



MINDS NEWSLETTER

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Editor

Dr. Sunil Kumar G Patil

*Assistant Professor
Dept of Psychiatry
MVJ Medical College &
Research Hospital
Bengaluru*

Assistant Editor

Dr. Sanjay T Naik
Senior Resident

*Dept of Psychiatry
MVJ Medical College &
Research Hospital
Bengaluru*

Recent Past Editor

Dr. Gopal Das.C.M

Recent Past Asst. Editor

Dr. Suravi Patra

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Monthly Newsletter on Psychiatry for Doctors & Medical Students

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From The Desk of Editor.....

Artificial Intelligence in Psychiatry

Artificial intelligence (AI) is a technology designed to perform activities that normally require human intelligence.

AI is spreading very fast in the field of Psychiatry. With Rapid global digitalization it has become necessary to understand and utilize the facilities of artificial intelligence for diagnosis, treatment and prevention of psychiatric disorders.

Virtual human avatar which uses AI technology has ability to carry out interactions and intelligent conversations (WATSON software, IBM). Now this technology is used for giving information and collecting basic data in mental health care settings which can serve large number of people with good accuracy.

There is a virtual consultant available where a person will be diagnosed by computer with the database it has and on basis of inputs of the patient.

There are new AI based clinical decision supports systems which has large complex data which will help clinicians to come to clinical decision easily. This is being used in Parkinson's disease and dementia.

Now there are companions based on AI which are being used for therapeutic purposes which may play big role in psychiatry in future. There are AI based interactive systems which are being used in social skill training in autistic children in non threatening environment.

Implants are being installed to deliver medications with AI technology on the basis of biofeedback mechanisms.

In India at present EMR (Electronic Medical Records) is being used for keeping patients records which can search similar details and fetches past session summary of patients for ease of consultant. Telemedicine is also being used more in mental health care setting in India.

There are problems associated with AI like inability to empathize with humans, inability of establishing therapeutic alliance and rapport. There are also ethical and legal issue along with judgment errors which needs to be addressed and guidelines to be formed before wider applications

With many benefits AI technology is creating a new hope and this can revolutionize mental health care in coming years.

Dr. Sunil Kumar G Patil

My seniors in medical college taught me to write bowel, bladder, sleep and appetite as personal history.

When I joined Psychiatry, really I knew how much a detailed personal history helps, not only in diagnosis and treatment but also in prevention.

Psychiatric personal history starts from antenatal period, through natal, post natal, childhood, temperament, schooling, college, habits, occupation, sexual history, marriage, spouse, children, interpersonal relationships, personality, etc.

History of stress with in-laws is important in recurrence of peptic ulcer.

The farmer's life during pollen season adds to his bronchial asthma.

Marital problems and living with alcoholic husband need to be highlighted in any headache history.

Whether one washes cloths at home or uses a laundry service, matters for skin problems.

I need not talk much about smoking, alcohol, drug dependence, extramarital sex, etc. They are all as important as history of diabetes and hypertension.

"I keep my house fully dust free, doctor. My servants keep leaving and my wife is very angry with me" An obsessive personality narrates about his asthma.

"I really cannot breathe well; my mother-in-law says I am acting" A dependent personality reports.

"My husband does not want to separate from his parents' house. That house is not properly ventilated" A histrionic personality demands.

Only in my in-laws' house I cannot breathe, in my mother's house I had no such problem. It is a haunted house trying to kill me" a paranoid personality analyses the cause of her symptoms.

How I wish I learnt psychiatry history taking in undergraduate days, to put these relevant details in the case history.

Dr. Saranya Devanathan, Senior Psychiatrist, Bengaluru

REFRAME – Let Awareness Reframe Assumptions: Myths and Facts about Addiction

- All addicted to substances are bad people
- No, some behaviour under the influence of substances can create such impression in some people with addiction
- Once a smoker/alcoholic is always a smoker/alcoholic
- Different types proven treatment available to quit smoking and drinking though difficult to treat
- Addiction can be cured with medication only
- It requires both pharmacological and psychosocial management
- People drink regularly only because they do not have responsibility
- Other factor are craving, withdrawal symptoms, social influences etc
- Drugs/alcohol/tobacco cause only physical damage to the body
- Can cause various mental illnesses like psychosis, mania, depression, anxiety disorder etc

Dr. Namrata Srinivasan, MVJMC & RH, Hoskote, Bengaluru

CAPGRAS SYNDROME

Capgras Syndrome was described by Capgras and Rebeul-Lachaux in 1923. It is also called illusion des sosies, and is one of the most colorful syndromes in neuropsychiatry. It describes a phenomenon whereby a patient believes that someone, usually a loved one or somebody with whom the patient has close emotional ties has been replaced by an identical looking imposter. The other misidentification syndromes that have been described in Psychiatry include Fregoli's Syndrome, Syndrome of intermetamorphosis and the syndrome of subjective doubles.

Capgras Syndrome is a delusional misidentification syndrome that represents the concept of doubles has been mentioned in many different cultures that have myths involving doubles. The earliest descriptions are in Greek mythology where the God Zeus in his desire to have sexual intercourse with Alceme assumed an identical form of her husband Amphitryon and tricked her into having a sexual intercourse with him. One of the best descriptions of the syndrome in contemporary literature has been given in the novel 'Possessed' by Dostoyevsky which describes the non-recognition by one of the characters of her husband.

Capgras syndrome forms an interface between Psychiatry and Neurology as around 40% of cases show an evidence of an organic disorder. Other conditions wherein an organic etiology is more obvious are déjà-vu, jamai-vu, and out of body experiences associated with temporal lobe disturbance and autoscapy. Neuropsychologically these disorders can be traced to involvement of the watershed areas of the temporo-parieto-occipital region which has been termed the multimodal association area.

One of the explanations of Capgras syndrome is that there are apparently two components for the recognition of a familiar face and the related semantic information and the other being limbic mediated emotional arousal. A dissociation between these two systems may explain the origin of Capgras delusion. There are two pathways of the visual system, the ventral route carries information from the visual centre to the temporal lobes which is preserved in Capgras syndrome but the dorsal visual route that is responsible for giving an emotional valence is damaged. Hence the patient is able to identify the face of a person but the emotional arousal fails to occur. The only way the patient can make sense of the absence of emotional arousal is to form the belief that the person he is looking at is an imposter. One of the differential diagnoses is Prosopagnosia or face blindness which results from bilateral lesions of the inferior temporal lobes.

Capgras syndrome has been reported with various organic disorders including right cerebral dysfunction, subarachnoid hemorrhage, head injury, temporal lobe dysfunction, pseudohypoparathyroidism, myxoedema, epilepsy and many other conditions. Since the evidence suggests that over a third of cases of Capgras delusion have an organic etiology, it has been suggested that in case of delusional misidentification there should be a thorough search for organic pathology.

Non epileptic attack disorder (NEAD) or (psychogenic non epileptic seizure PNES) – in children

Non epileptic attack disorder is an observable abrupt paroxysmal change in behavior or consciousness that resembles an epileptic seizure, but is not accompanied by the electrophysiological changes or clinical evidence for epilepsy. Some of the other synonymous terms used are pseudoseizures, psychogenic non epileptic seizure, non-epileptic disorder, non epileptic seizures and psychogenic seizures.

Seizures can be divided into three major categories. They are epileptic seizures (ES), PNES, and physiologic nonepileptic events (NEEs).

Physiologic nonepileptic events (PhysNEE) that are often confused with epileptic seizures include: Syncopal episodes, Movement disorders, Sleep disorders, vascular events, Gastro-intestinal disturbances and Migraine.

According to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the Diagnostic Criteria PNES is a psychiatric disorder; more specifically it is a conversion disorder, which falls under the diagnostic category of somatic symptom disorders in the . According to the classification, neurological symptoms that are found, after appropriate neurological assessment, to be incompatible with neurological pathophysiology can fall under conversion disorder, factitious disorder, or malingering.

The person with epilepsy spends huge amount of money for diagnosis and management. Thus a misdiagnosis of NEAD as epilepsy will also have a huge financial implication.

Approximately 5–25% of patients referred to an outpatient epilepsy center have PNES, and approximately 20–30% of inpatients evaluated for intractable seizures. PNES has female preponderance overall. About 5% undergoing evaluation have a definitive diagnosis of epilepsy during VEEG monitoring. A few patients with epilepsy develop PNES after epilepsy surgery. It occurs in two peaks: 19-22 years and 25-35 years. However it can occur in other age groups including children. Some of the precipitating factors in children are academic difficulties, bullying family/ interpersonal conflict, and physical/sexual abuse.

PNES are typically non-stereotyped events, while the reverse is a clinical sign that supports a diagnosis of epilepsy and events are of long duration with rapid recovery of cognitive functions following a prolonged non-convulsive-like event and most of the times PNES occur in awake state. Convulsive PNES manifestation include Clonic, myoclonic, tonic movements, Violent thrashing of the extremities and/or of the entire body, Opisthotonic arching of the back, Pelvic thrusting motions, Side-to-side head movements, the absence of facial clonic activity in the presence of generalized clonic-like activity, Eyes closed with resistance to eye opening, normal respiratory rate during the event and postictally (as opposed to a labored breathing in GTC) Vocalizations that include shouting, screaming, often associated with understandable speech and shedding of tears more likely to occur in the middle of the event unlike epileptic seizures, where vocalizations usually occur at the onset of the event. However there Some of the common misconceptions of PNES are that patients do not get injured, will not have tongue bite or sphincter disturbances as these are also reported in individuals with PNES. PNES can mimic either complex partial or generalized absence seizures.

The PNES manifestations in children can be divided into 2 groups, one group consisting of Unresponsive events where child become unresponsive with reduction or the absence of spontaneous movement and other group with motor events consisting of bizarre, irregular, jerking, or thrashing movements of the extremities, not typical of any of the known types of epileptic seizures.

Assessment, diagnosis and treatment

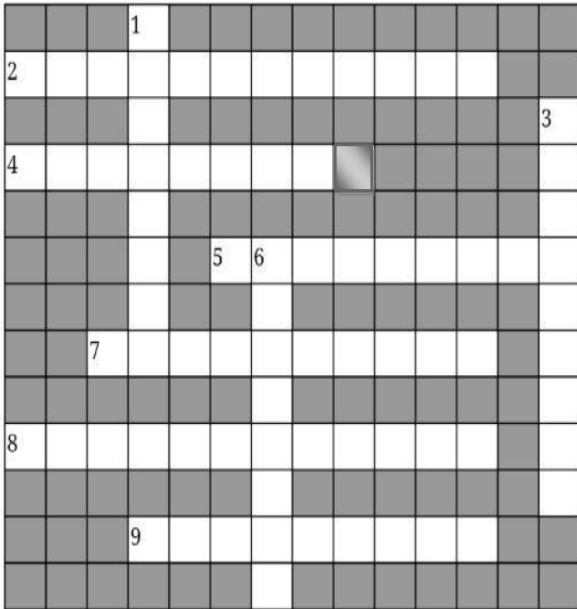
Accurately identifying and diagnosing PNES is a challenge for both psychiatrists and neurologists, and the diagnosis of PNES currently relies on the exclusion of epilepsy. Up to one fourth of patients with suspected epilepsy seen at epilepsy centers who had failed to achieve seizure control after two or more antiepileptic drugs (AEDs) had been tried were found to not have epileptic seizures after video-EEG. Epilepsy is usually ruled out using video-EEG telemetry to analyze typical events, and video-EEG has been considered the gold standard for the diagnosis of PNES. Some of the Provocative techniques used to aid in the diagnosis of PNES are use of a tuning fork hyperventilation, and photic stimulation.

The therapeutic options include psychotherapy, group therapy, cognitive behavioral therapy, use of anxiolytics and antidepressants.

**AN EXCLUSIVE SECTION FOR
UNDERGRADUATES AND
POSTGRADUATES**

MINDS QUIZ

1. A synthetic form of opium was introduced by Germany during WWII
A. Buprenorphine B. Methadone C. Fentanyl D. Norco
2. A long-term user of cocaine may well develop symptoms of other psychological disorders, such as:
A. Major Depression B. Eating disorder C. Social phobia D. All
3. Which organ is the site of the greatest absorption of alcohol?
A. Stomach B. Small intestine C. Large intestine D. Liver
4. Adverse effects of Amphetamines are all except
A. Hostility B. Drowsiness C. Confusion D. Restlessness
5. Which one of these is nicotine replacement therapy?
A. Nicotine gums B. Psychotherapy C. Varenicline D. Bupropion



ACROSS

2. When light flashes the patient gets tingling sensation(12)
4. Dreamlike state in awake person (8)
5. Patient senselessly repeat words or phrases spoken by others around them (9)
7. Hallucinations occurs just prior to sleep (10)
8. Subjective double (a person feels that a double of himself exists somewhere else (12)
9. Odd repetitive goal directed movements, eg, waving(9)

DOWN

1. Patient cries one minute and laughs the next without any stimulation(8)
3. Feeling of strangeness to familiar situations or events(8)
6. "I am sad, mad, bad, dad, glad" words have no logical connection(9)

**Can
You
CROSS
THE
CROSS
WORD**

Dr. Priyanka Mantagi, Intern, MVJMC & RH, Hoskote, Bengaluru



QR Code for MINDS website

- ACROSS**
1. Synaesthesia
 2. Oneiroid
 3. Echolalia
 4. Hypnagogic
 5. Doppelganger
 6. Mannerism

- DOWN**
1. Lablity
 3. Jamais vu
 6. Clanging

CROSS WORDS

**Dr. Faris
Basheer (PG)
MVJMC &
RH**

- MINDS QUIZ**
1. Methadone
 2. All
 3. Small Intestine
 4. Drowsiness
 5. Nicotine gums

ANSWERS

MINDS Newsletter was launched in July 2011 as a Monthly Newsletter on Psychiatry for doctors & medical students for creating awareness and continued medical education. You can receive a free e-copy of MINDS by an e-mail request to editormind@gmail.com, or by just SMS MINDS to Editor: +91 9845219324/ Asst. Editor;

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