



ERECTILE DYSFUNCTION. PATHOPHYSIOLOGY CONNECTION WITH ADJUSTMENT DISORDER

(review of the literature)

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Abstract: The article is devoted to sexual dysfunction, which is currently divided into primary and secondary. Special attention is paid to erectile dysfunction, as a disease, significantly relieve the quality of life. Erectile dysfunction is not only depriving man of sexual pleasure, but also causes a strong decline in overall life satisfaction worsens partnerships, although many wives give reduce erection lower value than their husbands, lowers the mood, to the point of depression, affects the self-esteem. Most scientists call an erection main manifestation of sexuality in men. The article presents the data on the etiology, pathogenesis, physiology and anatomy erection. Discusses the risk factors, divided into three groups. Provides data on the differential diagnosis and treatment of erectile dysfunction using the model LICT (lifting the ban, information, council, treatment), which may be used by physicians of all specialties. In our article covers the topic of adaptation, as the process of maintaining the functional state of homeostatic systems of our organism that provides its preservation, development, performance, maximum life expectancy in inadequate conditions. Is pathophysiology communication mechanism erectile dysfunction with adjustment disorder. The article refers to the indirect iatrogenesis and other reasons that compel patients of erectile dysfunction is not to seek medical help. Key words: adaptation, adjustment disorders, sexual dysfunction, erectile dysfunction, treatment erectile dysfunction.

Keywords: Erectile dysfunction,LICT,pathophysiology,pathogenesis, etiology.

INTRODUCTION

In the modern world, where the duration of human life and its value are steadily increasing, a condition such as sexual dysfunction, which significantly reduces the quality of life, deserves special attention from doctors and psychologists. It is known that sexual dysfunction has very diverse causes and is due to both psychological, mental, and somatic reasons. There are primary and secondary sexual dysfunctions; the concept of impotence (Latin impotentia - weakness, impotence) is little used due to its inconsistency with the true essence of the pathological process. Primary, developing without connection with any other disease, sexual breakdowns with subsequent neurotic fixation are pathoreflex. Dysfunctions due to systematic violations of the physiological program of sexual intercourse (interruption or prolongation) are

dysregulatory; due to sexual abstinence – withdrawal symptoms; and finally, due to the constitutional inferiority of the morphofunctional structures responsible for the neurohumoral regulation of sexual function - constitutional-genetic. A secondary, or symptomatic, disorder includes sexual dysfunction, which is a specific syndrome of various diseases of the nervous, endocrine, genitourinary or any other systems. In men, it is customary to identify disorders of the erectile and ejaculatory components of the copulatory cycle, while in women, as a rule, frigidity, anorgasmia, and in both of them, alibidemia. Modern understanding of the etiopathogenesis of erectile dysfunction. Erectile dysfunction is a fairly common disease. Men on all continents suffer from this disease. According to WHO, 150 million men worldwide have erectile dysfunction. Due to the increase in life expectancy in the coming years, their number should double and amount to approximately 322 million men in 2025 [2]. The greatest increase in the number of cases of erectile dysfunction is expected in developing countries, which is primarily due to a lack of funds and inadequate nutrition, chronic stress, the presence of somatic pathologies and the lack of access to sexological help due to the lack of training of general practitioners and mid-level specialists, as well as low sexual literacy of the population, false shame and ignorance, lack of knowledge about sexual hygiene. Physiology of erection. Erection is the main manifestation of sexuality in men, it is expressed in increased elasticity of the penis, an increase in its size due to increased arterial blood flow into the cavernous bodies and difficulty in the outflow of venous blood from them. There are spontaneous and adequate erections. Spontaneous, as a rule, arise without the participation of higher cortical centers of sexuality. In young people they arise during erotic fantasies and perception of erotic information. With age, this property disappears, and spontaneous erections persist only upon awakening, during sleep, with a full bladder, abstinence, congestion in the pelvic organs, as well as with stimulation of the spinal center, irritation of the external genitalia. Adequate erections occur with the participation of higher cortical centers, in response to sexual stimulation. They are not stable and depend on psycho-emotional factors and external conditions. With experience, this mechanism becomes more stable.

Anatomy. The deep artery of the penis pierces the tunica albuginea and enters the corpus cavernosum, where it divides into many corkscrew-shaped arteries that open into the cavernous spaces. Ebner's pads protrude into the lumen of the arterioles - smooth muscle elements that, by contracting, change the blood supply to the cavernous bodies. Three groups of veins drain the penis: superficial, intermediate and deep. The veins pierce the tunica albuginea at right and oblique angles, this ensures blocking of the outflow along with the valve apparatus of the veins. Cavernous tissue has a mesh structure of cavernous spaces lined with endothelium and separated by trabeculae. It contains smooth muscle fibers, which also ensures an erection. During erection, intracavernous pressure increases due to an increase in blood inflow by 3-4 times and a sharp decrease in blood outflow. The pressure increases in the corpora cavernosa much more than in the corpus spongiosum of the urethra [7]. The mechanism of erection development: sexual stimulation → increased parasympathetic activity → release of NO → increased concentration of intracellular cGMP → relaxation of vascular smooth muscle cells, vasodilation → increased blood flow → compression of venules and blockage of outflow from the penis → erection. Erectile dysfunction.

Erectile dysfunction is the persistent inability to achieve or maintain an erection sufficient for sexual intercourse [6]. Despite the apparent indifference of this disease to health, this disease has a great impact on the general condition of a person, significantly worsening the quality of life and health in general. Erectile dysfunction not only deprives men of sexual pleasure, but also causes a strong decrease in overall life satisfaction, worsens partnerships (although many wives attach less importance to decreased erection than the husbands themselves), lowers mood, even depression, and affects self-esteem [11, 15]. All this leads to a deterioration in the quality of life of patients and reduces performance. Contrary to the above, 85% of patients do not seek treatment, while the rest do so with great delay [6]. This behavior is explained by a reluctance to see a doctor and increased sexual shyness of men [14]. Meanwhile, according to I.S.Kon, 95% of all cases of erectile dysfunction are curable [6]. Patients suffering from this disease do not go to doctors due to the lack of skills of many doctors in confidential and confidential communication with patients, as well as due to the lack of sexologists. They often turn to psychologists who, although they have communication skills, try not to pay attention to this topic, even when the client states it as the main one. Another problem is indirect iatrogeny - the doctor's (or psychologist's) conviction that problems of sexual desire can be considered separately from the entire complex of a person's psychophysical life, as if in isolation from this complex [3].

Classification.

1. Organic erectile dysfunction (30%-80%) Causes: • Vascular • Neurogenic • Hormonal • Drug • Injuries and diseases of the penis • Renal failure and hemodialysis
2. Psychogenic erectile dysfunction – occurs due to central inhibition of erection mechanisms without structural changes (20% - 70%) Causes: • Depression and anxiety • Loss of a partner and withdrawal • Lack of sexual literacy • Others
3. Mixed erectile dysfunction – a combination of organic and psychogenic factors [2]. Differential diagnosis. Psychogenic erectile dysfunction 1. Sudden onset of the disorder 2. Sudden and complete loss of function 3. Nocturnal erections are preserved 4. Dependence on partner and environment (selective disorder) 5. May appear during masturbation Organic erectile dysfunction 1. Gradual onset 2. Gradual progression of the disorder 3 Nocturnal erections are impaired or absent 4. Erections are always impaired 5. Does not occur during masturbation Risk factors for erectile dysfunction: 1. Chronic diseases: • Systemic diseases (atherosclerosis, diabetes mellitus, cardiovascular diseases, renal and liver failure) • Neurological diseases (Alzheimer's disease, multiple sclerosis, spinal cord lesions and etc.) • Pathology of the penis (Peyronie's disease, etc.) • Mental illnesses • Endocrine diseases (hyperthyroidism, hypothyroidism, hypogonadism, hyperprolactinemia) 2. Surgical interventions and injuries, also radiation damage to the pelvic area. However, chronic prostatitis is not the cause of erectile dysfunction, but removal of the prostate can lead to this [13]. 3 Pharmacotherapy and use of substances that alter metabolism (alcohol, smoking, drugs). Medicines: - antihypertensives (thiazide diuretics, β -blockers) - antidepressants - hormonal drugs - tranquilizers - others (digitalis, antihistamines). This side effect is always indicated in the annotation, but it is necessary to explain to patients that during the treatment of a somatic or mental illness, sexual disorders may occur. Pathophysiological relationship between adaptation disorders and erectile dysfunction.

Adaptation is the process of supporting the functional state of the homeostatic systems of the body as a whole, ensuring its preservation, development, performance, and maximum life expectancy in inadequate environmental conditions [5]. Or, as defined by F.Z. Meerson, adaptation is the process of gaining resistance to certain environmental factors and gaining the opportunity to live in conditions previously incompatible with life, to solve problems that were previously unsolvable [9]. Adaptation disorders from a pathophysiological perspective are a violation of the adaptation process or adaptation (syndrome) process. ICD-10 defines adjustment disorder as a state of distress and emotional disturbance that interferes with social functioning and productivity that occurs during adjustment to a significant life change or stressful life event. It has been revealed that testosterone levels in people who have experienced stressful situations are below the average statistical norm for the male population of the central regions of the European part of Russia, while the values of follicle-stimulating and luteinizing hormones remain within normal limits [12, 1].

A clinical study of men who experienced a stressful situation in seismically active zones of Armenia (Leninakan, Kirovakan, Spitak, etc.) revealed sexological disorders in the form of erectile dysfunction, decreased libido, and orgasm disorders. Hormonal studies revealed a sharp decrease in the concentration of testosterone in the blood and an increase in the level of corticotropin [10]. Results of the 1986-1988 study. veterans of the Vietnam War reveal a significant increase in sexual disharmony among American military personnel who experienced combat stress: 40% of men who participated in combat operations divorced their wives once, 10% - two or more times, 14.1% reported serious family problems [1]. From a physiological point of view, the occurrence of sexual dysfunction in adaptation disorders looks completely natural, since it is parasympathetic activation that causes an erection, passing through the cavernous nerves from the branches of the pelvic plexus, and the excitation of sympathetic structures characteristic of stress, on the contrary, through stimulation of the hypogastric plexus and ganglia of the borderline sympathetic trunk, leads to detumescence. The main neurotransmitter that causes detumescence is norepinephrine - by stimulating adrenergic alpha receptors in the cavernous trabeculae and cavernous arteries, it spasms the arterial vessels of the penis [7]. This indicates a physiological connection between sexual dysfunctions, in particular erectile dysfunction, and adaptation disorders. Other mechanisms for the formation of sexual dysfunctions in adaptation disorders are also described [4, 6]. The influence of psychological and social factors on pathogenesis and the connection between the risk of developing sexual dysfunctions and the patient's personal characteristics require further study. Treatment of erectile dysfunction. To carry out high-quality treatment, it is necessary to remember that the doctor is obliged to "treat the patient, not the disease," based on this, the treatment of erectile dysfunction should be approached systematically, not considering only the pathology of the genital organs, but paying attention to all the patient's problems. For the treatment of sexual disorders, especially functional ones, the SISL model is used (S - lifting the prohibition, I - information, S - advice, L - treatment) [4]. C – the doctor seeks a frank conversation about the patient's sex life; And – provides the necessary information (limited), fighting ignorance and distorted ideas about sexuality;

Studies have shown that Viagra actually improves muscle tone and vaginal hydration, however, unlike men, for whom penile erection itself, even in the absence of expressed desire, stimulates sexual activity, women's experiences are associated with more subtle psychological states, which neither Viagra, nor Levitra, nor Cialis, of course, have any effect on. Therefore, further studies were stopped [15, 16]. Psychotherapy. Used in the absence of organic lesions. This treatment is carried out by a psychologist or psychiatrist. There are various options for psychotherapeutic treatment: • relieving anxiety and fear • temporary prohibition of sexual intercourse • Masters-Johnson exercise "Sensual Focus" (The essence of the exercise is to switch your sensory-erotic perceptions and sensations from the genitals to other parts of the body) [8, 18, 19]. • trainings and other Vacuum therapy. This treatment option is used for psychogenic and some organic erectile dysfunctions.

Penile prostheses are silicone rods or balloons in shape and size corresponding to the cavernous bodies. During the operation, the corpora cavernosa are drilled along their entire length, and penile prostheses are implanted into the formed canals. Modern plastic and hydraulic models of prostheses make it possible to simulate the penis, simulating a natural erection in accordance with functional needs. The high efficiency of prostheses has made this method a priority among surgical ones. However, many men feel uncomfortable with penile implants and subsequently refuse them. Conclusion. Considering the widespread prevalence of erectile dysfunction and the potential increase in this pathology, it is necessary to attract more attention to it from doctors, not only those involved in the treatment of the genital area, but also general somatic specialists, psychotherapists and psychologists.

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