment on every fifteen days up to completion of trial.

The data related to the clinical features was collected and then statistically analyzed. The status of NEAD was assessed on the basis of grades of various variables compared between pre and post trial values in terms of percentage. Values between two variables were compared with student (t) test for dependent samples by using the degree of freedom, p value (two tailed)<sup>xx</sup>. The results were expressed in terms of mean, standard deviation (SD $\pm$ ) and standard error (SE $\pm$ )

#### Observation and Results:-

Since NEAD is a psychogenic problem so the laboratory investigations like CBC, Thyroid profile, metabolic profile were not abnormal before and after treatment. The most common symptoms & signs with which patients presented are giddiness, fatigue, palpitation, headache, irritability, shortness of breath (SOB), loss of consciousness (LOC), stiffening of part or the whole body, pelvic thrusting, clenching of teeth, etc. The changes and percentage relief in typical and most common signs & symptoms before the start of and after the completion of treatment, are given below-

**Table no 1:-**Effect of trial drugs on clinical feature Giddiness

Groups	No. of Pt.	Mean		%age Relief	SD $\pm$	SE $\pm$	T	P
		B.T.	A.T.					
Gr. A	10	1.9	0.9	52.6	0.81	0.25	3.87	<0.01
Gr. B	10	1.8	0.7	61.2	0.56	0.17	6.12	<0.001

**Table no 2:-**Effect of trial drugs on clinical feature SOB (dyspnoea)

Groups	No. of Pt.	Mean		%age Relief	SD $\pm$	SE $\pm$	t	P
		B.T.	A.T.					
Gr. A	10	1.7	0.7	58.83	0.81	0.25	3.87	<0.01
Gr. B	10	1.63	0.72	72.6	0.54	0.16	5.59	<0.001

**Table no 3:-**Effect of trial drugs on clinical feature Irritability

Groups	No. of Pt.	Mean		%age Relief	SD $\pm$	SE $\pm$	T	P
		B.T.	A.T.					
Gr. A	10	1.5	0.6	60.0	0.73	0.23	3.85	<0.01
Gr. B	10	1.9	0.54	78.94	0.80	0.24	5.59	<0.001

**Table no 4:-**Effect of trial drugs on clinical feature Fatigue

Groups	No. of Pt.	Mean		%age Relief	SD $\pm$	SE $\pm$	T	P
		B.T.	A.T.					
Gr. A	10	1.58	0.35	77.78	0.56	0.13	9.05	<0.001
Gr. B	10	1.64	0.29	82.14	0.60	0.14	9.2	<0.001

**Table no 5:-**Effect of trial drugs on clinical feature Headache

Groups	No. of Pt.	Mean		%age Relief	SD $\pm$	SE $\pm$	T	P
		B.T.	A.T.					
Gr. A	10	2.0	0.72	63.64	0.90	0.27	4.66	<0.01
Gr. B	10	1.83	0.25	86.36	0.51	0.14	10.65	<0.001

**Table no 6:-** Effect of trial drugs on clinical feature Palpitation

Groups	No. of Pt.	Mean		%age Relief	SD ±	SE ±	T	P
		B.T.	A.T.					
Gr. A	6	2.0	0.83	58	0.75	0.35	3.79	<0.05
Gr. B	8	1.87	0.63	66.67	0.46	0.16	7.63	<0.001

**Table no 7:-**Effect of trial drugs on clinical feature Stiffening

Groups	No. of Pt.	Mean		%age Relief	SD ±	SE ±	T	P
		B.T.	A.T.					
Gr. A	5	2.0	0.8	60	0.45	0.2	2.23	>0.05
Gr. B	4	1.75	0.75	71.42	0.5	0.25	5.0	<0.05

**Table no 8:-**Effect of trial drugs on clinical feature LOC

Groups	No. of Pt.	Mean		%age Relief	SD ±	SE ±	T	P
		B.T.	A.T.					
Gr. A	5	1.36	0.36	73.4	0.63	0.19	5.24	<0.001
Gr. B	6	1.5	0.25	83.34	0.75	0.21	5.74	<0.001

### Discussion:-

As Tablet Mentat is commonly prescribed in ADHD, behavioural disorders, hyperkinetic states, aggressive behaviour, anxiety and stress related anxiety disorders and mental fatigue and as an adjuvant in epilepsy<sup>xxi</sup>, so this has been chosen in these type of cases too.

Similarly Tablet Geriforte is commonly used as daily health tonic in geriatric stress, generalized anxiety disorders (GAD), stress related anxiety and occupational stress, adjuvant during prolonged illness and convalescence<sup>xxii</sup>. The effect of trial drugs along with *Yoga nidra* has shown good result in the subjective parameters as given in the following tables-

**Table no- 9:-**Effect of trial drugs on Clinical Features (%age Relief)

Symptoms(→) Groups(↓)	Giddiness	SOB	Irritability	Fatigue	Headache	Palpitation	Stiffening	LOC
Gr. A	52.6	58.83	60.0	77.78	63.64	58	60	73.4
Gr. B	61.2	72.6	78.94	82.14	86.36	66.67	71.42	83.34

The overall effect of therapy after completion of 3 months of trial period can be seen from the following table-

**Table no- 10:-**Overall effect of therapy in two groups

Results	No. of patients		Percentage %	
	Gr. A	Gr. B	Gr. A	Gr. B
Cured	2	6	20	60
Marked improvement	3	3	30	30
Improvement	4	1	40	10
Unchanged	1	0	10	00

The 60% patients were cured in Gr- B in comparison to 20% in Gr- A. 30 % of patients in both the groups were having marked improvement. 40 % patients were shown improvement as compared to 10% in Gr- B. Only 10 % people in Gr- A remained unchanged after the completion of therapy. The higher success rate in Gr- B as compared to Gr- A must have been due to the effect of *yoga nidra* performed in these patients.

Some precautions must be taken while treating cases of NEADs, who are already on modern medicines like anticonvulsants, anxiolytics, antidepressants, SSRIs etc. In these cases, no abrupt stoppage of allopathic medicine is advised as ayurvedic medicines are slow to act. Gradual reduction of doses of allopathic medicines is done keeping in mind the severity of signs and symptoms of NEAD. In the mean time, patients are counselled regarding the chronicity of disease and can be cured only through regular, disciplined and sincere practice of *yoga nidra*.

Through *yoga nidra*, we are not only relaxing, but restructuring and reforming our whole personality from within. Release of tension, relaxation and peace of mind are the secrets of transformation. When a man is under tension, his

behaviour is influenced and when he relaxes, he becomes natural. If we practice *yoga nidra*, then the nature of our mind can be changed, diseases can be cured and our creative genius is restored. Subconscious and unconscious mind are the most powerful forces in human beings. The simple practice of *yoga nidra* has the capacity of penetration into the depths of the human mind. Initially, sometimes antidepressant drugs enable people to take part in psychological treatment. The treatment package for such problems should therefore, logically include (besides drug therapy, counselling etc.) various devices for mental rest and relaxation. *Yoga nidra* very effectively serves this purpose.

### Conclusion:-

It can be concluded from the present study that overall effect of therapy was more in Gr- B compared to Gr- A due to the *yoga nidra kriya*. *Yoga nidra* is an exercise of physical non-activity and mental relaxation. Like *sattwavajaya cikitsa* of *ayurveda* and psychotherapy of allopathy, if practised daily for a longer duration of time, *yoga nidra* will be able to cure the patients suffering of NEADs. However above mentioned results should be further analyzed by conducting such study in large number of patients with a longer period of follow up to justify the effect of therapy.

Further, it can be concluded that *yoga nidra* should be practised daily, whether people have any physical, mental or emotional problem or not, to dive deep into the mind and in the evolution of our consciousness.

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