

Sleep Therapy and Psychiatric Practice

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SLEEP THERAPY AND PSYCHIATRIC PRACTICE

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We must build practical medical work on the theoretical basis of the physiological teachings of I.P. Pavlov. In this respect, his teachings about the process of inhibition in the central nervous system have great significance. I.P. Pavlov wrote: "There is reason to believe, that as long as the inhibitory process is active the cortex is not deeply injured and can again return to complete normality; it may still recover from extreme weakness and its pathological process is still reversible" (I.P. Pavlov, Collected Works, AN SSSR, 1949, p. 444).

On the basis of this, there is at the present time, in many clinics and hospitals, a wide use of a protective therapy in the form of extended sleep, produced by giving medication to the patient. However, there is a complete lack of attention to other factors which guarantee the effectiveness of the therapy: relationships to the patient, care, nutrition, prevention of pain during therapeutic measures, etc.

After a series of experimental studies, I.P. Pavlov applied sleep therapy in the psychiatric clinic. The treatment was carried out in special wards over a period of 10-12 days, under the observation of A.G. Ivanova-Smolenskovo. I.P. Pavlov was very pleased with the results obtained. The first attempts with sleep therapy were carried out in the clinic of V.P. Osipov in 1935-1936. In organizing the sleep therapy in the psychiatric clinic of the S.M. Kirov Military-medical Academy, we studied the experience of the Pavlov clinic and

in the fall of 1950, established a special section, fully isolated from other wards, for this goal. Before placing patients in this section they were given a careful clinical and laboratory examination, and in addition there was a determination of their reaction to soporific drugs, and the individual dosage established. A very important point in the preparation of patients for sleep therapy is a careful preliminary psycho-therapeutic interview with the individual concerning his individual reaction under therapy and especially during the period of awakening from sleep. It is essential to discover the habits by which each patient has previously established a conditioned-reflex sleep. Thus, one type of patient sleeps better under a light blanket, another under a heavy one; one type on a hard bed, another on a soft one; some patients fall asleep quickly and soundly when they have a small pillow; and in the therapeutic clinic we have seen a patient who slept well only if he had the screws from a wallplug in his shirt pocket.

The history of the patient should include the time the soporific was given, together with the daily dose, characteristics of the falling-asleep, depth of sleep, number of hours of sleep in 24 hours, the time of falling asleep and awakening, condition of the patient while awake, times when food was taken, appetite, intestinal activity, urine production; the temperature is taken no less than 2-3 times a day; pulse and respiratory rates per minute are taken every two hours, the blood pressure no less than once every 24 hours, the blood and urine are examined every other day. One should not wake a patient to give medication or food--it is essential to wait for spontaneous awakening. The food should be nutritious, not coarse, and rich in vitamins. If a tendency to constipation is noted it is essential to achieve evacuation by enemas. The separated wards must be well ventilated. The

soporific medication is given to the patient after he has taken food, 3-4 times in 24 hours. The course of sleep therapy usually lasts 15-20 days, while in those cases where it is alternated with insulin therapy, the whole course of treatment lasts 1-1 $\frac{1}{2}$ months.

Sleep therapy has been in progress since the fall of 1950. Up to 1 June 1951, sleep treatment has been used with 83 patients. In a first group of patients a deep narcotic sleep was induced with sodium amytal in a dose of 0.3-0.4, three to four times daily, while in some cases individual doses reached 0.5-0.6. The patients slept 20-22 hours daily. On the third to fourth day this group of patients began to show signs of weakness: disturbance of speech, incoordinated walk, urinary incontinence, changes in the blood picture (lymphocytes, increased ROE), and some dimming of consciousness in the wake period. Detoxification was carried out with a 40% solution of glucose with ascorbic acid, copious drinking and warm baths. In some of the cases, of the last example with soporifics used for 3-4 days, the injection of scopolamine with morphine was substituted. On the next morning the patients awoke without any sign of intoxication. Administering hexenal with the same goal in mind did not ease the condition of the patients. Of the more serious complications observed in this group, one can note a condition of collapse, present in two patients on the 5th day immediately after taking sodium amytal. With one patient a temperature rise to 40.5 degrees was noted on the 10th day, accompanied by profuse sweating and paresis of the intestine; while in another patient a bladder hematuria was observed. While the efficacy of the treatment in this group was great, the noted complications made it necessary to change to the use of a less deep sleep, with a decrease in dosage of soporific.

In the last group of patients, the treatment was carried out with a lighter sleep, lasting 18-20 hours a day. The soporific used was phenobarbital or "noktal" in doses of 0.2-0.4, two to three times per day, and a 5% solution of choral hydrate, together with covering flavors or in enemas, calculated to give 0.5-1.0 choral hydrate two times every 24 hours. This combination of soporifics gives insignificant toxic effects. In order to lower toxic effects, once conditioned-reflex sleep has been established, the patients are sometimes given indifferent powders instead of the soporific. One should keep in mind that in patients with prolonged consequences of closed trauma to the brain or in severe alcoholics, there is sometimes observed a short-duration waking period on the first day of sleep. In rare cases, an intolerance or increased sensitivity to soporific substances may be seen. Thus, one patient slept 18 hours continuously after taking a 0.3 dose of sodium amytal, while other patients showed nausea and vomiting after taking the soporific. During the first 3-4 days after stopping the soporific administration some patients feel especially bad. The effects of intoxication disappear slowly. The patients cannot analyze their own condition correctly, or give critical attention to their feelings, and are in a depressed mood, sometimes showing episodic disturbances of perception, with an accentuation of psychotic tendencies. The patients claim that they feel much worse than before the treatment, complaining of apathy, general sluggishness, and insomnia. Vegetative disturbances can be observed in the form of subfebrile temperatures with subsequent copious sweat formation and then a falling of temperature below 36 degrees, sometimes in disturbances of cardiac activity, with a fall in blood pressure. In this period especially careful attention to the patient is required, with the carrying out of disintoxification measures: copious drinking,

warm baths and the internal administration of glucose with ascorbic acid. If a psychiatric interview about the possibility of a temporary worsening of the disease is given previously, the patient will be more calm and understand his condition more correctly. In order to avoid the possible arousal of epileptiform attacks and ease the period from sleep to a waking condition, the patient is given luminal 0.05 three times a day and 0.2 for the night, for three to four days. An excursion in the open air has a very encouraging effect on patients in this period. One should note here also, that during sleep therapy, when the cortex is in a condition of marked inhibition, one can clearly observe symptoms of organic damage to the cortex, which were almost unapparent before.

The best therapeutic results were obtained with patients suffering with prolonged effects of "closed" cerebral trauma. Nineteen patients fell into this group. After sleep therapy, the patients noted a disappearance or marked decrease in headaches, quiet regular sleep, disappearance of unpleasant sensations in various parts of the body, an absence of emotional outbursts, improvement of outlook, less fatigue when working than before, and a return of working ability.

We present the following example for an illustration:

Patient Z., born in 1911, [redacted] grew and matured normally. No diseases transmittable by heredity noted in family. Bout with typhus in 1921; in 1940 was wounded in the chest at the front, with damage to ribs; in 1944 and 1945 suffered contusions with a loss of consciousness, short-lived appearance of blindness and deafness. Continued service after treatment. Before contusion had been quiet, gay, cheerful; after contusion became mean, excessively irritable, stubborn,

revengeful. From 1945 began to experience periods, 2-3 times a year, of dullness, strong irritability, headaches, worsening of appetite, tendency to solitude, showing a strong inclination to alcohol, with solitary drinking. This condition would last from 6 to 10 days, after which the patient felt better and returned to work. Was treated twice in a psychiatric clinic while in this condition.

Subsequent examinations: no deviation from the normal could be observed in the internal organs; no symptoms of injury to the central nervous system; encephalogram shows a clearly defined regular internal cephalic hydrocele with swelling of the third ventricle. From the viewpoint of the psyche, observed in clinic, there is noted tenseness, maliciousness, complaining, absence of a critical attitude to own condition, tendency to affective outbursts, suspiciousness, sarcastic, negative attitude to medical staff, demonstrations, ridicule of personnel, insults, lying; no errors of perception were noted, intellect intact. Sleep and appetite of patient bad, increased tendency towards sweating, sharply defined hyperemia of face.

Diagnosis: traumatic encephalopathy with attacks of disphoria.

After carrying out the sleep therapy all the pathological symptoms disappeared and the patient only showed psychic sluggishness for a month. After nine months, the sluggishness was gone and working ability fully restored; no disphoric attacks were present. According to the words of the wife, the character of the patient became the same as it was before the contusion.

Highly encouraging therapeutic results were obtained with individuals suffering with chronic tetra-ethyl-lead poisoning. Good results were obtained with causalgia, with acute alcoholic psychosis

and with patients suffering from manic-depressive psychosis.

There was noted a marked improvement of health in patients suffering from psychasthenia. There were twelve patients in this group. Most of them achieved a stable recovery and returned to work. There was a smaller group of patients whose pathological symptoms declined to some extent, which allowed them to return to their previous work.

We present the following history of illness as another example:

Patient C. born in 1909, grew and matured normally, no neuro-psychic disease in family. The patient has an anxious-imaginative character, but is always gracious and gay. In 1940 he saw in his sleep that he was dying, awoke in terror, and from that time the fear of sudden death did not leave him. He was afraid to walk alone, cross the street or an open area, lie in bed; he soon acquired the idea that he was going insane. In 1942 he caught typhus, experiencing the disease severely, but after recovery his persistent fear of sudden death and insanity disappeared and he felt well.

In 1943 he experienced contusions at the front and became deaf in the left ear. In the spring of 1950, after a severe anxiety, all his compulsive ideas became acute anew; he became afraid to stay home alone, and scabies appeared over his whole body.

Examination data: the boundary of the heart is broadened to the left by one finger, first tone weak, one can hear a slight systolic sound over the apex, the second tone is accentuated over the aorta; pulse 78 beats per minute, regular, arterial pressure 130/88. With regard to the nervous system the following was found: red dermographism,

tremors of fingers, weak abdominal reflexes; on the psychic side, there is a fear of death, fear of going insane, irritability, anxious-imaginative character.

No pathology was disclosed by the laboratory examinations of blood and urine.

Diagnosis: psychasthenia.

The patient received a combined therapy over the course of 45 days: sleep and insulin; no signs of weakness were observed. Was discharged healthy for work, and remarked that he was "reborn"; over the course of the last six months there has been no complaint about a decline in condition of health.

There is a large group of individuals suffering from schizophrenia. All of them, whether just fallen sick or chronic cases, do not show a noticeable improvement in condition with sleep therapy. Similarly, there was no improvement in cases of paranoid delusions.

Patients suffering with hysterical mutism and convulsive attacks also showed no improvement with sleep treatment, actively resisted therapy, and showed highly disturbed awakening. In this connection it is essential to combine sleep therapy with other therapeutic measures.

Since patients with paranoid delusions and those just taken ill with schizophrenia sometimes give temporary good results with sleep therapy, it is essential to find such supplementary therapeutic measures which could maintain the positive results of the treatment which are obtained.

Preventive therapy also includes the environment of the patient.

I.P. Pavlov wrote: "One can expect a very significant increase in the number of recoveries, if, with such patients, physiological calm due to inhibition is combined, in addition, with deliberate environmental calm. They should not be kept in a continuously and highly irritated environment, among other more or less disturbed patients." (from: A.C. Ivanov-Smolenskiy, Observations on the Pathophysiology of Higher Nervous Activity, "Medgiz", 1949, p. 233.)

For this reason, the psychiatric clinic of I.P. Pavlov, writes A.C. Ivanov-Smolenskiy, "reminded one much more of a well-organized sanatorium than a psychiatric institution". In addition, all the internal organization and rules of the clinic were designed to guarantee maximum quiet for the patients. Consequently, the organization of care and quiet in wards, with the exclusion of all irritation and excitement, will promote the effectiveness of treatment of the sick.

"...Not for one minute did I.P. Pavlov forget that he was dealing with a living being, often a deeply suffering human. His approach to patients was always full of unusual gentleness, sensitivity and warmth." (from: A.C. Ivanov-Smolenskiy, The scientific session of the AN SSSR and AMN SSSR, dedicated to the problem of the physiological teachings of Academician I.P. Pavlov, AN SSSR, 1950, p. 77). Pavlov was an example to us of how each medical worker should act towards patients.

It is known, that the correct establishment of diagnosis, execution of an operation or prescription of medicine is only half of the healing of a patient; the second half depends on how the indicated treatment will be carried out, how the patient will be cared for, what circumstances will be created for him. Therefore, the effectiveness

of treating patients depends to a great extent on nurses, laboratory workers, junior medical personnel. In caring for patients the personnel must avoid traumatic events, which, unfortunately, still occur in our practice.

In view of the teachings of I.P. Pavlov it is also essential to consider the nutrition of the patient. Pavlov considered that the psychic stimulation of good food was the most powerful and practical incentive to appetite. I.P. Pavlov wrote: "The dining room must be such that it reminds one in no way of work, so that all the cares of the day are left on its doorstep" (from: I.P. Pavlov, Selected Works, published by AN SSSR, 1949, p. 208). These conditions for arousing appetite are not always observed by us. The loss of appetite in patients is not always analyzed from the point of view of Pavlovian physiology. A depression of gastric reflexes and complete loss of appetite in patients obliges the medical worker to raise the standards of their care as much as possible, protecting them from all traumatic events.

Further creative development of the ideas of I.P. Pavlov and their application to medical practice will allow us to protect the health of the Soviet public still better.