

## CLINICAL PHARMACOLOGY OF PSYCHOTROPIC DRUGS

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**Abstract:** This article provides detailed information about psychotropic drugs, including how psychotropic drugs are used, in what cases this drug can be used, and the order and norms of their use.

**Keywords:** neuroleptics, antidepressants, tranquilizers, psychostimulants, psychotomimetic drugs,

### **Psychotropic drugs**

Psychotropic substances are substances that have an effect on the central nervous system and primarily on human mental activity. In healthy people processes of excitation and inhibition in the brain are in balance. Emotions, nervous overload, stress can lead to the emergence of neuroses, manifested in anxiety, hysterical conditions, behavioral disorders, etc. Mental illnesses are characterized by more serious mental disorders (delusions, hallucinations, memory and thinking disorders, personality changes).

Mental illnesses can occur with a sharp predominance excitation processes (motor agitation, delirium, hallucinations), so and with excessive suppression of these processes (depression, melancholy mood, impaired thinking). Discovery and introduction into practice of active psychotropic drugs (50s. XX century) are one of the most significant achievements of medicine. PM this profile is used not only in psychiatry, neurology, but also in other branches of medicine - therapy, anesthesiology, oncology, etc.

**The international classification divides all psychotropic drugs into five main groups:**

- neuroleptics
- antidepressants
- tranquilizers
- psychostimulants
- psychotomimetic drugs

### **Neuroleptics**

Neuroleptics include drugs of various chemical structures that have the ability to have an antipsychotic effect and modify and normalize pathologically altered behavioral reactions. At the beginning of the era of psychopharmacology, the main property of this group of drugs was considered to be the ability to cause special depression of the central nervous system, decreased mental activity, psychoaffective indifference without hypnotic effects and loss of critical abilities. This condition is called neurolepsy.

Currently, the two most widely used names for this group of drugs are “neuroleptics” and “antipsychotics.” The latter most accurately reflects the main direction of action of the drugs.

Subsequently, with the advent of a large number of new antipsychotic drugs, it became clear that a kind of sedative effect is not obligatory for the entire group; it is present only in a limited number of drugs. And the obligatory property of the drugs is their antipsychotic effect, which includes two effects:

the ability to block and reduce psychopathological symptoms, hallucinatory-delusional disorders; normalizing effects on pathologically altered behavior of various origins.

The listed effects are not necessarily present in the spectrum of activity of every modern antipsychotic drug. They may be absent or their severity varies within a fairly wide range - from mild to significant.

### **Antidepressants**

Antidepressants combine drugs with different chemical structures that have a specific psychotropic effect - the ability to eliminate pathologically altered, depressed mood, depression, and increase the activity of depressed patients. Main properties of antidepressants:

antidepressants specifically normalize, level out, and increase pathologically altered, depressive mood;

- increase the inhibited motor activity of depressed patients;
- improve and accelerate the thinking process in depression;
- improve concentration.

### **Tranquilizers**

Tranquilizers, or anxiolytic drugs, include substances of various chemical structures that have the ability to influence emotional disorders of a neurotic nature, eliminate anxiety and fears without causing severe lethargy or drowsiness.

Although sedative and tranquilizing effects are also inherent in other groups of psychotropic drugs - antipsychotics, antidepressants and sleeping pills, tranquilizers have significant differences. In contrast to neuroleptics, they do not have an antipsychotic effect over the entire

dose range and do not cause psychoaffective indifference. Unlike antidepressants, tranquilizers can only slightly weaken the anxiety component of depression without affecting the actual depressive symptoms. Tranquilizers are not characterized by such a pronounced gap between the effects in healthy and sick people as with neuroleptics and antidepressants. Most of the drugs in this group can cause mental and physical dependence.

### **Psychostimulants**

Psychostimulants are drugs that have a stimulating effect on the central nervous system, increasing activity, attention, performance, and accelerating thinking processes. Unlike other psychotropic drugs, especially antipsychotics and antidepressants, psychostimulants have the same effect on sick and healthy people. The spectrum of action of psychostimulants includes the following effects:

- they stimulate intellectual activity, speed up the thinking process and speech;
- improve concentration and memory;
- may cause euphoria;
- increase motor activity (sometimes causing motor restlessness);
- lengthen the period of wakefulness, reduce the need for sleep;
- weaken the effect of sleeping pills and narcotic drugs;
- reduce appetite;

Despite the ability of some psychostimulants to cause euphoria in healthy people, they do not help relieve depressive disorders, but, on the contrary, can increase anxiety, restlessness, and suicidal tendencies. They can lead to exacerbation of mental disorders. Long-term use of psychostimulants often causes addiction. In addition, some psychostimulants cause an aftereffect: after a period of increased activity, drug withdrawal is accompanied by the appearance of lethargy, lethargy, and drowsiness.

### **Psychotomimetic drugs**

Psychotomimetic drugs (hallucinogens, psychodysleptics, psychedelics, etc.) combine drugs of various chemical natures that can cause psychotic disorders in small doses. Based on the characteristics of emerging mental disorders, psychotomimetic drugs are divided into two groups:

causing psychotic, hallucinatory (schizophrenia-like) disorders without changes in consciousness  
- true hallucinogens;

causing psychotic disorders against the background of darkened consciousness of various types.

For psychotomimetics, the ability to cause mental disturbances is a permanent and main consequence of their effect on the central nervous system. Unlike other groups of psychotropic drugs, the effect of true psychotomimetic drugs is not selective, and all types of life experience and all spheres of mental activity are affected.

### **Normotimics**

There is a conditional group of drugs that can create psycho-emotional stability in human behavior. These drugs are classified as anticonvulsants. Such an effect was empirically discovered in them and is now being actively studied by psychopharmacology.

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