



Memory Retrieval and Significance and Function of Psychical Cortex (Area 9 -Area 12)

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***Corresponding Author:** Kunal Joon, Department of Anatomy, NIIMS, India**DOI:** 10.31080/ASNE.2023.06.0663**Received:** August 16, 2023**Published:** August 25, 2023© All rights are reserved by **Kunal Joon**.**Abstract**

Memory is retrieved from the different cortex through the memory retrieval circuit. This circuit involves psychical cortex which convert them and comprehend them and send to motor speech area and person recognize it.

Objective: Memory retrieval process, Memory retrieval circuit, Mystery of psychical cortex, Significance and fate of psychical cortex

Keywords: Neuroscience; Neuro; Neurology; Psychology; Memory

Introduction

This research covers the process of memory retrieval and significance and functioning of psychical cortex and treatment of dementia and Alzheimer diseases.

Psychical cortex

Area number 9 to 12 It forms the anterior part temporal lobe. It connects in the retrieval memory circuit connected to the every cortex through cingulate gyrus and above corpus callosum

Memory retrieval circuit

- **Step 1:** Memory stored in the various cortex travel through psychical cortex.
- **Step 2:** In psychical cortex memory is converted into visual memory.
- **Step 3:** Memory travel in hippocampus and converted into the recent memory.
- **Step 4:** Recent memory is comprehended in speech area wernick area.
- **Step 5:** Memory gets retrieved.

Photo visual memory process

- **Step 1:** Memory received from retina
- **Step 2:** Passes through psychical cortex that is anterior lobe of temporal lobe.

- **Step 3:** Memory travel through hippocampus
- **Step 4:** Recent memory is comprehended in wernicks area.
- **Step 5:** Memory is visualized for seconds when eyes are closed.

Auditory memory

- **Step 1:** Memory received from a pattern
- **Step 2:** If same pattern is stuck or visualize in brain.
- **Step 3:** The memory stored in Auditory cortex.
- **Step 4:** Travel through psychical cortex and get comprehend.
- **Step 5:** Memory is retrieved.

Olfactory memory

- **Step 1:** memory received from a olfaction
- **Step 2:** if same type of olfaction is received in brain through Olfactory nerve.
- **Step 3:** memory stored in Olfactory cortex.
- **Step 4:** travel through psychical cortex and get comprehend.
- **Step 5:** memory get retrieved.

Taste memory

- **Step 1:** Memory received from the taste
- **Step 2:** If same type of taste received brain stimulates through hypoglossal.
- **Step 3:** Memory stored in gustatory area.
- **Step 4:** Travel through psychical cortex and get comprehend.
- **Step 5:** Memory get retrieved.

Memory retrieval circuit

Figure 1: <https://photos.app.goo.gl/zyArEPqRD5fYFHEJ9>

Figure 1.1 shows about memory retrieval circuit routes.

Route 1: it includes hippocampus as in this route hippocampus convert long term memory into the recent memory for retrieval.

- **Step 1:** Memory recieved from cortex
- **Step 2:** Travel to psychical cortex and gets comprehend
- **Step 3:** Travel to corpus callosun than to internal capsule
- **Step 4:** Travel to hippocampus and grts converted into recent memory and gets retrieved

Route 2: This type of circuit involves in sudden memory in which sudden response is required.

- **Step 1:** Memory stimulus recieved
- **Step 2:** Travel to psychical cortex and gets comprehend.
- **Step 3:** Travel to corpus callousm than to inter al capsule.
- **Step 4:** Go to anterior nucleus of thalmas and get retrieved.

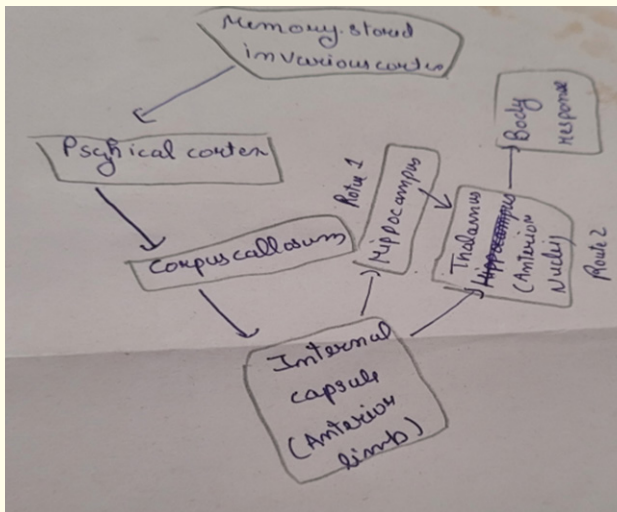


Figure 1

Function of psychical cortex

The main Function of psychical cortex area 9 to 12 or anterior lobe of temporal lobe. This area play a main role in the memory reterival circuit ad it act as a comprehend circuit it combines and comprehend the memory stored in the cerebral cortexes

Significance of psychical cortex

The main Significance of psychical cortex is that it helps in comprehension combination of various memory from different areas of cerebral cortex.

Dementia treatment

- **Aim:** to study eeg of dementia patients
- **Material required:** eeg graph of dementia patient [1].

Methodology

- Basically eeg graph is to study varies brain pattern of the person
- Theta wave gives the identification of memory retrieval and its process
- Eeg graph used in studying the various waves pattern of patients
- Theta waves are studied to check the problem of the patient
- Alertness of mind and Pschological diseases are interlined with area 9 to 12 which is the psychical cortex
- Psychical cortex is the anterior lobe of temporal lobe
- It comprehends the memory which is less functioning in the dementia case

Observation



Figure 2: eeg graph of dementia.

On studying the dementia patients eeg graph shown below we observe irregular wave pattern of theta wave which determines the convulsions Confusion and split brain in dementia patient. It also give records of the forgetfulness of dementia patients the more the irregular is wave pattern more is the forgetfulness [2] of dementia patients.

Treatment of dementia patients

As dementia is a temporary condition . As patients is in depression [3].

Treatment can be given in two ways

- Pschyological way : in this patients is given a Pschyological therapy by understanding a Mental situation of patients and asking his /her problem and resolving its problem In his / her own way or your own way be like his /her
- Symptomatic treatment : this treatment includes drugs which excites the neuron and treatment given is antidepressant which makes patient to come out from dementia and Resolve his /her problem to lead his /her normal life [4].

Alzheimer diseases treatment

Aim: to study eeg graph of Alzheimer diseased patient

Material required: eeg graph of Alzheimer diseased patients

Methodology

- Alzheimer diseases is the basically a degenerative disease in which neurons gets degernate
- Entangles occur in the neurons in Alzheimer disease
- Symptoms included forgetfulness , loss of basic skills , depression
- Eeg pattern of patient is studied [5]

Observation

Eeg of dementia

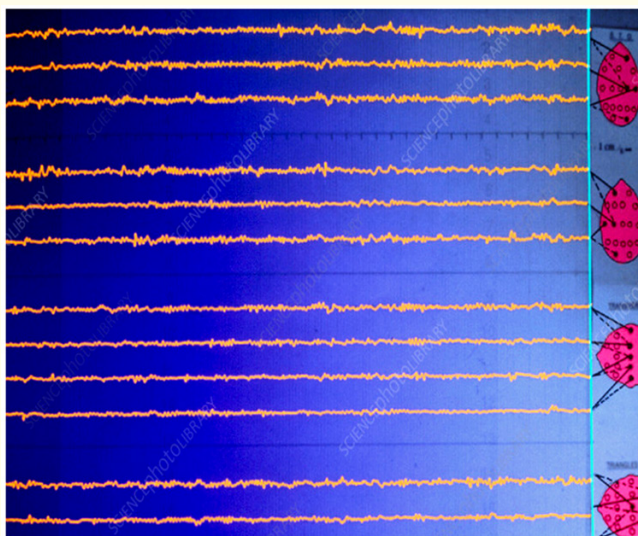


Figure 3: eeg graph of Alzheimer diseased patients.

Figure 3 showing eeg of the patient with Alzheimer diseases

In Alzheimer disease patient Alertness goes and memory retrieval and storage circuit affected as the theta wave pattern is nil here shows in the figure even theta wave are not produced in frontal lobe shows that area 9 to 12 or pschyical cortex are also affected.

Treatment

Treatment is only by one way is that Regeneration cell therapy As cell has a dna code and it's dna act as a architecture so a dna from patient body can be used as a source for Regeneration of cells and lead to treatment for patient with Alzheimer diseases.

Treatment of parkinsonism diseases [6]

- **Aim:** to study eeg of parkinsonism diseased person
- **Material required:** eeg graph of parkinsonism diseased person

Methodology

- Parkinsonis diseased person works slowly.
- Parkinsonism is the case in which dopaminergic neurons gets exhausted.
- Eeg graph is used to study gama wave to see the irregularity of dopaminenergic neurons.
- Also sense the Alertness and focus of the patient.

Observation

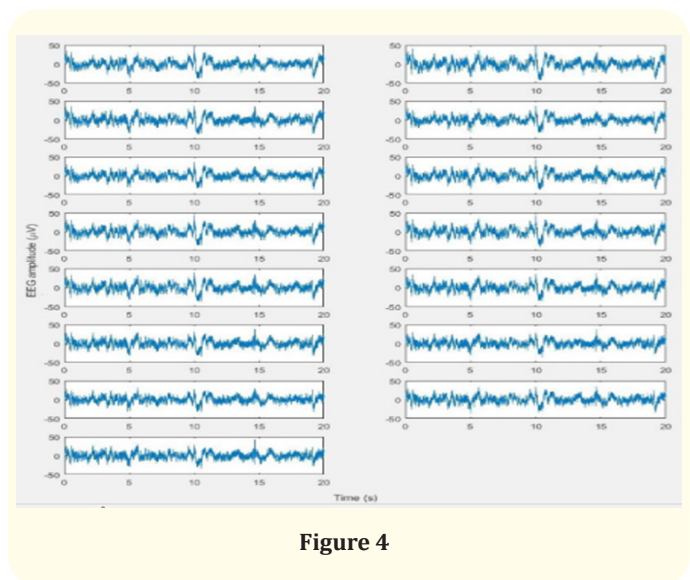


Figure 4

Figure 4 shows early parkinsonism diseased patient in which the gamma waves are regular pattern but on careful observation we observe a early lurching gate [7]. Pattern in the gamma waves.

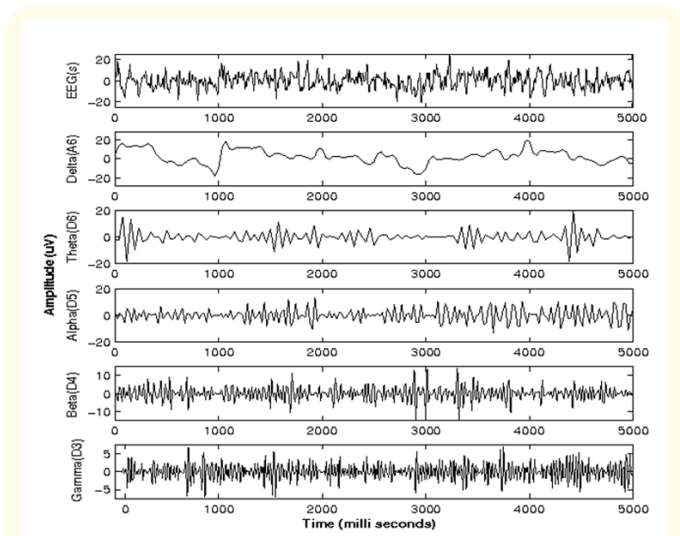


Figure 5: Shows different wavelt and clear picture of eeg in which we can observe.

The lurching gate pattern in gamma waves and this figure tells about the patient functional defect in the dopaminergic neurons which is shown that on giving stimulus neuron excites but less tells about exhaustion of neurons in the patient [8].



Figure 6: eeg graph of parkinsonism.

Figure 6 shows about the proper parkinsonism diseased patient in proper irregular pattern of gamma waves are visible which tells full exhaustion of dopaminergic neurons and less excitation of dopaminergic neurons which makes people less excitable towards their works.

Treatment

- Parkinsonism Symptomatic treatment is known by giving L dopamine [8].
- Proper treatment of parkinsonism diseased patients can be done generating more dopamine synthesing neuron through stem cell therapy also by implanting more dopaminergic neurons in the patient through stem cell therapy.
- By making body synthesing more dopamine by catacholamine decomposition [9].

Discussion

Discussion was conducted on.

- Eeg of dementia
- Eeg of parkinsonism
- Eeg of Alzheimer diseased patients [10]

Proper patients history were taken and proper eeg and studies were performed.

Conclusion

That psychical area helps in the comprehension and retrieval of memory and injury of this can lead to the Alzheimer diseases and also stem cell therapy can be used for the treatment of parkinsonism, Alzheimer’s Disease and dementia.

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Contributions of author Kunal Joon
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Analysis
Experimentation

Data Analysis

ICMJE statement
Declaration that the article is according to the format

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Data Availability

Data cannot be made available for reasons in disclosed in the data availability statement as the patient don't allow to make it public.

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