Lectures on the discipline "Psychiatry and Medical Psychology" for foreign students

(lecture format - video lectures, below is text (voice) accompaniment)

Lecture Topics

1. Subject of psychiatry. History of the development of psychiatry. The concept of mental. Subject of medical (clinical) psychology. Common psychopathology. The main spheres of mental. Perception's disorders.
2. Disorganized process of thinking abs speech. Delusional states, types, dynamics.
3. Emotional disorders. Mood disorders.
4. Movement disorders. Psychomotor disturbances. Behavioral and will disorders.
5. Consciousness. Clinical, neuropsychological and psychological aspects of consciousness. Concept of self-consciousness. Consciousness disorders. Sleep disorders.
6. Schizophrenia, a history of schizophrenia doctrine. The main symptoms. Forms of schizophrenia and clinical course of disease.
7. Organic mental disorders. Mental disorders due to brain injury. Epilepsy, types of seizures, mental disorders due to epilepsy.
8. Substance use disorders. Alcoholism and drug addiction.
9. Neurotic stress-related disorders. Personality disorders.
10. Mental disorders of childhood and adolescence. Mental disorders in the elderly.

Lection 1

Subject of psychiatry. History of the development of psychiatry. The concept of mental. Subject of medical (clinical) psychology. Common psychopathology. The main spheres of mental. Perception's disorders.

Slide 2

In different historical periods in and the different country the attitude to patients with mental disorders often depended on the level of scientific and cultural development.

This is what the Russian psychiatrist P.B. Gannushkin talked about:

"Assessing the psychiatric care in country, we can assess the level of culture in this country"

Slide 3

The history of the development of psychiatric science consists of several stages.

I. Pre-scientific period, extending from ancient times to the emergence of Hellenic Medicine. This period characterized by primitive theological understanding of the abnormal behavior of the mentally ill, which was captured in mythology and folk poetry. For example, auditory imperative hallucinations in Odysseus, the hero of the Iliad Homer, when he heard the fascinating voices of sirens.

II period or the era of Greco-Roman medicine. The beginning of this period is considered the 7th or 6th century B.C., when the first attempts to provide assistance to the mentally ill were made. It was made an attempt to understand mental disorders outside of theological concepts.

Hippocrates wrote***: "We must know that grief, sadness, discontent and complaints come from the brain, from it we become insane, we have delusion, we are overcome by anxiety and fear"***

Slide 4

III period. The Middle Ages are characterized by dominance of Inquisition and regression to the level of a pre-scientific worldview, with a negative attitude to the mentally ill, as to persons possessed by diabolic insanity. The main "care" was execution or autodafe of mental patients or their isolation for public safety.

Slide 5

Patients imprisoned in the cells of the Inquisition were in terrible conditions, literally chained.

Slide

IY period in 18-19 centuries - the period of the formation of psychiatry as a medical science.

The French scientist Phillip Pinel was the first psychiatrist who, in 1792, firstly freed mental patients from chains, and altogether changed patient care

Slide 7

On the left you see a monument to Phillip Pinel in Paris.

On the right you can see a portrait of an english psychiatrist John Conolly, who was made a similar revolution in England end even went further by introducing system "open door"

Slide 8 - Y period or the era of nosological psychiatry

During this period, scientists are most interested in the causes of mental illness and methods of treatment. A reflection of the different opinions of psychiatry most acutely was represented in so-called dispute "scientists psyche" and "scientists somatic". "Scientists psyche", such as Geynrot, Ideler continued the tradition of idealistic metaphysics. Psychoses were considered as the effects of sinful passion and vices, and these views were as echo of the medieval theory of the influence of the evil spirit.

Slide 9

In accordance with this view, there were special treatment methods: You can see on the left the picture of fettering chair with iron squeezing mask, on the right – picture of painful hydrotherapy

Slide 10
You can see on the left the picture of the mechanical procedures (rotation), on the right side – the picture of patient, long standing in a pose of crucifixion

Slide 11
The echo of the school of the psyche is the phenomenon of exorcism that exists in our time, the purpose of which is to eject demons from a person through religious rituals

Slide 12
"Scientists somatic" school, such as Jacobi, on the contrary, considered mental illness as disease of the whole organism and recommended the use of medicine (herbal drug), diet and balneotherapy in the treatment of mental disorders. "Scientists somatic" provided the basis for the development of biological and clinical psychiatry, focused on the material substrate of mental disorders

Slide 13
YI period or the modern period of psychiatry is associated with the "psychopharmacological revolution" in the treatment of mental disorders, thanks to the discovery of Chlorpromazine in December 1950, which was initially intended for another task, relief of postoperative shock. Later scientists noticed that the substance had a sedative and anticonvulsant effect. The first tests that the psychiatrist Frank Hades did, gave a brilliant result: after a three-week course of the drug, a 24-year-old "violent crazy" patient with a diagnosis of schizophrenia, previously treated with opioids, barbiturates and electroshock, returned to normal life and was discharged home.
After chlorpromazine, a multitude of new antipsychotic medications began to produced, the wide application of psychotropic drugs has been an increase outpatient forms of psychiatric care and broad study of the social aspects of psychiatry.

Slide 14 - The concept of mental health
From the standpoint of **psychiatry, as a medical science**, mental health is the absence of mental disorders
From the standpoint of **medical psychology**, mental health is also:

1) state of harmonious human interaction with the environment, ensuring its adequacy to the social environment;
2) adaptive ability of a person to overcome stressful situations

The main tasks of a psychiatrist:

- diagnosis of mental disorder
- treatment

The work of **clinical psychologist** is only **paraclinical**

Slide 15 - Etiological factors of mental disorders
Despite the variety of etiological factors contributing to the occurrence of mental illness and mental disorders, in clinical psychiatry, usually only those are taken into account that can serve as biological markers. Mostly, we mean genetic and morphological factors.
Psychiatry, as a medical science, in most textbooks is presented in 2 parts: General Psychopathology and Nosological Psychiatry, the first deals with the identification of mental disorders, the second with nosological and etiological aspects.
The main methods of general psychopathology are:

1. Patient's observation, behavior monitoring

2. Conversation, interview
3. Experiment, testing

Below will be shown two videos, the first demonstrates how, using common observation of a person's behavior, it can be assumed that he has a mental disorder, in this case, presumably, a hypomanic state.
The second video shows the conversation of a "difficult" patient with two psychiatrists, both of whom could not find contact with him

Slide 16 – Video

Slide 17 – Video

Slide 18
The main task of testing is to quantify the degree of dysfunction.
You see the Schulte table, which serves to evaluate the attention function - the subject must sequentially find numbers from 1 to 25 over some period of time, normally comprising from 37 to 40 seconds.
In the next video, you can see that the patient's time to complete this test is significantly higher than the standard, approximately 60 seconds.

Slide 19 - Video

Slide 20 - Main spheres of the psyche
The dividing into parts such a complex phenomenon as the psyche is restricted and even mechanistic.
Nevertheless, such a dividing is of practical importance, for example, for describing the patient's mental state when the doctor begins his description with the words: "Consciousness is clear or unclear and so on"

Slide 21 - Classification of psychopathological syndromes
Based on the description of mental status and in case of detection of mental disorders, a psychopathological syndrome is identified. In the presented classification of syndromes proposed by academician Snezhnevsky, syndromes are arranged according to their severity. The neurotic syndromes, which are functional in nature, are mildest, the most severe are dementia syndromes, which based on the organic lesion of the brain.

Slide 22 - Perception
Perception is the process of being aware of a sensory experience and being able to recognize it by comparing it with previous experiences.
It is necessary to distinguish phenomenon between feeling or sensation and properly perception.
Sensations *reflect the properties* of objects and occurrences of the world
Perception is, firstly, the *holistic reflection* of objects using the senses, and, moreover, realize the intentional selection of certain objects or phenomena of the objective reality.
Perception includes the sensory component and the gnostic component or recognition.
Perception is the "bridge" between sensation and knowledge

Slide 23 - Types of sensations
In this classification, the types of sensations are presented by sensory organs. Our consciousness most often reacts to visual and auditory sensations.

Slide 24 - Sensory processing disorders

Sensory hypersthesia is an abnormal increase in sensitivity to stimuli
Sensory hyposthesia is a partial loss of sensitivity to sensory stimuli
Analgesia **is** loss of sensation of pain
Paresthesia is an abnormal sensation of the skin (tingling, pricking, chilling, burning, numbness) with no apparent physical cause
Senestopathies are similar to paresthesias, but are characterized by:

- unusual, often quite mannered
- polymorphism - a variety of pains, burning sensations, cold, heaviness, filling, electrification, movement, etc.
- accompanied by unpleasant, painful, sometimes unusually torture experiences
- localization does not correspond to the clinical symptoms of somatic disease

Slide 25 - Perceptual disturbances
Illusions are mistaken perception. *Whether visual, auditory, or in other sensory fields; whether occur in clear consciousness or not; whether any steps taken to check the reality of distorted perceptions*. Illusions classified into:

- optical (physiological)
- pareidolia - is the tendency for incorrect perception of a stimulus as an object, pattern or meaning known to the observer, such as seeing shapes in clouds, seeing faces in inanimate objects or abstract patterns, or hearing hidden messages in music
- affective illusions - *visual or auditory*

A hallucination is a perception experienced in the absence of an external stimulus. The hallucinations can be in the auditory, visual, olfactory, gustatory or tactile domains.
Auditory hallucinations are commonest types of hallucinations in non-organic psychiatric disorders. It is really important to clarify whether they are elementary (only sounds are heard) or complex (voices heard). The hallucination is experienced much like a *true perception* and it seems to come from an external objective space (for example, from outside the ears in the case of an auditory hallucination). If the hallucination does not either appear to be a true perception or comes from a subjective internal space (for example, inside the person's own head), then it is called as a *pseudohallucination*

Slide 26- Perceptual disturbances - Psychosensory disorders
Psychosensory disorders – distortion of perception of the size and the shape of objects, as well as some own body, their integrity, relative position in space. The following types are distinguished:
Porropsia. The term porropsia translates loosely as 'seeing things being carried away' and is used to denote a visual distortion in which stationary objects appear to be moving away from the observer (micro-porropsia) or moving near (macro-porropsia)
Metamorphopsia is a type of distorted vision of objects in size or shape:
Micropsia is a condition affecting human visual perception in which objects are perceived to be smaller than they actually are
Macropsia is visual perception, in which objects appear larger than normal
Dysmegalopsia or dysmetropsia. The term translates roughly as the diminished ability to appreciate precise shape of objects.
Splitting of perception
Autometamorphopsia – perception of one's own body distorted
Distorted time perception – hastened time perception, slow time perception, perception of stopping time, perception reverse time

Slide 27
You see a case of an optical or physiological illusion

Slide 28
And this is the example of visual fancy pareidolia

Slide 29
It is the example of affective illusion, most likely due to fear and anxiety

The following video will demonstrate visual hallucinations - true, like the animal monsters, typical for patients with alcoholic delirium

Slide 30 - Video

Slide 31
Something like this the patient sees visual pseudo-hallucinatory

In the next two videos, you will see different forms of hallucinations:
The first video presents a fragment of the film "The Sixth Sense", which shows the experiences of a child who complains of visual and auditory hallucinations that torment him. In the film, the child is talking not with a real person, but with a hallucinatory ghost.
In the second video, you can see a real man suffering from tactile hallucinations. You can clearly see how he is tormented, trying to shake off invisible insects, and asks for help.

Slide 32 – Video

Slide 33 – Video

Slide 34
This image is related to psychosensory disorders.
In this case, this is the so-called macro-porropsia. In a case of ordinary porropsia the stationary objects appear to be moving away from the observer, and in a case of macro-porropsia, on the contrary, external objects move closer and threaten to crush.

Slide 35
Micropsia is a condition affecting human visual perception in which objects are perceived to be smaller than they actually are

Slide 36
Macropsia is visual perception, in which objects appear larger than normal

Slide 37
Dysmegalopsia or dysmetropsia, in which surrounding objects are perceived as in askew mirror, with disturbed proportions, lengthened or shortened, skewed, twisted around the axis.

Slide 38
Splitting of perception is a rarer type of metamorphopsia

Slide 39
Autometamorphopsia – perception of one's own body distorted.
In the case of total autometamorphopsia, the body is perceived as either enlarged –macrosomia, or small - microsomy. In the case of partial autometamorphopsia, some parts of the body are perceived as enlarged or reduced.
In the picture you see a partial autometamorphopsia in the form of perception of enlarged hands

Slide 40

In this picture you see a partial autometamorphopsia in the form of perception of enlarged hea

Lection 2

Disorganized process of thinking abs speech. Delusional states, types, dynamics.

Слайд

This lecture is devoted to the description of specific thinking disorders observed in patients with schizophrenia, otherwise denoted as conceptual disorganization, and also the description of delusions

Слайд 2

There are many definitions of thinking, but they are all taken from philosophy and psychology. There is no medical definition of thinking, because we cannot connect thinking with any anatomical region of the brain or with any physiological process. We talk about the process of thinking when a person actively solves a problem or task similar to finding the right way out of the labyrinth. If an animal solves this problem behaviorally using motor activity, then a human solves this problem abstractly, “in the mind” using mental activity

Слайд 3 – Autistic thinking

In autism, there is a dominance of the so-called position "from the environment», apartness from reality and its problems.

You can observe a similar style of thinking in young children with a rich imagination, when some unpleasant events and obstacles are easily and quickly resolved in the inner space of the imagination. The rich imagination of childhood is not a pathology, except for a disorder such as early childhood autism.

E. Bleiler, an Austrian psychiatrist who created the doctrine of schizophrenia, considered predominance of inner life with an active turning-away from the external world as one of the most important symptoms of schizophrenia.

Слайд 4

Predominance of inner life with an active turning-away from the external world causes autistic behavior resembling seclusion. In the photo you see a modern hermit living in the improvised dugout, and it is not clear what he is doing, and it is not known what is living on

Слайд 5 – Tangentiality

Tangentiality, or “fruitless” thinking refers to a disturbance in the thought process that causes the individual to relate excessive or irrelevant detail that results in never reaching the essential point of a conversation or the desired answer to a quest.

As E. Bleiler wrote, a schizophrenic is one who speaks a lot and for a long time, but says nothing. Using the analogy with the labyrinth, we can say that a healthy person is looking for a way out, and the patient “walks in a circle”

Слайд 6

As an example of tangentiality of thinking, we can cite an essay by the Argentine writer Jorge Luis Borges, who in some ancient Chinese archives sought out a strange classification of animals. Namely in this manner, think and reason patients with schizophrenia.

Слайд 7 – Loosening of associations

Phenomenon of “loosening of associations” is accompanied by patent’s neglect to well-known laws of logic, described by Aristotle - 1) the law of identity; 2) the law of non-contradiction; 3) the law of the excluded middle; 4) and the principle of sufficient reason described by Leibniz.

Divergent thinking is a thought process used to generate original ideas by exploring many possible solutions. It typically occurs in a spontaneous, free-flowing, "non-linear" manner. Many possible solutions are explored in a short amount of time, and unexpected connections are drawn.

Unlike divergent thinking, convergent thinking is organized due to set of logical steps to arrive at one solution, which in some cases is a "correct" solution. For the schizophrenic, divergent thinking is a process uncontrolled by logic, like a gamble that is just as likely to result in error as it is to result in original solution.

The ambivalence of thinking in patients with schizophrenia is seen in that phenomenon, when the original operations of abstraction are combined with primitive, stilted and even stupid reasoning. For example, the patient says that “God is a ship of the Sahara”.

Divergent thinking in a patient you can observe in his speech, in the form of a **neologism phenomenon** - a change in the meaning of words or even the creation of new words

Слайд 8

To identify logical defects in the patient’s thinking, testing should be used. Widely used test "Fourth should be excluded".

Performing this test, the patient neglects the laws of logic, namely, the operations of generalization by similar qualities, and excludes the object by absurd sign.

For example, on the left draw the patient has excluded sweets, because “they are a pair”, and on the right draw he has excluded an electric lamp, because “it is fragile”

Слайд 9 – Disruption of goal-directed sequencing of thinking

Disruption of goal-directed sequencing of thinking. It is inconsistency, “slipping” of thinking, as a result of the lock in thinking the first law of logic, the law of identity.

This disorder of thinking is reflected in inconsistent, confused speech, even reaching chaotic speech or schizophasia.

It is impossible to conduct a conversation with such a person - he regularly goes off to the side, “slips away”, talks about something incomprehensible.

Symbolism of thinking is a regression to the archaic or magical thinking of ancient peoples. L. Levy-Bruhl, a French researcher of thinking among primitive tribes, wrote that for Bushmen, rain is a person; the clouds are his hair, the jets of water are his legs, so every tribe had a “rain charmer”.

Symbolism of thinking in a patient with schizophrenia leads to the development of meaning delusions and interpretation delusions, when some external event is as a trigger for the appearance of delusions

Слайд 10 – Disorders of thinking and speech as urgent manifestations

These disorders of thinking and speech are observed in psychotic states, so they can be designated as disease process, often in acute stage

Слайд 11 – Mentism or the “whirlpool” of thoughts

Mentism can be compared to a storm, when one wave covers another, something similar occurs in the patient's thoughts. In such a state, patients very often cannot utter a single word.

Слайд 12 – Sperrung or “rupture” of thinking, or thought block

Sperrung is a German word meaning " rupture " of thought

When spherrung occurs, the patient suddenly loses speech, because loses thought, much like the driver stops before a break in the road.

Слайд 13 – Stagnation of thoughts, or “stuck”, “skidding” thoughts

This disorder manifests itself in verbigerations, when a patient, having uttered a word, gets stuck on it, for example, saying the phrase "I was at home", then he repeats the same word "at home ..., at home ..., at home".

Слайд 14 – The “circuit" of thought

The “circuit" of thought manifests itself in association’s iteration or verbal stereotypes.
For example, to the question with whom he lives, the patient replies “I live with my mother”, and further to all another questions he stereotypically answers “I live with my mother”.

Слайд 15 – Delusions
Delusion, first of all, has ill basis, therefore it cannot be reassuring and leads to maladjustment.

Primary delusions *arise* de novo *and cannot be explained on the basis of other experiences or perceptions. Also known as* autochthonous delusions*, these are though to be characteristic of schizophrenia and are usually seen in early stage.* Primary delusion is often systematic, for example, the delusion of reform.

Слайд 16
Primary delusions in non-schizophrenic individuals may occur under stress. For example, during the Covid pandemic have emerged many conspiracy theories against humanity. Bill Gates also was declared one of these conspirators.

Слайд 17 – Content of delusion, classification
Secondary delusions *are the commonest type of delusions seen in clinical practice. Secondary delusions can be explained as arising from other abnormal experiences,* including hallucinations. Classification is based on the content of delusion. The most common are delusion of persecution and delusion of control and intrusion or Kandinsky-Clerambault syndrome. The latter is otherwise designated as syndrome of the psychic automatism that is characterized by pseudohallucinations, telepathy, thought broadcasting and thought insertion by an external force. The syndrome also characterized by delusion of being controlled by a source outside himself. For example, the patient complains that someone speaks with his mouth, walks with his feet, does something with his hands. Delusional parasitosis or Ekbom's syndrome is a mental disorder in which individuals have a persistent belief that they are infested with living or nonliving pathogens such as parasites, insects, or bugs, when no such infestation is present. They usually report tactile hallucinations known as formication, a sensation resembling insects crawling on or under the skin.

Слайд 18 – Nihilistic delusion
Nihilistic delusion, also known as walking corpse syndrome or Cotard's syndrome, is a rare mental disorder in which the affected person holds the delusional belief that they are dead, do not exist, are putrefying, or have lost their blood or internal organs.

Secondary delusion is often accompanied by hallucinations, exciting emotions, so this delusion is called feeling delusion

The following video presents a fragment of the film Jeanne d’Ark. The heroine of the film talks about her voices and her sacred mission, that is very similar to a paranoid syndrome.

Слайд 19 – Video

Слайд 20 – Dynamics or development of delusion
Like any disease process delusion proceed in stages.
Delusion often debuts as a delusional mood, when everything around becomes unusual, takes on extraordinary meaning. The patient has tendency to mistakenly perceive connections and meaning between unrelated things, which received the name of the so-called “Delusional perception”. On this early stages of delusion, the patient discovers unmotivated seeing of connections a specific feeling of abnormal meaningfulness, over-interpretations of actual sensory perceptions as opposed to hallucinations, that may appear later.

With a long progression of the disease, delusion becomes more and more absurd, fantastic, that is denoted as paraphrenia.
The following video presents a fragment of the film “K-PAX” about insane who considers himself as creature from another galaxy and planet K-PAX

Слайд 21 – Video

Слайд 22 – Nosological classification of delusion
You can see the nosological factors of delusion, of which the most common is schizophrenia.
Delusional disorder diagnosed as self-determining disorder when the patient has no other symptoms of schizophrenia.
Organic psychoses are characterized by abnormal brain function that is caused by a known physical abnormality, which in most cases is some organic disease of the brain.
And about delusion due the stress. For Freud, delusions were the result of a conflict between psychological agencies, the id, ego, and super-ego. Delusion, briefly stated, is seen as a personal unconscious inner state or conflict which is turned outwards and attributed to the external world. Later, psychoanalytical authors suggested that delusions might be a compensation for any kind of mental weakness. This concept in a way resembles Alfred Adler’s theory of individual psychology, in which the consequences of personal failures play a major role in the etiology and pathogenesis of mental disorders.

Lection 3

Emotional disorders. Mood disorders.

Слайд 1

This lecture is devoted to the pathology of the affective sphere of the psyche, which includes emotions, feelings and mood

Слайд 2 – Emotions and feelings

Emotions and feelings reflect a person's attitude to the world, to what he experiences and does, in the form of the inner experience, the essence of emotion.

The biological role of emotions is that they serve the purpose of adaptation, because they make it possible quickly to evaluate reality and react appropriately. Using emotions, the human instantly evaluates reality, guided by the most ancient and universal criterion of all living organisms - to survive. In this we see the universal meaning of emotions.

The overall emotional tone that sets a person's mood depends on a number of factors, all of which are important.

Слайд 3 – Emotion or feelings

We can observe a certain emotional state in a person by observing his facial expressions and other forms of expressive motor activity. But that all palette of feelings that a person experiences is not entirely accessible to us, unless he himself tells about it.

Слайд 4

For example, it is difficult, looking at this woman, to say what she really feels and experiences.

Слайд 5 – The theory of fundamental emotions

Nevertheless, studying the expression of emotions, scientists K. Izard and E. Bartlett from a large number of emotions have identified 10 main, so-called fundamental emotions, which are provided by innate neural programs.

Слайд 6 – Video

Interest, we can say, is the daily emotion. Without it, a person feels emptiness.

Слайд 7

Interest energizes behavior, providing the body with an optimal level of activation. Secondly, interest motivates cognitive processes. Interest activates motivational processes that push the individual toward a certain goal. We can say that anybody cannot be successful in profession if he has not interested this work.

Слайд 8

The emotion of joy is often associated with the feeling of pleasure. The last can arise from the satisfying of some need, for example, from eating delicious food.

Joy is something that suddenly feels as unexpected good.

In children, joy is a common emotion that arises easily, from the common stimuli, such as jumping in puddles.

Joy is important for mental and biological processes - firstly, it frees from negative emotions, and secondly, it improves the physiological state. In social relationships, a person experiencing gladness is more communicative and benevolent to others.

Слайд 9 – Mental and biological significance of joy

Joy is important for mental and biological processes:

- firstly, it frees from negative emotions
- secondly, it improves the physiological state

- in social relationships, a person experiencing gladness is more communicative and benevolent to others

Слайд 10 – Video
Wonder is an emotional reaction of a person to objects or a situation, which are characterized by: a) unusual; b) abruptness.
Wonder is generated by the high increase in nerve stimulation, which inhibits all previous emotions. In a state of wonder, thoughts are absent, the normal thought processes are stopped. Unlike the interest, wonder does not motivate behavior. For a person, it is necessary to be ready to deal with sudden new events; wonder serves as a release the nervous system from the current state. Tomkins called wonder "a channel-clearing emotion", and therein lies its biological role.

Слайд 11
Grief is an emotional reaction to the loss of what is dearest to a person, for example, the loss of a loved one, or a meaning of life. The colors of the grief experience are varied - it can be a strong mental pain experienced as torment, it can be sadness, or gloom.
A person experiencing grief also suffers physically, so he often looks sick, exhausted, weakened.
Grief is often associated with suffering. Suffering is a deep affect that occurs as a result of prolonged exposure of the excessive negative stimulation (coldness, pain, noise, hotness, light, etc.). Animals suffer if their environment is harmful, some of the animals die, and survive the more adapted. This is how natural selection works.

Слайд 12 – Mental and social significance of grief
Civilized world allowed man to avoid physical suffering, but did not relieve him of grief. Has the grief any significance foe people?
People feeling grief and desperate, actually are going through a crisis phase, and if they get past it, they will become much stronger
This is why psychologists say that personal growth and its development is dramatic.
Social meaning of this emotion is that grief contributes to the unity of people, it is the force that keeps a person close to loved ones.

Слайд 13
The emotion of anger arises in response to unexpected obstacles in a person when he wants to achieve something, for example, satisfy important needs and desires. Also, anger can be caused by a restriction of freedom, physical or psychological.

Слайд 14 – Biological role of anger
Anger is a strong emotion, as evidenced by the accompanying physiological changes (rise in blood pressure, heartbeat, muscle tension, an increase in the concentration of cortisol in the blood, etc.). The enhanced physiological properties of anger serve the main purpose - the destruction of the object that caused the anger, and in this we can see the biological meaning of anger.
In the human world, the manifestation of anger, which can lead to destructive behavior, is not welcome. As the result, we have common human problem - the problem of suppressed anger, which is basic for the development of many psychosomatic diseases (peptic ulcer, hypertension, angina pectoris, dermatitis, etc.).

Слайд 15 – Video
Disgust arises as a feeling of aversion towards something negative and offensive. We can feel disgusted by something we perceive with our physical senses (sight, smell, touch, sound, taste), by the actions or appearances of people, and even by ideas.
Disgust has evolved as a response to offensive foods that may cause harm to the organism. As an adult, a person learns to control its facial reactions, including the reaction of disgust. A person not

only knows how to hide his disgust for something unpleasant to him, but also acquires the ability to “portray” disgust for the other purpose - discard the other person as spoiled food to show someone that his behavior causes us disgust, as strong as spoiled food. Therefore, the emotion of disgust, like anger, is considered as a hostile emotion.

Слайд 16 – Video
Disdain is a part of the triad of hostile emotions. Unlike the anger, disdain or contempt is the cold-blooded emotion.
There are differed the emotion of contempt-scorn and the emotion contempt-haughty**.**
Disdain combined with disgust underlies various kinds of prejudices - racial, social, ethnic, religious, sexual.

Слайд 17 – Video
Contempt-haughty it is disdain with a sense of arrogance and superiority.

Слайд 18 – Fear
From the standpoint of neurophysiology, fear is caused by a rapid increase in neural activity.
Factors causing fear:

1. External events and processes that are perceived as threatening.
2. Pathological processes in the body, which are also perceived as threatening, for example, sudden acute pain in the heart

Слайд 19 – Biological role of fear
The biological role of fear lies in its connection with the self-preservative instinct or survival instinct. Feeling fear, a person trusts his instinct and tries to avoid danger. There is no stronger motivation for seeking a safe environment than fear.

Слайд 20 – Shame
In shame, a person's consciousness is filled with himself. It was as if something that he was deeply hiding from others suddenly appeared on public display. Shame is associated with feelings of self-worthlessness, an acute loss of self-esteem that cause intense mental anguish.

Слайд 21 – Guilt, regret
Guilt is associated with the awareness of blame. The experience of guilt is accompanied by feeling of own wrongness in relation to another person. Feeling guilty, the person bows their head low or looks away.

Слайд 22 – Social significance of shame and guilt
Although the emotions of shame and guilt are unpleasant, they have social significance.
The social meaning of shame lies in the fact that people, trying to avoid this extremely unpleasant feeling, do not commit shameful acts.
The emotion of guilt helps to feel the pain of another person suffering through our fault, it makes us correct the situation as much as possible. Without guilt and shame, people would not follow the norms of morality and ethics.

Слайд 23 – Papez circuit
With regard to emotions, we can already talk about their biological basis, referring to the anatomical regions in the brain that provide energetic mobilization for emotion. Emotions are physiologically linked to the limbic brain.
The Papez circuit or medial limbic circuit goes through the following neural pathways:
hippocampal formation→fornix→mammilary bodies→anterior thalamic nucleus→cingulum→ amygdala.

Emotions manifest themselves due to the fact that the limbic system contains a significant amount of biologically active mediators belonging to the group of biogenic amines, enkephalins and endorphins.

Слайд 24 – Polygraph
The emotional state of an individual can be monitored by recording some biological parameters of somato-vegetative reactions, for example using a polygraph test.
A polygraph test is a procedure that measures and records several physiological parameters, such as blood pressure, pulse, respiration, and skin conductance, while a person is asked and answered a series of questions.

Слайд 25 – Disturbances in emotional reactions
Broadly speaking, the *emotions* can be described as two main types:
1. *Affect*, which is a *short-lived* emotional response to an idea or an event, and
2. *Mood*, which is a *sustained* emotional state.
So according to these definitions, we distinguish disturbances in emotional reactions and mood disorders
Among of pathological emotional reactions differ:
Emotional lability
Emotional excitement
Emotional inadequacy
Blunted affect
Emotional incontinence

Слайд 26
In the caricatures of the famous painter Bidstrup, we can find types with certain types of emotional responses.
Torpidity or stolidity of the emotional response is the character trait of phlegmatic temperament.
Emotional lability manifests itself in a quick response to various stimuli, due to which a person is in a fluctuating mood. Emotional lability is characteristic of persons with high neuroticism and anxiety.

Слайд 27
Emotional over excitability is an excessive emotional response to ordinary stimuli, perceived as aversive, i.e. harmful, and to which individual reacts with extreme irritation, like a flashing match. Emotional excitability is often a constitutional character trait in persons with borderline personality disorder.

Слайд 28 –(Emotional inadequacy
Emotional inadequacy is inconsistency, non-congruence of emotions for the situation in which they arise. For example, children often reveal emotional inadequacy, due to that they have not yet learned role behavior and the emotional expression corresponding to this behavior. In adult, emotional inadequacy is often characteristic of patients with schizophrenia.

Слайд 29 – Emotional incontinence
Emotional incontinence is a condition when an external component of emotions appears with extraordinary ease, mainly tearfulness or laughter, in the absence of an internal experience of feelings. Emotional incontinence occurs in older people, especially those with dementia.

Слайд 30 – Mood disorders
There are the main mood disorders as they are reflected in the International Classification of Diseases ICD-10.

Undoubtedly, depressive states are in the center of attention due to their widespread occurrence. According to the WHO, 18-25% of women and 8-10% of men have experienced a distinct depressive episode at least once in their lives.

Слайд 31 – Video

Слайд 32 – Depressive state
According to the severity of symptoms, the level of the depressive state is assessed. Severe depression has a risk of suicide.
Almost every depression is accompanied by disturbance of biological functions: insomnia, loss of appetite and weight *(or sometimes hyperphagia and weight gain),* feeling of fatigue, weakness, menstrual irregularities, palpitations, headaches, pain in the neck muscles, bowel constipation, dry mouth etc.

The following video shows fragment from the film "Where Dreams May Come", in which the heroine has symptoms of severe psychotic depression, psychotic because she hears the voice of her dead husband. Further in the film, the heroine commits suicide.

Слайд 33 – Video

Слайд 34 – Bipolar disorder
Bipolar disorder, previously known as manic depression, is characterized by periods of depression and abnormally elevated moods. During mania individuals often make impulsive decisions with little regard for the consequences. During periods of depression the risk of suicide is high.
In bipolar disorder, in addition to manic and depressive episodes, there are mixed episodes which symptoms of both mania and depression. Between affective episodes or phases, there may be "light" intervals of mental health or intermission, without a decrease in mental functions.

Слайд 35 – Recurrent depressive disorder
Recurrent depressive disorder describes the tendency of an individual to suffer recurrent episodes of depressed mood. Between episodes, remissions take place, which can be prolonged at the initial stages of the disease. As the disease progresses, depressive phases occur more often, and remissions are shortened, and the course of the disease becomes chronic.

Lection 4

Movement disorders. Psychomotor disturbances. Behavioral and will disorders.

Слайд 1

When we talk about motor activity, we mean psychomotor, behavior and will of a person
In pathology, the following disorders are distinguished:

- Movement disorders
- Psychomotor disturbances
- Behavioral and will disorders.

Слайд 2 – Activity

Activity is closely related to motivation. Motivation is defined as the need for action; it is a psychophysiological process that organizes human behavior. The motive is often compared to the need, but the need reflects the state of the body when it needs something. For example, thirst is a subject's need, and a bottle with a certain liquid that a person wants to get is a motive.

Слайд 3 – Psychomotor disturbances

Psychomotor activity of a person, in contrast to behavioral and volitional activity, does not have so-called motives of action.
Among the numerous psychomotor disorders, the main ones are:

- Psychomotor excitement
- Catatonia, excitement or stupor
- Hebephrenia

Слайд 4 – Psychomotor excitement

The peak of increased motor activity is psychomotor excitement, which, according to E. Kretschmer, is like as “motor storm”.
Psychomotor excitement is a typical reaction of living beings in a situation of stress and danger, when all the skills of movement come into motion, one after another.
Psychomotor excitement in mental patients is a nonspecific clinical symptom related to many mental disorders and it is an urgent state requiring immediate treatment.

Слайд 5 – Catatonic excitement, types

Catatonia is a state of psycho-motor immobility and behavioral abnormality. Catatonia can be excited or stuporous.
Types of catatonic excitement:
First, **confused-pathetic excitement** is characterized by hyperproduction of movement and speech incoherence. Patients are very mobile, speak loudly and incoherently, often rhyme, shout out greetings and calls, laugh, whistle, scold, march, dance and do gymnastic exercises.
Second, **impulsive excitement** is defined by sudden and unmotivated, destructive and aggressive actions.
Third, **"silent" excitement** is characterized by mutism, silence combined with motor fury, aggression and destructive actions directed not only at others, but also at oneself.

The next video shows a fragment from the film "Glass", where the actor very realistically plays a patient in impulsive excitement. It is clearly seen that such a patient is very dangerous to society.

Слайд 6 – Video

Слайд 7 – Catatonic stupor, types

Stuporous catatonia is characterized by immobility.
There are the following types of stupor

First, **stupor with catalepsy** is passive induction of a posture held against gravity. Lying on the bed, the patient can keep his head at a great distance from the pillow in such a way as if something else was placed under the head, which is called the "air cushion" symptom. This state can last for days, weeks, sometimes even months.
Second, **stupor with waxy flexibility** is the state, in which patient allow positioning by examiner and maintain position
Third, **stupor with muscle stiffness** is accompanied by muscle tension, mainly of the flexor muscles, resulting in complete rigor of the body. A patient in a similar state can take the pose of an embryo.
Fourth, **Stupor with negativism** is characterized by opposition or no response to instructions or external stimuli. For example, if someone tries to straighten the patient's arm, then he instantly provides active resistance and bends it even more.

The following video will shows real case of catatonic stupor with muscle stiffness, which suddenly occurred in a patient in a supermarket.

Слайд 8 – Video

Слайд 9 – Hebephrenia
Hebephrenia was first described by the German psychiatrist Hecker E. (1878) as an independent mental illness. The term hebephrenia comes from the name of Hebe, the goddess of youth in ancient Greek mythology, because Hecker supposed that this disorder is typical of adolescence.

Слайд 10 – Hyperactivity-motor disinhibition
With hyperactivity-motor disinhibition motor actions associated with the subcortical level, namely rubrospinal and thalamo-pallidary, become disorganized. Subcortical rubrospinal and thalamo-pallidary level includes the following neuroanatomical formations: red nucleus (nucleus ruber), pallidus (globus pallidus), thalamus, substantia nigra, striatum (corpus striatum).
Some of the disorders of this level may have a psychogenic cause, and then they are referred to as dissociative disorders. Among them, the most common are dissociative tremors, chills, tics, body writhing.

Слайд 11 – Hyperkinesis
Hyperkinesis is diagnosed based on the following symptoms:
- uncontrolled, spontaneous occurrence
- the possibility of conscious control, but requiring a great concentration of attention and volitional effort
- he patterns of hyperkinesis is “disfigured”, “broken off” and, according to N.A. Bernstein, presents a caricature of the movement.

Слайд 12 – Hyperkinesis ("obstetrician's hand"
The photo shows hyperkinesis in the form of the so-called "obstetrician's hand".

The next video shows a patient with multiple tics and hyperkinesis suffering from Gilles de la Tourette's syndrome

Слайд 13 – Video

Слайд 14 – Behavior and will
Behavior is an organism’s activities in response to external or internal stimuli, including objectively observable activities, introspectively observable activities, and nonconscious processes.

Volition or **will** is the cognitive process by which an individual decides on and commits to a particular course of action. The most important characteristic of volitional behavior is self-determination. A person acts of his own free will, despite the opposition of external factors.

The behavioral and volitional activity of a person, in contrast to psychomotor acts, is based **on needs and motives**.
Need, by S. Hall, is a specific condition associated with any deficiency or dysfunction of physiological processes in the body. A person's need for something is a passive-active state: passive, since it expresses a person's dependence on what he needs, and active, since it includes the desire to satisfy it. Recognizing a need, a person has **attraction, desire, tendency**, the latter constitute the **motivational sphere of the personality**.

Слайд 15 – Maslow's hierarchy of needs
In various theories of personality, a person's needs that determine his motivational activity are usually divided into lower and higher.
The satisfaction of the lowest needs is carried out through instinctive activity, the realization of needs of higher level requires the so-called rational behavior. And only the highest needs are realized through volitional processes.

Слайд 16 – Motivational sphere of personality
The motivational sphere of the individual is mainly composed of needs (the answer to the question "why?") and motives (the answer to the question "why, for what?").
There are the following motives: a) hedonistic; b) motives of interest; c) altruistic; d) motives of duty, duties. Combinations of various motives determine the basic line of human behavior.
In mental patients we can observe:

- regression from higher motives or needs to lower ones, which reflects personality degradation
- unmotivated activity, caused by unconscious motives
- conflicts in the motivational sphere, caused by disagreements in **extrinsic** and **intrinsic motivation**

Extrinsic motivation is prompted by reward or punishment ("carrot and stick motivation").
Carrot and stick motivation is a motivational approach that involves offering a "carrot" (a reward - for good behavior) and a "stick" (a negative consequence for poor behavior).
Intrinsic motivation provides behavior that is initiated and energized from within, from the core of the personality

Слайд 17 – Extrinsic motivation - "carrot and stick motivation"
There is nothing worse when a person does something only out of fear of punishment, in this state he is capable only of the most primitive forms of labor.
Most people carry out their professional activities, stimulated by reward. The more reward, the more a person tries to do his job with high quality.

Слайд 18 – Intrinsic motivation
But only a strong intrinsic motivation of some extraordinary persons is capable of creating something amazing, like the Notre Dame Cathedral.

Слайд 19 – Main disorders of behavior and will
There are presented main pathological forms of behavioral and volitional disorders observed in mental illness

Слайд 20 – Negativism in children

Negativism in children is expressed in resistance to external influences, is a variant of the norm and even a condition for the formation of volitional function.

Слайд 21 – Negativism in mental patients
Negativism in adults reveals itself in resistance to any externally motivated activity.
There are the following forms of negativism:

- In **active negativism** the individual does the opposite of what is asked for (for example, screws the eyes up when asked to open them)
- In passive **negativism** the person fails to cooperate (for example, when asked to sit, it remains to stand in the same place).
- In paradoxical negativism the patient performs actions opposite to those that are required of him. Patients do the opposite, no matter what they ask.
- Verbal negativism reveals itself in the patient's refusal to answer questions. One can observe either mutism (complete silence) or echolalia (duplication of the question asked)

Слайд 22 – Impulsive self-harm acts
Impulsive actions are divided into:

1. actions in a state of passion, for example, actions in a state of anger, which later a person often regrets
2. sudden, unexpected and inappropriate actions – homocidal, suicidal or self-harm acts, performed in a state of formally clear consciousness, but without understanding their motives

Слайд 23 – Kleptomania, oniomania (shopping)
Hyperbulia – pathologically increased attraction to something, which is maladaptive and often antisocial.
Kleptomania is a very strong wish to steal that you cannot control, especially without any need or purpose, usually considered to be a type of mental illness.

Compulsive buying disorder or **oniomania** is characterized by an obsession with shopping and buying behavior that causes adverse consequences.

Слайд 24 – Pyromania, homicidomania
Pyromania is an impulse control disorder, in which individuals repeatedly fail to resist impulses to deliberately start fires, in order to relieve tension or for instant gratification.
Homicidomania is an irresistible urge to kill. Homicidomania is characteristic of antisocial psychopaths, such as A. Chikotilo, a serial killer of the Soviet period, rapist, pedophile, necrosadist, necrophile and cannibal, according to operational information, killed more than 65 people.

In addition to these, other types of pathological drives are known:
Dromomania or travelling fugue is uncontrollable urge to walk or wander
Masochism is the tendency to derive sexual gratification from one's own pain or humiliation

Слайд 25 – Ambivalency-ambitiousness
Ambivalency-ambitiousness – the emergence of antagonistic tendencies in a person's consciousness, accompanied by fluctuations between opposite decisions and the impossibility of making a choice between them, which leads to a refusal to make a decision at all. Kraepelin regarded such states as "blockade of the will" - as soon as a patient has a desire, for example, to raise his hand, the opposite desire not to do so appears. Ambivalence is a characteristic symptom of schizophrenia

Слайд 26 – Hypobulia and abulia

Abulia is the state of pathological lack of will. A less severe state of decreased volitional activity is hypobulia

The following signs are characteristic of hypobulia:

- the difficulty of starting and maintaining purposeful movements;
- lack of spontaneous movements;
- poverty of speech up to its complete absence;
- lack of social contacts
- regression of physiological needs (indifference to hunger, thirst, cold, heat, pain).

Слайд 27 – Apathy-abulic defect

Abulia is an obligate symptom of schizophrenia

Abulia is usually combined with apathy, with a complete absence of any desires, even basic needs. In the era of the absence of pharmacotherapy, patients with schizophrenia rapidly progressed to severe apathy-abulic defect, which was designated as "death with eyes open."

Lection 5

Consciousness. Clinical, neuropsychological and psychological aspects of consciousness. Concept of self-consciousness. Consciousness disorders. Sleep disorders.

Слайд

In fact, we know little about consciousness and we have to recall the words of the English scientist T. Huxley: "What is consciousness, we do not know, we also do not know how, when the nervous tissue is irritated, such an amazing thing as consciousness occurs"

Слайд 2 – States of consciousness

Consciousness is often equated with wake. The area of consciousness is much broader than the area of waking. So, in clinical psychiatry and medical psychology, there is actually to distinguish between the following concepts: **wake and awareness**, the latter is defined as the understanding of a situation or subject at the present time based on information or experienceis. Also, both types of consciousness are associated with **self-awareness**.

Self-awareness is the experience of one's own personality or individuality. It is not to be confused with consciousness. Self-awareness is how an individual consciously knows and understands their own character, feelings, motives, and desires.

Слайд 3 – Biodynamic model of consciousness

The biodynamic model of consciousness assumes knowledge of the material nature of consciousness. Some aspects of this knowledge concerning cortical activity, the activity of the reticular formation and other subcortical structures have been studied, but not fully.

In clinical practice, speaking of consciousness, they mean, first of all, the level of wakefulness, which depends on the activity of the brain, which includes the following:

1) neuronal activity (arousal)
2) activity in certain spatial structures
3) time-limited neuronal activity

Слайд 4 – Reticular formation

It was found that consciousness is carried out due to neuronal activity emanating from the reticular formation, which activates the cerebral cortex (ascending activating tract).

The **reticular formation** is a set of interconnected nuclei that are located throughout the brainstem. It is not anatomically well defined, because it includes neurons located in different parts of the brain.

Слайд 5 – Pathways of reticular formation

The reticular formation includes ascending pathways to the cortex in the **ascending reticular activating system** (**ARAS**) and **descending pathways** to the spinal cord via the reticulospinal tracts.

Neurons of the ascending reticular activating system play a crucial role in maintaining behavioral arousal and consciousness. The overall functions of the reticular formation are modulatory and premotor, involving somatic motor control, cardiovascular control, pain modulation, sleep and consciousness, and habituation.

Descending reticulospinal tracts descend from the reticular formation in two tracts to act on the motor neurons supplying the trunk and proximal limb flexors and extensors. The reticulospinal tracts are involved mainly in locomotion and postural control.

Слайд 6 – Inhaled Anesthetics

The hypofunction of the descending part leads to inhibition of the spinal centers and causes a state of deep sleep with simultaneous muscle relaxation.
The same effect can be induced using anesthetics or muscle relaxants.
For example, depressant effect of isoflurane anesthesia on spinal somatosensory transmission influences the threshold for reticulo-thalamo-cortical arousal

Alcohol and drugs also have a depressing effect on the level of wakefulness. Low doses of these substances cause euphoria, overdose leads to coma.
The following video shows a subject, who appears to be in a state of drug intoxication. It can be assumed that, on the whole, he is aware of the situation of the toxicological examination, but at the same time he is detached, almost does not react to the environment.

Слайд 7 – Video

Слайд 8 – Criteria for Waking Consciousness
1) Orientation in time, space, environment, faces and self. Awareness of the needs and necessities of one's own body.
2) Reacting to the environment - being aware of what is happening around.
3) The ability to recall past events.
4) Purposeful activity with meaning

Based on these criteria, a conclusion is made about the level of wakefulness.

Слайд 9
Obviously, the criteria for assessing the level of wakefulness are formalized.
It often happens that a person who is formally in a clear consciousness succumbs to the influence of a gypsy or a swindler and loses control and does things that later cannot explain, for example, why he gave all the money.
In this case we can talk about some clouding of his consciousness

Слайд 10 – Consciousness's disorders
With a quantitative disorder of consciousness, the reticular formation does not energize the brain sufficiently. Depending on the degree of inhibition of brain activity, one can observe the lack of consciousness or a clouding of consciousness.

Слайд 11 – Lack of consciousness
Fainting, or syncope, is an attack of short-term loss of consciousness caused by a temporary disturbance of cerebral blood flow.
It is known that an epileptic seizure is accompanied by a short-term failure of consciousness; it is also known that with epilepsy, paroxysms can be non-convulsive, manifest only by a short-term failure of consciousness, which is called absence.

Sopor is a condition of abnormally deep sleep from which it is difficult to rouse. It involves a profound depression of consciousness, while maintaining coordinated defensive reactions to stimuli such as pain, harsh sound, and bright light, and preserving vital functions. Pupillary reaction to light may be sluggish, but the corneal reflexes are preserved.

A **coma** is a deep state of prolonged unconsciousness in which a person cannot be awakened, fails to respond normally to painful stimuli, light, or sound.

Слайд 12 – Clouding of consciousness

Mild clouding of consciousness caused by alcohol or other psychoactive substances, that have an inhibitory effect on the nervous system.

Obscured consciousness characterized by a significant increase in the threshold of perception to all stimuli emanating from the outside world due to the impoverishment of higher nervous activity. The patient cannot indicate either the current date or location. At the same time, the patient partially retains the ability for verbal communication.

Слайд 13 – Trance
Trance is an abnormal state of wakefulness in which a person is not self-aware and is either altogether unresponsive to external stimuli or is selectively responsive in following the directions of the person who has induced the trance. Trance states may occur involuntarily and unbidden.
The term *trance* may be associated with hypnosis, meditation, magic, flow, and prayer.
Some examples of patological trance states:

- A state resembling sleep
- An out-of-body in which one feels they have passed out of the body into another state of being.
- A state induced by the use of hypnosis; the person accepts the suggestions of the hypnotist
- A state of consciousness characterized by extreme dissociation often to the point of appearing unconscious.

Слайд 14 – Pathological drowsiness
Somnolence, alternatively "**sleepiness**" or "**drowsiness**", is a state of strong desire for sleep, or sleeping for unusually long periods, compare hypersomnia. It can be accompanied by weakness and lack of mental agility. Somnolence is often viewed as a symptom rather than a disorder by itself.

Narcolepsy is a long-term neurological disorder that involves a decreased ability to regulate sleep-wake cycles. Symptoms often include periods of excessive daytime sleepiness and brief involuntary sleep episodes.

Слайд 15 – Altered consciousness
The altered consciousness differs from the darkened consciousness qualitatively. When consciousness is clouded, there is a decrease in the clarity of consciousness, without any psychotic experiences, and with an altered consciousness, the patient has psychopathological phenomena in the form of hallucinations, delirium, inadequate affect, which looks like acute psychosis.

The following video shows a patient with alcoholic delirium who experiences visual hallucinations - he sees worms on the tree trunk and tries to remove them from the tree

Слайд 16 – Video

Слайд 17 – Delirium
Delirium is an altered state of consciousness characterized by the following groups of symptoms:
Obscured consciousness
Psychotic (delirious) symptoms
Physiological symptoms

Delirium is an urgent condition, requiring intensive treatment.

Слайд 18 – Twilight state of consciousness

Twilight state of consciousness is a state of clouded consciousness in which the individual is temporarily unaware of his or her surroundings, experiences fleeting auditory or visual hallucinations, and responds to them by performing irrational acts, such as undressing in public, running away, or committing violence. The disturbance occurs primarily in temporal lobe epilepsy, dissociative reactions, and alcoholic intoxication. On regaining normal consciousness, individuals usually report that they have little or no recollection of their actual behavior.

Слайд 19 – Oneiroid syndrome

Oneiroid syndrome is a condition involving dream-like disturbances of one's consciousness by vivid scenic hallucinations, accompanied by catatonic symptoms (either catatonic stupor or excitement), delusions, or psychopathological experiences of a kaleidoscopic nature. The term is from ancient Greek and means literally *dream-like*. It is a common complication of catatonis schizophrenia. Oneiroid syndrome is distinguished from delirium by the extraordinary and fantastical nature of its psychotic experiences. Characteristic to the condition are a sense of dramatic changes in the world, and simultaneous feelings of triumph and catastrophe.

There is often disorientation regarding place and time, as well as a double-awareness of oneself: a patient might be aware simultaneously that he or she is in the hospital, as well as a participant in a fantastical narrative.

The behavior of a patient who is in an oneiroid state sharply contrasts with his or her fantastic pseudohallucinatory symptoms – patients usually lie motionless in bed, with closed eyes, watching their fantastic adventures as if from the outside.

Слайд 20 – Psychedelic states of consciousness

A psychedelic experience (or "trip") is a temporary altered state of consciousness induced by the consumption of psychedelic drugs like mescaline, LSD, psilocybin, and others.

Probably the most common, widely recognized psychedelic experiential phenomenon is the alteration in visual perception; this includes surfaces in the environment appearing to ripple and undulate. Psychedelic visual alteration also includes spontaneous formation of complex flowing geometric visual patterning in the visual field.

Слайд 21 – Psychedelic states of consciousness

The psychedelic experience is often compared to non-ordinary forms of consciousness such as those experienced in meditation and near-death experiences. The phenomenon of ego dissolution is often described in different forms, from depersonalization to phenomenon of out-of-body experiences

Слайд 22 – Emotions and decreased waking consciousness

Certain emotions can reduce wakefulness.

Of these emotions, euphoria has the greatest effect on the clarity of consciousness. Hence there is a saying - "someone lost their head from happiness". Likewise, patients who are in dysphoria, in a state of anger, lose their minds. Apathy patients are simply detached from reality.

Слайд 23 – Hypervigilance

In contrast to hypotonia of consciousness, there are states of hyper-wakefulness or hypervigilance. Often they are noted in people in a stressful situation, as a state of anxious expectation and readiness for an instant response. People who have experienced severe stress may also have increased vigilance for a long time, which is one symptom of Post-traumatic stress disorder (PTSD).

The state of hypervigilance can be induced by taking psychostimulants such as amphetamine, cocaine.

Слайд 24 – Self-consciousness

Self-consciousness is a heightened sense of self-awareness and includes self-evaluation, self-experience and self-control.
With disorders of self- consciousness, the patient either destroys the self-image (for example, with dementia), or he does not control himself (for example, with catatonic excitement), or his ability to manipulate others decreases, for example, due to anxiety-depressive experiences, feelings of self-doubt.

Слайд 25 – The “field" of self-consciousness
Self- consciousness can be compared to a kind of space-time field, in the center of which is the core of the personality in the self-concept, and next to it are objects of the external world available for interaction with them. The wider the field of self-consciousness, the greater the sphere of influence and competence of the individual. Consequently, we can talk about both the expansion and the narrowing of the boundaries of self-awareness, due to the emotional experiences of a person.

Слайд 26 – Narrowing of self-consciousness
Emotions of fear, anger, grief and shame lead to a significant narrowing of the boundaries of self-consciousness, when all objects disappear from the field of awareness, and only one remains, capturing the consciousness.

Слайд 27 – “Tunnel consciousness”
Consciousness becomes "tunnel", the person does not perceive anything except the object that has captured his consciousness. For example, with strong fear, this object causes a feeling of horror and a desire to run in the opposite direction, with strong anger, this object, on the contrary, causes the desire to destroy it.
In the most severe cases, affects arise, such as the affect of anger with the corresponding destructive behavior. In other pathological cases reactive delusions develop.

Слайд 28 – Expansion of consciousness
Expanding the boundaries of consciousness, if it is not pathological in nature, is a sign of good adaptive capabilities of a person. The emotion that expands self-consciousness is often surprise in children, interest in adults, as well as the experience of guilt-repentance that can change something in the world or in oneself.

Слайд 29
In pathological cases, one can observe an excessive expansion of the boundaries of self-consciousness, when a person goes beyond his Ego and begins to feel one with the whole world. These conditions are referred to as ecstatic. In other cases, we can observe delusion of grandiosity, for example, delusion of omnipotence.

Слайд 30 – Sleep and dreams
Sleep is a natural physiological state, the opposite of the waking state.
Physiological sleep differs from other similar conditions, anabiosis and hibernation that observed in animals. A pathological state similar to hibernation known as sleep lethargy can occur in humans.

Слайд 31 – Sleep stages on EEG
Sleep is a special state that includes certain stages or phases that regularly recur during the night. The transition from one stage to another occurs stepwise, and their appearance can be seen on the EEG.
Stage 1 - a transitional stage between awake and sleep, alpha and theta rhythm are noted on the EEG

Stage 2 - the moment of onset of sleep, which is still shallow. EEG waves become higher in amplitude and slower. These slow waves are called theta rhythm, while the so-called sleep spindles appear
Stage 3 – Non-REM sleep, in which very slow waves of high amplitude predominate on the EEG; this phase is otherwise called delta sleep.
Stage 4 - very deep sleep, in which delta waves on the EEG take more than 20% of the recording time.
Stage 5 - paradoxical or REM sleep, when the sleeping person has an alpha and beta rhythm on the EEG, as in wakefulness, and at this moment the person has a dream. This sleep is called REM sleep due to rapid eye movement, and body movements can also occur.

Слайд 32 – Sleep cycles
The first stage of sleep lasts 5-10 minutes. Then comes the second stage, which lasts about 20 minutes. Another 30-45 minutes falls on the period of the third and fourth stages. After that, sleep returns to the second stage and immediately goes to the REM sleep stage, the first episode of which has a short duration - about 5 minutes. This whole sequence of stages is called a cycle. The first cycle lasts 90-100 minutes. Then the cycles are repeated, while the proportion of Non REM sleep decreases, and the proportion of REM sleep gradually increases, the last episode of which in some cases can reach one hour. On average, with a full healthy sleep, five complete cycles are noted, which is 7-8 hours.

Слайд 33 – Importance of sleeping
- Sleep provides rest for the body, especially deep sleep.
- Sleep promotes the processing and loading of information, which is associated with REM sleep.
- Sleep is the adaptation of the body to changes in illumination (day-night).
- Sleep restores immunity, including by activating T-lymphocytes.
- Sleep provides the removal of endotoxic substances from the brain.
- It has been suggested that sleep allows neurons to repair damaged DNA.

Слайд 34 – Sleep disorders
Sleep disorders are divided into four main categories:
1. Insomnias
2. Hypersomnias
3. Disorders of the Sleep-Wake Schedule - Circadian Disorders
4. Parasomnias

Most often, people are worried about insomnia. As various international studies show, up to 30% of people are unhappy with their sleep and believe that they suffer from insomnia.

Слайд 35 – Insomnias
Insomnia is classified into the following types:
early insomnia, or difficulty getting to sleep
intermittent insomnia, or difficulty staying asleep, or intermittent wakefulness
late insomnia or early morning awakening

Lection 6

Schizophrenia, a history of schizophrenia doctrine. The main symptoms. Forms of schizophrenia and clinical course of disease.

Слайд 1

This lecture is devoted to the most common disease in the clinic of mental disorders - schizophrenia, a disease that some psychiatrists call the "Delphic Oracle" in psychiatry.

Слайд 2 – EPIDEMIOLOGY

According to the World Health Report in 2001, about 24 million people worldwide suffer from schizophrenia. The point prevalence of schizophrenia is about 0,5-1%. Schizophrenia is prevalent across racial, sociocultural and national boundaries. The incidence of schizophrenia is believed to be about 0,5 per 1000.

Onset most often occurs in young people, between about 15 and 30 years of age.

Слайд 3 – Pre-nosological schizophrenia concepts

Much earlier, before the foundation of the modern concept of schizophrenia, descriptions of schizophrenia-like diseases were recorded in the literature. So, in 1845 German psychiatrist Griesinger described hallucinatory delusional psychoses. French psychiatrist Morel in 1852 described early dementia or dementia praecox. Morel, in one of his works, described the story of a talented boy, whose disease appeared at the age of fourteen, which led him to a complete degradation of mental abilities.

Слайд 4 – Pre-nosological schizophrenia concepts (Hecker**,** Kahlbaum)

Further, German psychiatrist Hecker in 1871 described hebephrenia.

Catatonic disorders, described by the German psychiatrist and neurologist Kalbaum in 1890, were also treated as a separate disease.

Слайд 5 – Schizophrenia concept or nosological period

Emil Kraepelin, German psychiatrist, founder of the nosological approach in psychiatry, brought together the early dementia, hallucinatory delusional psychoses, hebephrenia and catatonia. Kraepelin designated this united disease as dementia praecox.

Слайд 6 – Identifying Schizophrenia-Specific Symptoms

A further contribution to understanding the nature of schizophrenia was made by the Austrian Psychiatrist E. Bleuler, who in 1908 renamed dementia praecox as schizophrenia

"Schizophrenia" derived from the ancient Greek "schizis" ("split") and "frene" ("mind, thinking, thought")

E. Bleuler described the fundamental symptoms, meaning mental splitting, and the secondary symptoms of schizophrenia (delusions, hallucinations)

Слайд 7 – Identifying Schizophrenia-Specific Symptoms (Stransky, Conrad)

Other scientists have also tried to identify the primary symptoms of schizophrenia.

E. Stransky, Austrian psychiatrist, considered intrapsychic ataxia to be a specific symptom of schizophrenia. Intrapsychic ataxia is manifested by discordance and inconsistency between various mental processes.

Further, K. Konrad, German psychiatrist and neurologist introduced the concept of "reduction of energy potential" as primary symptom of schizophrenia.

Слайд 8 – Identifying Schizophrenia-Specific Symptoms

Almost simultaneously, the Austrian psychiatrist Berze and the German psychiatrist and neurologist Bermger hypothesized hypotonia of consciousness as the primary symptom of

schizophrenia. Psychopathological disorders in schizophrenic patients arose, according to scientists, due to a decrease in the level of waking consciousness.

Слайд 9 – Etiology of schizophrenia
The etiology of schizophrenia is currently unknown. However, several theories have been propounded.
Firstly, Genetic Hypothesis.
Genetic factors are very important in making an individual vulnerable to schizophrenia.
About 8-10% of first degree relatives of patients with schizophrenia can present with schizophrenia. If both parents have schizophrenia, chances of the child developing schizophrenia increase to about 40%.

Слайд 10 – The causes of schizophrenia
In the history of patients with schizophrenia, one can find the influence of harmful factors, for example, severe pregnancy or childbirth, problems in the mental development of childhood.

Among the other causes there are important:
Stress. Increased number of stressful life events before the onset of disease probably has a triggering effect on the onset of schizophrenia, in a genetically vulnerable person.
Sociocultural theories. For example, higher rates of schizophrenia have been found among some migrants.
Family influence. Family theories include: cold, 'schizophrenogenic mothers', lack of 'real' parents, dependency on mother, anxious mother, communication deviance.

Слайд 11 – Other theories of schizophrenia
Biochemical Theories
Schizophrenia is presently thought to be probably due to a functional increase of dopamine at the postsynaptic receptors.
Brain Imaging
Cranial CT Scan, Magnetic resonance imaging Scan show enlarged ventricles (not amounting to hydrocephalus) and mild cortical atrophy (with an overall reduction in brain volume and cortical grey matter by 5-10%) in some patients of schizophrenia.

Слайд 12 – Groups of schizophrenic symptoms
POSITIVE SCALE of symptoms includes psychotic symptoms that are primarily conspicuous (hallucinations, delusions, catatonia)

MENTAL DISCORDANCE, **SCHISM**, as specific symptoms of schizophrenia, includes symptoms of schismatic thinking and symptoms of disorganized emotions and behavior

NEGATIVE SCALE of symptoms includes emotional withdrawal, social withdrawal, blunted affect, avolition-apathy

The next two videos will show acute psychotic conditions. The first video presents a fragment of the film " Shutter Island", in which the experiences of a hallucinatory-delusional patient are very realistically shown. The second video shows a patient in a substupor state, who is unable to answer a single question.

Слайд 13 – Video

Слайд 14 – Video

Слайд 15 – Discordance symptoms or specific symptoms of schizophrenia are presented by the following:

Symptoms of schismatic thinking:

- “loosening of associations” (paralogy, neologisms, “slipping” of thinking, divergent thinking, the ambivalence of thinking)
- tangentiality or “fruitless” thinking, autistic thinking
- mentism, sperrung or “rupture” of thinking, stagnation of thoughts, the “circuit" of thought

Symptoms of emotional discordance:

- emotional shallowness and inadequacy
- parathymic and paramimic symptoms

Most of the listed symptoms have been described in previous lectures

Слайд 16 – Parathymic and paramimic symptoms

Parathymic and paramimic symptoms are visible expressions of emotional ambivalence. Emotional expressions of patients are often discouraging, and emotions unfold in some unnatural way. Looking at the photos of these patients, it is very difficult to understand what feelings they are experiencing.

Слайд 17 – Behavioral disorders

Negativism, ambitendency, impulsivity have been described in previous lectures.

Oddities of behavior manifests itself in the inexplicable actions with lacking of meaning; in general, these actions can be described as absurd, shocking, capricious, symbolic.

For example, an office worker collects pens from all tables and puts them in an umbrella case, but when asked why he did it, he is genuinely perplexed and even cannot explain his behavior to himself.

Слайд 18 – Mannerism and scenic

Mannerism is characterized by exaggerated artificiality and unnaturalness of gestures, posture, facial expressions, manner of dress, comparable to buffoonery and caricature

Scenic is a role-playing position that looks ridiculous and inappropriate

The photos show an oddity manner in clothing that looks ridiculous

The following video shows an oddity behavior that resembles a scenic symptom.

Слайд 19 – Video

Слайд 20 – Self-disturbance

1) Fragmentation of the ego manifests in that, the patient with schizophrenia does not feel his integrity. He considers some components of his psyche to belong to himself, others are felt as not his own
2) Depersonalization in the form of an increasing "dissolution" of one's own self.
3) “Mirror symptom”. Patients confrontation with their own image in the mirror can produce some impression that their reflection is distorted, so some of them don't use the mirror
4) Phenomenon of transitivism is the illusory assumption that one’s symptoms or other characteristics are shared by other people. For example, individuals with schizophrenia might believe that others are also experiencing their hallucinations

Слайд 21 – Negative symptoms

Apathy is a blunted affect of extreme severity, lack of desire to do anything, reduced needs, even physiologically necessary.

Avolition or abulia is inability to force itself to do anything, even to satisfy basic needs (hunger, thirst, bodily comfort).

Cognitive dysfunction is due to general mental regression.
Social withdrawal. Patients tends to be isolated, participating very rarely in social activities and occasionally neglecting personal needs, and have very few spontaneous social contacts. In other cases, disorganized antisocial behavior is observed

Слайд 22 – Avolition-apathy defect
Avolition-apathy defect is the most common and most severe outcome of schizophrenia. In cases of complete helplessness, patients are placed in special social care institutions, in so calls Nursing Homes for Mental Health Problems

Слайд 23 – Disorganized antisocial behavior
Disorganized antisocial behavior often manifests as vagrancy. Such patients wander the world, as a rule, without documents, are often detained by the police, after identification they are placed in medical institutions or social care institutions, where they do not stay for a long time and continue to lead the same way of life.

Слайд 24 – Clinical types of schizophrenia
Paranoid schizophrenia is characterized by the following clinical features:
1. Delusions of persecution, reference, "grandiosity", control. The delusions are usually well-systematised.
2. The hallucinations usually have a persecutory content

Simple Schizophrenia. *It is characterized by an early onset,* at 14 to 20 years old*, very insidious and progressive course, presence of characteristic 'negative symptoms', a drift down the social ladder, and living shabbily and wandering aimlessly. Delusions and hallucinations are usually absent.* The prognosis is usually very poor.

Catatonic schizophrenia is characterized by a marked disturbance of motor behaviour.It can present in three clinical forms: excited catatonia, stuporous catatonia, and catatonia alternating between excitement and stupor.

Hebephrenic schizophrenia is a type of schizophrenia, the main symptom of which is disorganized behavior.

Слайд 26 – COURSE AND OUTCOME
The course of schizophrenia is specified under the categories of:

- Episodic with complete remission and a healthy outcome
- Episodic with remission, but with some personality changes
- Recurrent schizophrenia with repeated relapses and complete remissions, with a good prognosis
- Schub-schizophrenia with repeated relapses and incomplete remissions, with progressive personality changes
- Continuous schizophrenia or continuously psychotic

Lection 7

Organic mental disorders. Mental disorders due to brain injury. Epilepsy, types of seizures, mental disorders due to epilepsy.

Lection 7

Слайд 1

The importance of this topic of the lecture is due to the fact that patients who have received brain injury, as well as patients with epilepsy, which is usually observed by a neurologist, very often have mental disorders that require their correct assessment.

Слайд 2 – Classification of brain injury

One of the main factors that determine the maladjustment of patients after severe traumatic brain injury are mental disorders that do not allow many patients to return to their previous work, social activity.

Mental pathology depends on the severity of the brain injury.

Слайд 3 – Mental disorders due the traumatic brain injury

Severe traumatic brain injury is accompanied by deep depression of consciousness in the form of sopor and coma, which are life-threatening conditions. During the period of trauma, a disorder such as psychomotor excitement may be observed.

For moderate injuries, twilight or delirium may occur.

Слайд 4 – Prolonged coma

Prolonged coma or post-coma or a persistent vegetative state is disorder of consciousness in which patients with severe brain damage are in a state of partial arousal rather than true awareness. After four weeks in a vegetative state, the patient is classified as in a persistent vegetative state. This diagnosis is classified as a **permanent vegetative state** some months (three in the US and six in the UK).

If such patients survive, they become severely disabled

Слайд 5 – Lack of activity or a psychomotor excitement

Treating and caring for patients with psychomotor excitement is problematic because patients jump out of bed, fall, rip off infusion systems, sensors. In addition, the use of powerful sedatives is limited due to the potential for deterioration in general condition. Therefore, such patients are often fixed to the bed.

On the other hand, it has been observed that such patients have a better prognosis in terms of recovery compared to those with low activity.

Слайд 6 – Psychomotor excitement

We see a patient during the war who received a severe brain injury. He does not stay in bed, he strives somewhere, falls, gets up again, at some point discovers the so-called fugue - a rapid run.

Слайд 7

It is hard to believe that this is the same patient after the therapy.

Слайд 8 – Cognitive impairment

Korsakoff's amnestic syndrome:

1. Amnesia of fixation, loss of immediate memory, a person being unable to remember events of the past few minutes. Critical duration - 6 months
2. Confabulations, that is, invented memories which are then taken by the patient as true due to gaps in memory. Critical duration - 1 month

3. Anterograde amnesia, memory loss for events after the onset of the syndrome. Critical duration - 10 months
4. Retrograde amnesia, memory loss extends back for some time before the onset of the syndrome. Critical duration - three years

The critical duration of the disorder means that if the symptom does not disappear during this period, it will persist as a permanent disorder.

The psychoorganic syndrome is characterized by reduction in memory and intellect, and affective disorders.
Depending on the dominant affect, there are four variants of the psychoorganic syndrome: asthenic, explosive, euphoric and apathetic. Critical duration - one year.

Слайд 9 – Psychopathological long-term consequences
Not only severe brain injuries leave psychopathological consequences, but also mild traumatic brain injury, for example, a commotion, in the future may manifest itself as mental disorders.
Patients may not attach importance to mild traumatic brain injury with a short-term lack of consciousness, and may not seek medical attention. And after a certain period of time, he begins to notice signs of the disease.

Слайд 10 – Cerebral asthenic syndrome
Cerebral asthenic syndrome is the most common consequence of brain injury and is characterized by the following symptoms:
1) hypersthesia - an irritable reaction to usual external stimuli (noises, smells, bright light)
2) meteorological dependence (intolerance to heat, sudden changes in weather)
3) frequent headaches
4) vertigo
5) emotional lability
6) exhaustion at work, increased fatigue
7) vegetative-vascular disorders (tendency to tachycardia, rise in blood pressure).

Слайд 11 – Cerebral asthenic syndrome with cognitive dysfunction
In other individuals, cerebral asthenic syndrome is characterized mainly by cognitive dysfunction, attention exhaustion, decreased ability to concentrate, decreased working memory, and a general decrease in mental performance

Слайд 12 – Dissociative Disorders
Dissociative disorders - a variety of functional disturbances that look like organic disorders that arise in a stressful situation. During a traumatic experience such as an accident, disaster or crime victimization, dissociation can help a person tolerate what might otherwise be too difficult to bear. In the case of a brain injury, the trauma itself acts as a psychogenic factor, which a person often receives in a stressful situation.

Слайд 13 – Conversion Disorders
Earlier, conversion disorders were referred to as hysterical neurosis.
Conversion disorder begins with some stressor, trauma, or psychological distress. Usually the physical symptoms of the syndrome affect the senses or movement. Common symptoms include blindness, partial or total paralysis, inability to speak, deafness, numbness, difficulty swallowing, incontinence, balance problems, seizures, tremors, and difficulty walking.

Слайд 14 – Video

The video shows two patients with conversion disorders after receiving a brain injury in combat. In the first patient, we see astasia-abasia, in the second, myoclonus, that, like psychogenic tremor, can last for hours, and the patient does not feel tired.

Слайд 15 – Organic personality disorder

Organic personality disorder is the personality change, which can be caused by traumatic brain injury. The organic personality disorder is associated with a significant alteration of the habitual patterns of premorbid behavior". There are crucial influences on emotions, impulses and personal needs because of this disorder.

In case of the organic personality disorder, patient has to show at least three of the following diagnostic criteria over a six or more months' period:

- deficits in cognitive function
- suspiciousness and paranoid ideas
- dysfunctional behaviors
- disinhibited behaviors, which are characterised by inappropriate sexual and antisocial actions
- neurosis
- emotional changes, alterations in expression function
- irritability

The following video shows the fragment of the movie "Mind on Fire". In the film, it is not clear after what accident the heroine developed mental disorders. But this is exactly what a severe organic personality disorder looks like due to the traumatic brain injury.

Слайд 16 – Video

Слайд 17 – Mental disorders due the epilepsy

Epilepsy is a group of neurological disorders characterized by recurrent epileptic seizures.

Epileptic seizures are episodes that can vary from brief and nearly undetectable periods to long periods of vigorous shaking. The most common type (60%) of seizures are convulsive. These episodes can result in physical injuries, including occasionally broken bones. In epilepsy, seizures have a tendency to recur and, as a rule, have no immediate underlying cause.

The underlying mechanism of epileptic seizures is excessive and abnormal neuronal activity in the cortex of the brain, that can often be confirmed with an electroencephalogram (EEG).

Слайд 18 – Generalized tonic-clonic seizure

Generalized tonic-clonic seizure has certain stages:

- Auras (forefeeling)
- Loss of consciousness
- Tonic convulsions
- Clonic convulsions
- Short-term coma
- postictal phase, exhaustion within 10-30 minutes and recovery to normal state

Слайд 19 – First aid for a seizure

First aid for a seizure is aimed at keeping the person safe until the seizure stops on its own. Most seizures last from 30 seconds to 2 minutes.

1. Stay calm and reassure bystanders.
2. Loosen anything around the person's neck (clothing, ties, jewelry, etc.) that may impede breathing.
3. Do not restrain the person – this may result in injury.

4. Do not put anything into the person's mouth, and do not try to hold the tongue or force the mouth open. This may also cause injury.
5. Clear the area around the person and remove any objects that could injure them (glasses, furniture, etc.).
6. Put something flat and soft under their head.
7. After the seizure, lay the person on their side to facilitate breathing and keep the airway open.
8. Do not leave a person alone after a seizure – they may be disoriented or confused.
9. If the person is known to have epilepsy, it may not be necessary to call 911. However, call 911 if:
    - the seizure lasts longer than 5 minutes,
    - another seizure begins soon after the first one ends,
    - the person does not awaken after movements have stopped,
    - or you think anything else might be wrong.

Слайд 20 – Antiepileptic defense system

Epilepsy occurs in 1% of the population, although epileptogenic brain lesions are much more common. This is due to the fact that the epileptic focus forms not only the epileptic system, but also the antiepileptic defense system.

It includes:

- the cerebellum
- the reticular nucleus of the pons,
- the caudate nucleus
- frontoorbital cortex.

Function of the antiepileptic system is to inhibit the spread and generalization of epileptic activity.

Слайд 21 – Classification of seizure types

The interaction of these two systems explains the high polymorphism of epileptic seizures, as well as their mental equivalents.

Focal nonmotor onset of seizures or mental equivalents of seizures can be both conscious (aware) and not conscious (impaired awareness)

Слайд 22 – Classification of Mental disorders due the epilepsy

I. Ictal Mental disorders or the mental equivalent of a seizure**:**

1. The twilight clouding of consciousness mentioned in the lectures above.
2. Complex partial seizures, also called **psychomotor seizures**, are characterized by a clouding of consciousness and by strange, repetitious movements called automatisms. On recovery from the seizure, which usually lasts from one to three minutes, the individual has no memory of the attack. The following automatisms are described: chewing, mimic, vocalism or aphasia, gestures, ambulatory automatism (fugue, trance)
3. Focal seizures **with retained awareness**. During the seizure the person will be able to communicate and will remember the episode afterwards. Different symptoms are classified into four categories:

    Sensory seizures - the person may see lights or the all objects in one color, hear a buzzing sound, or feel tingling or numbness in a part of the body

    Autonomic seizures. These seizures are accompanied by autonomic symptoms or signs, such as abdominal discomfort or nausea which may rise into the throat (epigastric rising), stomach pain, the rumbling sounds of gas moving in the intestines, belching and vomiting. This has sometimes been referred to as abdominal epilepsy.

    Affective seizures – dysphoric and ecstatic states

Exceptional states – derealization and depersonalization, déjà vu, illusory seizures

Слайд 23 – Ambulatory automatism
Trance – a rare type of focal motor seizures with *ambulatory automatism* manifesting as an unplanned travel with clouding of consciousness
Sleepwalking, also known as **somnambulism** or **noctambulism**, is a phenomenon of combined sleep and wakefulness. It is classified as a sleep disorder belonging to the parasomnia. It can be as benign as talking, sitting up in bed, walking to a bathroom, consuming food, driving a motor vehicle
Sleepwalking may last from 30 seconds to 30 minutes

Слайд 24 – Sensory seizures
When person may see light or an all objects in one color, often manifests itself as an aura before the onset of a seizure

Слайд 25 – Interictal mental disorders
In patients with epilepsy, during the course of the disease, a number of mental disorders can be observed, from cerebral asthenia to hallucinatory-delusional states. The most typical is an epileptic personality disorder.
Some personality traits, such as pedantry, can be noted from adolescence.
The next video shows the fragment of the film, in which the hero reveals such character traits as pedantry, accuracy, obsessive desire for purity. True, in the film he does not suffer from epilepsy.

Слайд 26 – Video

Слайд 27 – Hyperbulia syndrome
Intence desire or hyperbulia is due to strong instinct in persons with epilepsy, combined with rapid inflammability and inability to control themselves.
Exhibitionism is the act of exposing in a public those parts of one's body that are not normally exposed – for example, genitals, for sexual satisfaction or to shock the bystander.
Systematic satisfaction of desires becomes addiction

Typical changes in thinking in the form of torpidity and viscosity appear as epileptic encephalopathy progresses.
To understand the essence of such phenomena as the torpidity and viscosity of thinking and speech, let us set up a simple experiment. Let's record the speech of a healthy person, and then using a computer program we will slow down the recording speed by 2 times, and this is what we will see.

Слайд 28 – Video

Слайд 29 – Video
A patient with epileptic encephalopathy speaks something like this. If you do not know about the presence of a disease in a patient, at first glance, you may get the impression that he is in a state of alcoholic inhibition.

Слайд 30 – Epileptic encephalopathy
Such torpidity is due to the fact that in patients with epilepsy for many years, in the cerebral cortex, according to EEG data, slow-wave activity in the form of a delta rhythm begins to dominate, even in a state of wakefulness, which is not able to provide a sufficient rapidity of mental processes's

Lection 8

Substance use disorders. Alcoholism and drug addiction.

Слайд 1

These disorders pose not only a medical problem, but also a social and lawful problems.

Слайд 2 – Areas of the narcological service

Areas of the narcological service include the following:

I. **Therapeutic assistance:**
   - diagnostics and treatment
   - rehabilitation
   - preventive activities

II. **Expert service:**
   - examination of acute intoxication (alcohol, drug)
   - examination of the state of addiction to alcohol or drugs, which is carried out as a forensic psychiatric evaluation

Слайд 3 – Examination of acute intoxication. Acute intoxication of alcohol

Diagnostics of the state of acute alcohol intoxication includes a description of:

1) mental and affective state - euphoria or other emotions
2) the state of the neurological system (coordination, stability on the legs)
3) somatovegetative disorders

Distinguish between mild, moderate and severe alcohol intoxication.

In the next two videos, you will see persons in a state of alcoholic intoxication of varying degrees - the first has a mild degree, the second has a moderate.

Слайд 4 – Video

Слайд 5 – Video

Слайд 6 – Pathological alcohol intoxication

Pathological alcohol intoxication is an acute, short-term psychotic disorder that occurs when drinking alcohol, usually in relatively small doses.

It proceeds in the form of a twilight clouding of consciousness in combination with the affects of anger, rage, fear, with the development of sharp motor excitement; often with aggressive actions of a non-targeted nature. Pathological intoxication ends suddenly, with complete amnesia for the period of the state.

Pathological intoxication usually occurs in persons with premorbid features, often in stressful situations.

Слайд 7 – Examination of the acute intoxication of another substances

It can be difficult to determine by external signs what a person has consumed - alcohol or drugs. This is often observed - the simultaneous intake of alcohol and other drugs

Therefore, an obligatory stage in the examination of the acute intoxication is a chemical-toxicological study or analysis (blood, urine).

Слайд 8 – Chemical-toxicological examination or analysis

The most popular method of chemical and toxicological analysis is gas-liquid chromatography, which allows not only qualitative analysis, i.e. to establish what kind of substance is in the biological environment, but also to determine this substance quantitatively.

The latter is especially important for qualifying the severity of alcohol intoxication.

Слайд 9 – Determination of the severity of alcohol intoxication by the level of alcohol in the blood (in ppm, ‰)

- less than 0.3 ‰ - no influence of alcohol;
- from 0.3 to 0.5 ‰ - insignificant influence of alcohol;
- from 0.5 to 1.5 ‰ - mild intoxication;
- from 1.5 to 2.5 ‰ - moderate intoxication;
- from 2.5 to 3.0 ‰ - severe intoxication;
- from 3.0 to 5.0 ‰ - severe alcohol poisoning, death may occur;
- more than 5.0 ‰ - fatal poisoning.

Слайд 10 – Causes of alcoholism and drug addiction

1. Sales market - free sale of alcohol, illegal drug trade
2. Social and cultural environment that shapes attitudes towards alcohol and drug use
3. Individual psychological and biological personality traits that determine the predisposition to alcohol or drugs

Only the last factor is within the competence of medicine

Слайд 11 – The influence of cultural factors on the attitude of society towards alcohol intake

By the character of society's attitude to alcohol intake, the following types of cultures are distinguished:

- "Withdrawal culture" that exists in some Arab countries, categorically excluding alcohol intake;
- "Ambivalent culture" that exists in some Muslim regions, which does not encourage drinking, but does not categorically prohibit it

Слайд 12 – The influence of cultural factors on the attitude of society towards alcohol intake

- The "liberal culture" that exists in southern European winemaking countries that even allows daily alcohol intake, but only in the form of low alcohol grape wines;
- "Alcoholic or pathological culture" that exists in Russia, encouraging the intake of strong alcoholic drinks (vodka)

Слайд 13 – Alcohol predisposition factors

- Hereditary predisposition
- Early onset of alcohol use (during adolescence)
- Chronic stress, constant feeling of tension (risk factors)
- Drinking alcohol frequently for no particular reason

Слайд 14 – Hereditary predisposition to alcoholoism

There isn’t a single gene responsible for alcoholism. There are hundreds of genes in a person’s DNA that may amplify the risk of developing an alcohol use disorder. Identifying these genes is difficult because each plays a small role in a much larger picture. Yet, studies have shown that certain combinations of genes have a strong relationship to alcoholism.

Among the behavioral traits parents can pass on to their children is a predisposition toward alcohol abuse and addiction.

Although people can inherit alcoholic tendencies, the development of an alcohol use disorder is also dependent on social and environmental factors

People with mental illness have a higher risk of turning to substance abuse

Слайд 15 – Definition of alcohol addiction
In accordance with the ICD-10, there are:

- Alcohol abuse involves a spectrum of unhealthy alcohol drinking behaviors, in extreme cases resulting in health problems for individuals and large scale social problems
- Alcohol dependence is a chronic disease in which a person is unable to control drinking. A person needs to drink greater amounts to get the same effect and has withdrawal symptoms after stopping alcohol use. Also called alcoholism.
- Alcohol withdrawal syndrome is a set of symptoms that can occur following a reduction in alcohol use after a period of excessive use. Alcohol withdrawal may occur in those who are alcohol dependent.

Слайд 16 – Symptoms of addiction syndrome
Clinically manifest syndrome of alcohol dependence includes: Addiction symptoms - I) psychological, II) mental and III) physical, and
Symptoms of changes in biological reactivity - I) tolerance, II) altered forms of intoxication, III) systematic consumption

Слайд 17 – Psychological dependence
The term *psychological dependence* is generally meant to describe the emotional and mental processes that are associated with the development of, and recovery from, a substance use disorder or process addiction.

Слайд 18 – Mental dependence
Mental dependence is already expressed in certain mental disorders, mainly of an emotional disturbance, seriously affecting the general condition of the drinker, primarily on his performance. These can be anxiety states, states of extreme irritability, in severe cases - psychotic states in the form of alcoholic delirium.

Слайд 19 – Physical dependence
The manifestation of physical dependence to alcohol is expressed in the so-called hangover syndrome, characterized by the following symptoms:

- headache
- tremor, chills
- nausea, vomiting
- malaise, weakness
- autonomic hyperactivity (rise in blood pressure, tachycardia, rapid breathing, diarrhea, hyperthermia)
- hyperreflexia, seizure activity
- in more severe cases - hemorrhages (from the veins of the esophagus)

Слайд 20 – Symptoms of changes in biological reactivity
Alcohol tolerance is increased by regular drinking. This reduced sensitivity requires that higher quantities of alcohol be consumed in order to achieve the same effects as before tolerance was established. Alcohol tolerance may lead to (or be a sign of) alcohol dependency
Heavy alcohol consumption over a period of years can lead to "reverse tolerance". A liver can be damaged by chronic alcohol use, leading to a buildup of fat and scar tissue. The reduced ability of such a liver to metabolize or break down alcohol means that small amounts can lead to more rapid intoxication.

Слайд 21 – Altered forms of intoxication
The following types are observed:

- Intoxication with explosiveness (explosiveness), when a short period of euphoria suddenly changes to an explosion of discontent, irritation and anger
- Intoxication with hysterical features is characterized by demonstrative attempts at suicide, imitation of insanity, stormy scenes of theatrical despair
- Intoxication with depressive affect. Depressed mood prevails. There is a high probability of suicide while intoxicated.
- Intoxication with paranoid experiences) is characterized by suspicion of others, suspiciousness, inadequacy in the interpretation of the actions and statements of others
- Intoxication with features of foolishness (hebephrenic variant). Occurs in teenage drinkers and in the presence of latent mental pathology

Слайд 22 – Systematic consumption
It's about hard drinking or dipsomania.
Dipsomania is the continuous use of a large number of alcoholic beverages for an extended period.
There are two types:
Pseudo dipsomania or situational hard drinking are called periodic spontaneous drinking for several days (up to 2 weeks). Sometimes the patient is able to interrupt the hard drinking himself.
True dipsomania is characterized by a duration of more than 1 month. Withdrawal symptoms are usually very severe, even fatal, requiring urgent therapy

Слайд 23 – Medical Complications of Alcohol Dependence

A. Gastrointestinal and others systems
   1) Fatty liver, cirrhosis of liver, hepatitis, liver cellcarcinoma, liver failure
   2) Gastritis, reflux oesophagitis, oesophageal varices, pepticulcer, carcinoma stomach
   3) Cardiomyopathy
   4) Pancreatitis: acute, chronic, and relapsing

B. Central Nervous System
   Peripheral neuropathy
   Delirium tremens
   Alcohol withdrawal seizures
   Alcoholic hallucinosis
   Alcoholic jealousy
   Wernicke-Korsakoff psychosis
   Marchiafava-Bignami disease
   Alcoholic dementia
   Suicide
   Cerebellar degeneration
   Central pontine myelinosis
   Head injury and fractures

Слайд 24 – Opioid dependence
Opiate is a term classically used in pharmacology to mean a substance derived from **opium**. Opioid, a more modern term, is used to designate all substances, both natural and synthetic, that bind to opioid receptors in the brain (including antagonists). Dependence develops rapidly when taking opiates

Слайд 25 – Opioid Myths and Legends
The use of opiates dates back to the period of the Sumerian civilization.
The famous traveler Marco Polo, and then other researchers, supported the version that opium and other drugs come from China, or at least came from the Far East.

This hypothesis was largely facilitated by the myths and legends associated with opium. Here is an example of one of them, which says that opium appeared on earth after Buddha, in order to ward off sleep, tore out his eyelash and dropped it. The first poppy flowers grew from divine eyelashes

Слайд 26 – Opioid Withdrawal Syndrome
The worst fear that opioid users can experience is the fear of withdrawal
The onset of withdrawal symptoms occurs typically within 12-24 hours, peaks within 24-72 hours, and symptoms usually subside within 7-10 days of the last dose of opioid.
The characteristic symptoms include lacrimation, rhinorrhea, pupillary dilation, sweating, diarrhea, yawning, tachycardia, mild hypertension, insomnia, raised body temperature, muscle cramps, generalized body ache, severe anxiety, piloerection, nausea, vomiting and anorexia

Слайд 27 – COCAINE USE DISORDER
Cocaine is an alkaloid derived from the coca bush *Erythroxylum coca*, found in Bolivia and Peru. It was isolated by Albert Neimann in 1860 and was used by Karl Koller (a friend of Freud) in 1884 as the first effective local anesthetic agent.
Cocaine is a central stimulant which inhibits the reuptake of dopamine, along with the reuptake of norepinephrine and serotonin.

Слайд 28 – Acute Intoxication and Complications
Acute cocaine intoxication is characterized by pupillary dilatation, tachycardia, hypertension, sweating, and nausea or vomiting. A hypomanic picture with increased psychomotor activity, grandiosity, elation of mood, hypervigilance and increased speech output may be present.
The complications of chronic cocaine use include:

- acute anxiety reaction
- uncontrolled compulsive behavior
- psychotic episodes (with persecutory delusions, and tactile and other hallucinations)
- delirium and delusional disorder

Слайд 29 – CANNABIS USE DISORDER
Cannabis is derived from the hemp plant, Cannabis sativa, which has several varieties named after the region in which it is found (e.g. *sativa indica* in India and Pakistan, and *americana* in America). Cannabis (street names: *grass*, *hash*, *marihuana*) produces more than 400 identifiable chemicals of which about 50 are cannabinoids, the most active being tetrahydrocannabinol.
Cannabis produces a very mild physical dependence, with a relatively mild withdrawal syndrome, which is characterized by fine tremors, irritability, restlessness, nervousness, insomnia, decreased appetite and craving.
On the other hand, psychological dependence ranges from mild (occasional ‘trips’) to marked (compulsive use).
Complications: *Chronic cannabis use sometimes leads to memory impairment, worsening or relapse in schizophrenia or mood disorder, decreased testosterone levels, anovulatory cycles, reversible inhibition of spermatogenesis, blockade of gonadotropin releasing hormone*

Слайд 30 – Stages of treatment for addicted patients
A. Withdrawal treatment
Treatment of withdrawal symptoms is recommended in a hospital, because therapy is often urgent
B. **Psychological addiction treatment**

- Psychopharmacotherapy therapy with medicines that improve emotional disturbances that provoke alcohol or drug use

- Psychotherapy is an important part of drug addiction treatment and allows the patient to reorient towards a healthy lifestyle, change their behavior, thoughts and emotions, rebuild relationships with family
- Therapy with or opioid receptor antagonist. Naloxone and naltrexone are commonly used opioid antagonist drugs that bind to the opioid receptors, so preventing the body from responding to opioids and endorphins.

C. Rehabilitation

The goal of this stage is to return the patient to a normal lifestyle with restored health and social, labor, adaptive skills. The rehabilitation period is best done in a specialized center where the rehabilitation program is planned. Rehabilitation can take several months.