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Biological Therapy Methods in Modern Psychiatry: Antidepressants, Neuroleptics and their Effectiveness

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Annotation: All aspects of the organization of psychiatric care are concentrated in the treatment of mentally ill people: the provision of medical institutions with medicines and materials, the qualification and training of doctors and medical workers. Modern differential diagnostic, clinical and organizational, therapeutic and rehabilitation methods of providing care to patients not only complement each other, but also allow the "realization" of each of these relatively independent areas of medical care. The absence of one or another connection or its "blocking" affects the entire system of providing care to mentally ill people and in some cases can lead to its complete ineffectiveness.

Treatment of any mentally ill person includes a number of medical (examination and diagnostics, emergency medical care, course therapy using various medications, psychotherapy, physiotherapy) and socio-therapeutic measures aimed at his socio-psychological correction and rehabilitation.

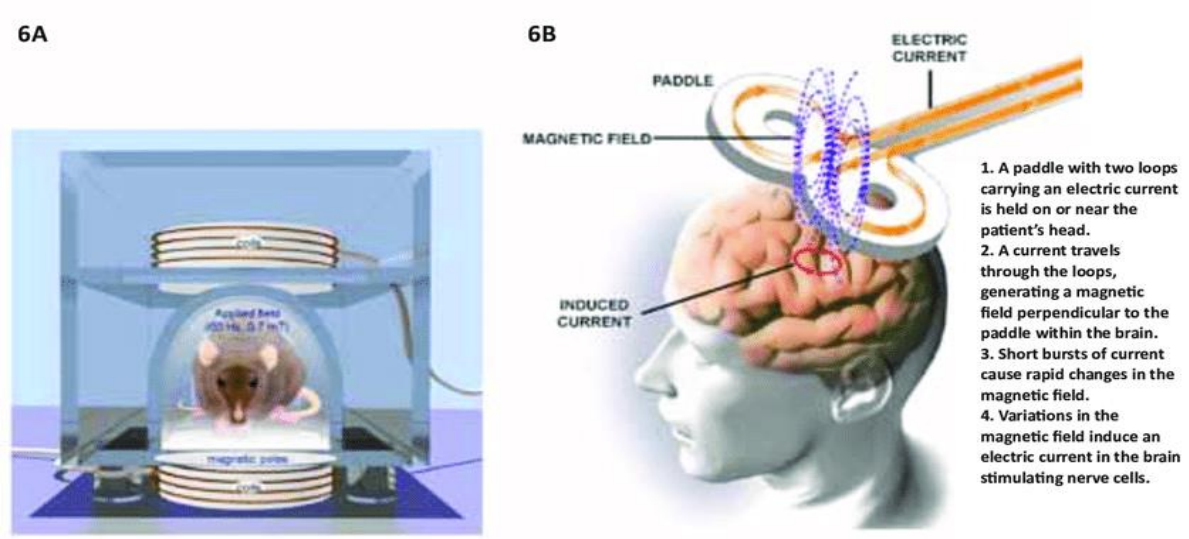
Keywords: Modern diagnostic methods in psychiatry, prognosis and treatment, prevention, prevention, methods.

Introduction: The "points of application" of therapeutic methods to pathogenetic links that determine the development of psychopathological manifestations indicate the great potential of therapeutic, prophylactic (primary, secondary) and compensatory-rehabilitative measures. In this case, therapeutic intervention can be directed at the causes that caused the disease (etiological therapy); pathogenetic mechanisms that determine the course of the disease; compensatory

mechanisms.

In psychiatry, as in other areas of medicine, all treatment and rehabilitation activities should be carried out on a solid legal basis, taking into account generally recognized ethical standards. The 1996 Declaration of the World Psychiatric Association emphasizes that psychiatrists should always be guided in their work by respect and care for the patient, demonstrating a "sense of individual responsibility." This Declaration affirms the following general principles of conduct for psychiatrists:

Psychiatry is a medical discipline concerned with providing modern conditions for the treatment of mental disorders... Psychiatrists should develop methods of therapeutic intervention that least restrict the patient's freedom. At the same time, they should try to obtain advice from competent colleagues if necessary.

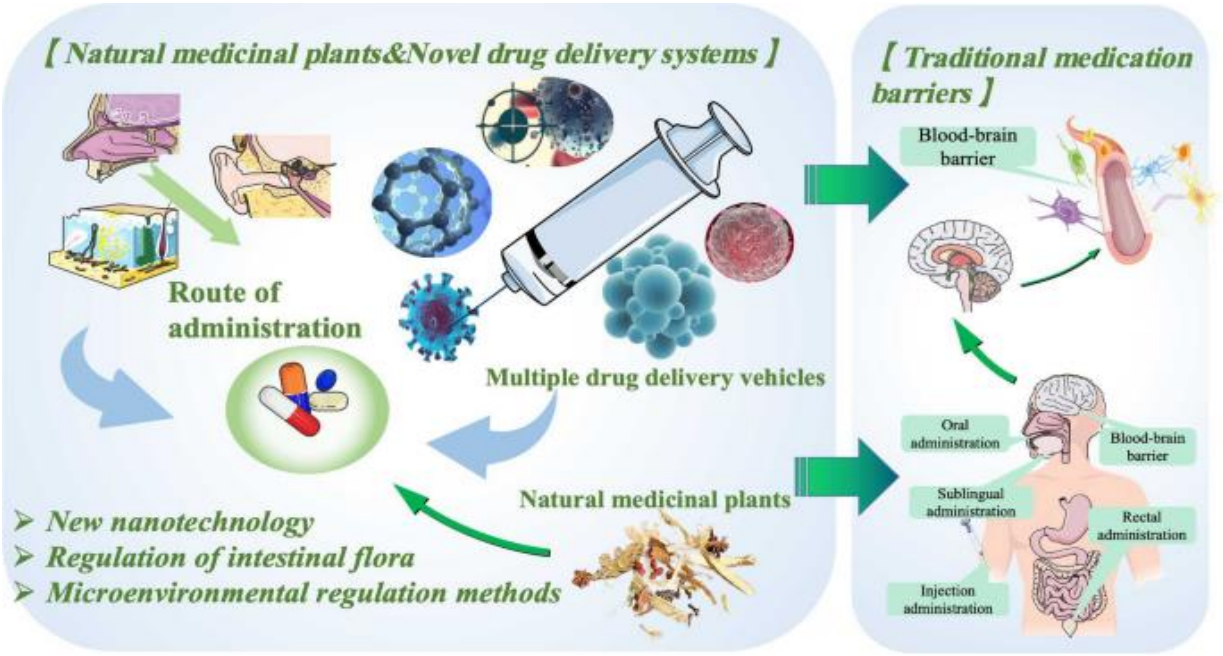


Psychiatrists are obliged to stay abreast of scientific advances and expand their knowledge and share it with other specialists.

The patient should be considered a participant in the therapeutic process. The doctor-patient relationship should be based on mutual trust and respect.

Information obtained in a therapeutic relationship should remain confidential and used only to improve the mental health of the patient. Psychiatrists are prohibited from using this type of information for personal or financial gain.

Etiotropic therapy of mental disorders includes measures to eliminate various infectious, somatic, neurological diseases, the consequences of brain damage, both psychotic and non-psychotic psychopathological manifestations. Through the use of antimicrobial, antiparasitic, antiviral, cardiovascular drugs, nootropics, hormones, neurosurgical methods, it is possible to eliminate the cause and direct consequences of the underlying disease or injury and subsequently reduce the accompanying mental disorders. In the history of psychiatry, this was most clearly manifested in the treatment of progressive paralysis. The key point in this case was to identify the connection between previous syphilis and progressive paralysis occurring in a specific picture of nervous and mental disorders. Malaria therapy for progressive paralysis, proposed by J. Wagner Jauregg in 1917, modern means of preventing syphilis, its early treatment have reduced the number of patients with diagnoses that were frequent and fatal in the recent past: syphilitic neurasthenia, syphilitic meningitis, hallucinatory, paranoid and other forms.



Research methods and materials: Etiotropic therapy may also include psychotherapy and some methods of socio-psychological correction of the condition of patients with psychogenic disorders. Elimination of the psychotraumatic situation that provoked neurotic reactions and changing the patient's attitude to it contribute to the reverse development of psychopathological manifestations. In this case, the appointment of psychotropic drugs may be an auxiliary treatment measure.

Pathogenetic therapy, as a rule, is non-specific: for various diseases and psychopathological states, sufficiently effective drugs and therapeutic measures are used. The use of psychopharmacological drugs and other therapeutic agents helps, first of all, to reduce those syndromes and symptoms that have a clinically determined predominant therapeutic effect. After that, the entire clinical picture normalizes with the reverse development of the remaining symptoms. This, at first glance, corresponds to the well-known position on target symptoms, according to which an adequate assessment of the effectiveness of drugs in psychiatry is associated with a change in individual symptoms under their influence. However, target symptoms are only the first sign of “finding the key” (the necessary drug) for the “lock” (mental disorder). The effectiveness of treatment depends on the characteristics of the symptom and its place in the dynamics of the disease picture as a whole. This concept of “target symptoms” is perhaps the most correct for determining the symptomatic and nosotropic effect of “psychoactive” therapeutic agents and methods. Their action should not always be placed in the "symptomatic" or "syndromological" framework; it is most accurately assessed as selective pathogenetic. This means that a selective effect on a symptom has a therapeutic effect on one of the links in the pathological process.

Drugs used in psychiatry are not nootropic. However, when they are prescribed, the maximum therapeutic effect is achieved when the "psychotropic" nature of the drug finds the most favorable "soil" in the nature of the psychopathological structure of the situation. The therapeutic effect on various pathogenetic links in mental disorders can only be assessed indirectly. Psychopharmacological (psychotropic) drugs, as well as agents with a general biological effect, do not directly affect psychological and psychopathological phenomena. Their clinical effect is carried out indirectly through the so-called primary properties of the organism.

Compensatory therapy includes various biological and sociotherapeutic effects that do not directly "correct" the cause of the disease (etiological therapy) or pathogenetic mechanisms (pathogenetic therapy), but help stimulate compensatory processes, as a result of which many painful manifestations weaken and become even. Many drugs (cardiovascular, dehydrating, sleeping pills, actoprotectors and other drugs with a non-specific stimulating or sedative effect) and therapeutic methods have a compensatory effect on mental disorders: rational and other methods of

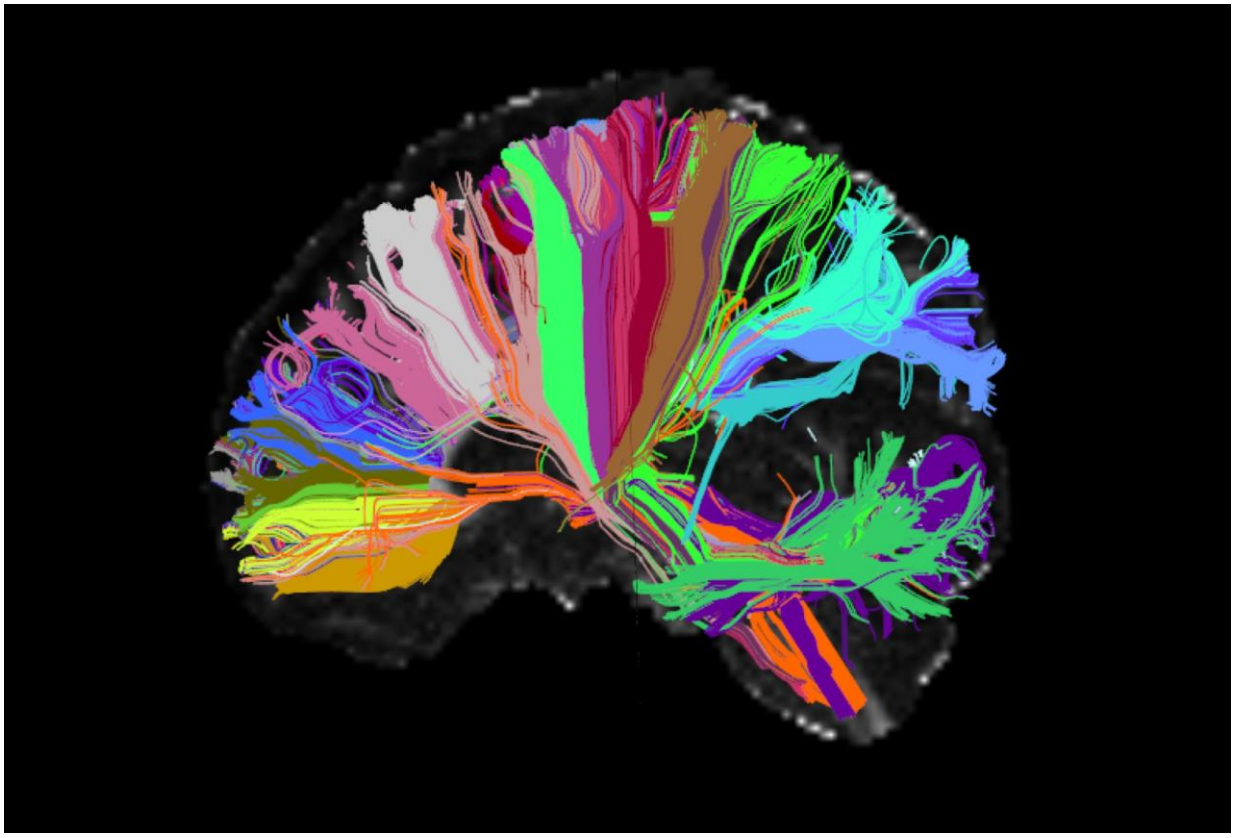
psychotherapy, social rehabilitation.

The choice of therapeutic agents for each of the three areas - etiological, pathogenetic, and compensatory - depends on the patient's individual treatment plan.

Results: The methods and tools used in psychiatric practice include therapy with psychopharmacological (psychotropic) drugs (which occupy a leading place in the treatment of major mental disorders), psychotherapy, unloading-dietotherapy, reflexology, etc. At the same time, the entire arsenal of drugs, physiotherapy, spa treatment, etc. are also used to treat major mental disorders. A special place in psychiatric practice is occupied by the system of rehabilitation of patients and disabled people. Each of the indicated methods and tools has its own indications and contraindications. They are based on the empirical experience of clinical psychiatry and scientific research.

A variety of methods and tools provide ample opportunities for developing an individual therapeutic plan. In this case, it is necessary to take into account the dynamics of the entire disease and the complex of leading psychopathological symptoms, including the somatic state; the effectiveness of previous therapy; previously observed side effects and complications; concomitant diseases, etc.

There is no and cannot be a template tool or a single method for treating a patient. This explains the need for a differentiated prescription of drugs and implementation of therapeutic measures with mandatory consideration of the dynamics of the disease, with adequate use of etiological, pathogenetic and compensatory therapy tools and methods. In this case, it is necessary to involve (at least not suppress) the possibilities of the so-called sanogenesis (natural biological and psychological mechanisms of eliminating painful manifestations).



The principle of individual differential therapy for patients, to a certain extent, contradicts the “therapeutic standards” that are widespread in some countries and have recently been partially implemented in Russia. A standard set of symptoms implies a standard selection of means and methods of therapy. This simplified approach gives rise to “paramedicalism”, which not only deprives the doctor of creative initiative, but also removes responsibility for the treatment being

carried out. Responsibility is “shifted” to insurance companies and health authorities that have approved the standards of treatment. Perhaps we can agree on the need for “standards” in a number of areas of medicine. Especially in the work of insufficiently qualified specialists, where it is difficult to “see” and “justify” the most rational therapeutic solution. However, in psychiatry, medical practice shows that it is always necessary to justify and implement an individual therapeutic plan. It may include individual "standard methods" (regulated dosage levels of medications, generally accepted, tested methods of psychotherapy, etc.), but must always be adapted to the specific patient.

Modern medicine includes a large number of drugs, united by their specific effects on psychopathological manifestations. Their emergence in the middle of the 20th century significantly expanded the therapeutic possibilities of psychiatric practice, changed the idea of the fatal incurability of mental illnesses, and contributed to the rapprochement of specialized psychiatric care with general medical practice. At the same time, psychotropic drugs have proven to be a "natural therapeutic tool", allowing for experimental and theoretical studies and the analysis of various relationships between pharmacokinetic parameters, comparing them with the psychotropic effect in patients. In recent decades, new approaches have emerged to understand the mechanisms of mental activity and the targeted creation of new highly effective psychotropic drugs. Their development led to the formation of a special branch of knowledge at the intersection of clinical psychiatry and pharmacology - clinical psychopharmacology.

It is customary to distinguish a number of clinical and pharmacological properties of psychopharmacological drugs, in addition to their somatoform and neurotropic effects. These include the following:

First, the presence of a psychotropic effect, which consists in the influence of each drug (group of drugs) on the affective state of a person suffering from various mental disorders. The psychotropic effect is expressed in an inhibitory (psycholeptic) or activating (stimulating, psychoanaleptic) effect on mental activity.

Secondly, the presence of a spectrum of psychotropic activity (individual for each drug or group of drugs), reflecting the "tropism" of its effect on psychopathological manifestations.

Thirdly, the presence of selective antipsychotic (antineurotic) activity, which has both a general (global effect on various manifestations of psychosis) and a selective (selective, “targeted”) effect on target symptoms, mainly at two main levels of psychopathological manifestations - psychotic and neurotic.

Given the lack of a systematic understanding of the etiology and pathogenesis of many mental disorders and accurate information about the biological mechanisms of their development, psychopharmacotherapy can be considered an important, but not the only possible therapeutic effect. Therefore, any findings of the causal relationship "drug" - "therapeutic effect" in modern psychopharmacology require special analysis and explanation. They should take into account at least the following.

Between any drug that causes changes in mental activity and the implementation of this action in the form of a therapeutic effect in the patient, there are many metabolic changes that occur both in the drug itself and in the neurochemical basis that ensure the functioning of the nervous system. The drug, as a rule, cannot directly affect psychological or psychopathological phenomena - anxiety, fear, delirium, depression, etc. The definitions of drugs such as "anxiolytics", "antidepressants", "hypnotics", which are widely used in practice, with a strict approach to the formulations, can be considered jargon, although they reflect the final effect.

Any mental disorder has common biological mechanisms that are not specific to it, and its own specific diseases, which depend on the individual characteristics of the organism (genotype, physiological state, somatic health) and personal psychological characteristics. In this regard, the effect of drugs with psychotropic effects can be achieved by interfering with various pathogenetic

links leading to the development of mental illness. There are a lot of such "points of application" for the action of psychotropic drugs.

The implementation of the therapeutic effect in mental illnesses is not directly related to the normalization of a particular biological system. This normalization, especially in borderline mental illnesses, does not eliminate the psychogenic (sociogenic, somatogenic) cause, but only helps to create conditions for the patient to adapt to functional changes at the level of the body (involvement of reserve capabilities of activity) or psychological state (resolution of the conflict situation, finding ways to adapt to it, etc.).

The high percentage of confirmed placebo effects when prescribing psychotropic drugs, especially in the "hands" of a good psychiatrist-psychotherapist, can make a significant correction in assessing the effect of a particular psychopharmacological drug.

Discussion: The above factors do not exhaust the entire list of possible areas of critical analysis necessary to understand the principle of action of psychopharmacological drugs. At the same time, it is they who allow us to formulate the position that it is impossible to single out a single pharmacological effect obtained in animal experiments and clinical pharmacological studies for direct extrapolation to patients. This suggests two main approaches to the development of new psychotropic drugs for the treatment of patients with mental disorders.

First of all, it is necessary to provide the patient with a systemic therapeutic effect, both through non-specific mechanisms that underlie the formation of mental disorders and psychosomatic diseases, and through specific etiological, pathogenetic mechanisms that determine the development of the pathological process (in most cases, only assumed).

Secondly, the assessment of the clinical and pharmacological effects observed as part of the treatment process. This also applies to the assessment of the effects of various psychotherapeutic methods and sociotherapeutic interventions, although they are more individual in nature, unlike the effects of drugs.

Given the approaches presented, the methodology of many studies of new psychopharmacological drugs, including very expensive model studies of depression, anxiety and other disorders, as well as multicenter studies, probably requires some adjustment. Without a systematic review of their overall therapeutic effect, the complex of clinical and pharmacological properties, and a comparative analysis of antipsychotic, anxiolytic, antidepressant, hypnotic, as well as

somatotropic and neurotropic effects, it is very difficult to draw conclusions about the effectiveness of a particular drug and its place among other psychotropic drugs.

In accordance with the Federal Guidelines for the Use of Drugs (IV edition, 2003), all psychotropic (psychopharmacological) drugs are divided into the following clinical and pharmacological groups:

a. Neuroleptics (antipsychotic drugs).

b. Anxiolytics (tranquilizers) and sleeping pills (hypnotics).

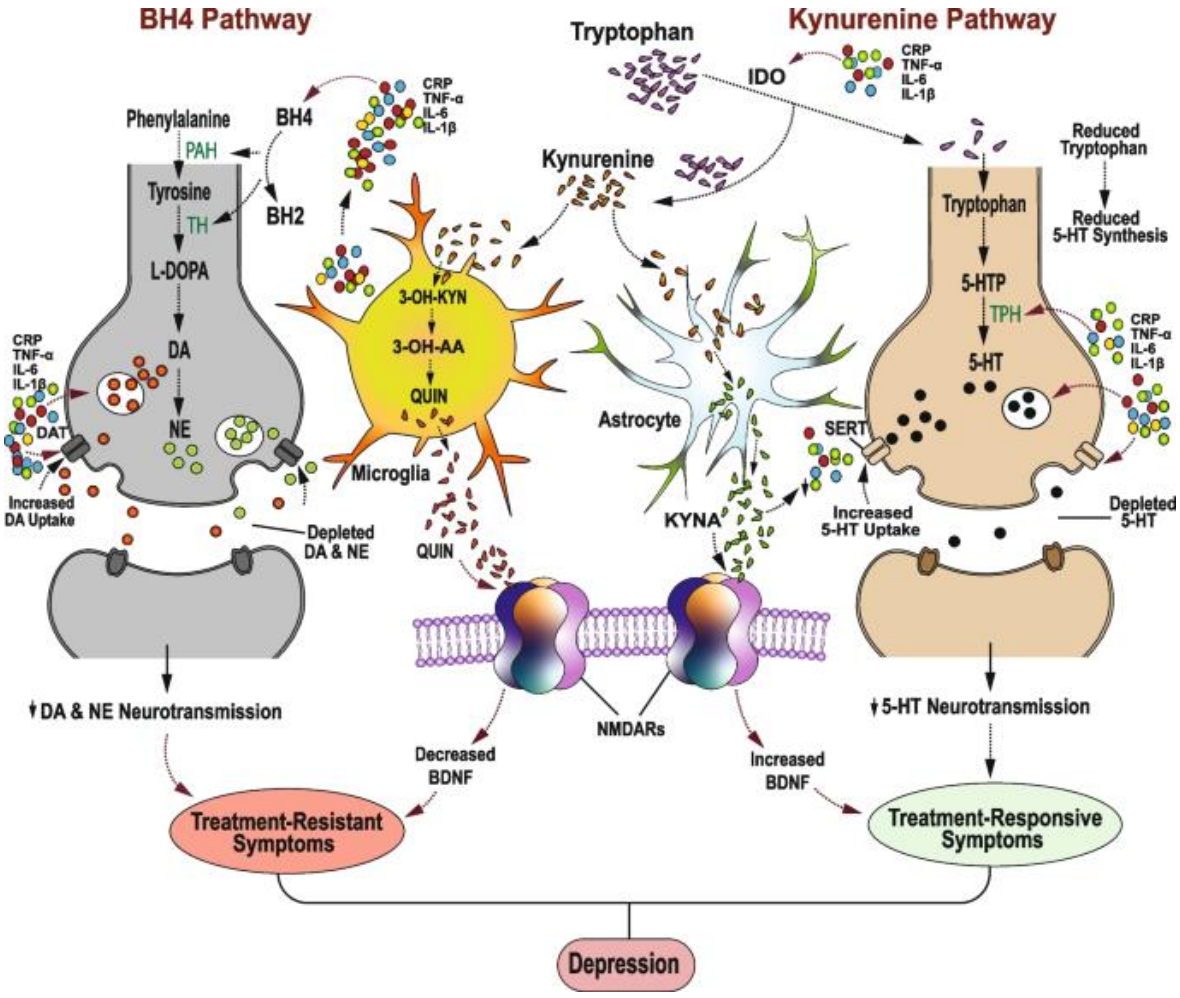
c. Antidepressants (thymoanaleptic drugs).

d. Psychostimulants (psychotonics).

e. Normotensive means.

f. Neurometabolic stimulants.

Psycholeptic drugs have sedative, inhibitory, depressant effects and include the following pharmacological groups:



neuroleptics (antipsychotic drugs) reduce psychotic symptoms and psychomotor agitation;

Anxiolytics (tranquilizers) and sleeping pills (hypnotics) have a calming, anti-anxiety, hypnotic, and antiphobic effect, mainly in neurotic disorders.

Psychoanaleptic drugs have a stimulating, activating, and psychoenergetic effect. They include:

antidepressants (thymoanaleptic drugs) normalize pathological depressive mood;

Psychostimulants (psychotonics) cause psychomotor activation.

Conclusion: A special place is occupied by normothymic agents (normotymics, mood modulators), which have an antimanic effect and, with long-term use, are able to prevent another exacerbation of affective and schizoaffective psychosis.

A separate group includes neurometabolic stimulants (nootropics, as well as cerebral blood circulation correctors, adaptogens, angioprotectors and microcirculation correctors , antihypoxants and antioxidants), which are capable of activating metabolic and energy processes in brain cells and / or have a cerebroprotective effect. This group is sometimes classified as psychoanaleptics, but given the breadth of therapeutic action and the variety of indications for use, it is appropriate to consider them separately. Drugs that exhibit neurometabolic stimulant properties in patients under extreme conditions (physical overload, etc.) are sometimes called actoprotectors. The basis for this, to some extent, is the conditional division of drugs, the specificity of their main clinical and pharmacological effects.

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