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Specific aspects of erectile dysfunction in psychiatry

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The participation of the psychiatrist in the management of erectile dysfunction (ED) is focused on three types of patients based on the origin of the dysfunction: (1) patients with functional or psychogenic ED, (2) patients with mixed, organic psychogenic ED, and (3) patients with ED and active psychopathology. The second group is influenced by three psychological factors: perpetuating factors, aggravating factors, and accompanying factors. The main psychopathological disorders that interfere directly with the erectile mechanism are depressive disorders (18–35%), anxiety disorders (37%), obsessive–compulsive disorder, psychotic disorders (46–47%), and the antipsychotic medications used to treat these disorders. The diagnostic proposal includes psychological and sexologic evaluation and differential diagnosis. The therapeutic proposal includes the basic principles of sex therapy in the model of behavioral-cognitive therapy (eg, prohibition of intercourse, sensate focus, voluntary loss of erections, no expectations about response), pharmacological therapy (eg, sildenafil, intracavernous injection of vasoactive drugs), and a combination of both therapies.
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Types of erectile dysfunction

The participation of the psychiatrist in the management of erectile dysfunction (ED) is focused on types of patients according to the type of dysfunction.

Functional or psychogenic ED

In these patients, the physiological erectile mechanisms are intact, and ED is caused by psychogenic inhibition in which at least two mechanisms are involved: stimuli sent from the brain to the sacral spinal cord can inhibit reflex erection when there are negative expectations or fear of failure during the excitation phase, and excess sympathetic tone with elevation of circulating catecholamines can increase constrictive tone, counteracting the mechanisms that cause relaxation of cavernous smooth muscle, for example, in situations of stress or high anxiety. Both mechanisms may be present at the same time in an individual in the absence of psychopathological factors.

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Patients with mixed organic–psychogenic ED

These patients have a series of psychological factors in addition to the organic cause. These factors can be divided into perpetuating, aggravating, and accompanying factors.

Perpetuating factors. Perpetuating factors are those that persist after ED, initiated by an organic factor that later disappears (a drug that is withdrawn or a health problem that stabilizes). That is, ED persists in the absence of the original factor due to psychological factors.

Aggravating factors. There is an underlying organic disorder that partially affects the erectile mechanism, but the psychological factors cause more severe or complete ED than that caused by the organic factor.

Accompanying factors. These are the psychological reactions that accompany any disease, such as loss of self-esteem, fear of the consequences of sexual activity (eg, fear of pain or a relapse), or the

belief that this disease or surgery is incapacitating for normal sexual behavior. As these factors are present in all patients with ED of organic origin, the decision for seeking psychiatric care should be based on their relevance in context with the dysfunction that is being treated.

Patients with ED and active psychopathology

As with depressive disorders, some psychopathological disorders interfere directly with the erectile mechanism through disturbances in the hypothalamic–pituitary axis. These disorders alter sexual experience and sexual behavior, similar to that seen in obsessive–compulsive disorder or psychotic disorders. In many cases, the drugs used to treat these disorders cause ED. When one or more of these suspected disorders clearly interfere with the origin or therapeutic approach to ED, psychiatric care should be initiated.

The psychiatrist should bear in mind that ED may affect a large percentage of his or her patients. The incidence of ED in depression ranges from 18 to 35%. In severe depression, estimated rates of ED go as high as 90%, although this percentage may be exaggerated by side effects of treatment and decreased sexual desire.[1] In patients with schizophrenia, ED incidence is reported at 47%.[2]

Regarding treatment with psychotropic drugs, patients treated with paroxetine have the lowest incidence rate for ED (41%) of those treated with SSRIs. ED is reported in 67% of patients treated with venlafaxine, 73% of patients treated with citalopram, and 63% of patients treated with sertraline.[3]

Diagnostic proposal

In addition to obtaining the patient's medical history, the psychiatrist should also perform the following evaluations.

Psychological evaluation

Anxiety, depression, phobias, obsessive disorder, and personality disorders may be related to the sexual problem.

Sexologic evaluation

A sexual history includes educational and religious factors and sexual attitudes; current sexual relations, including frequency, aversive stimuli, sexual thoughts and fantasies, erroneous sexual beliefs, and associated sexual dysfunctions; problems derived from the attitude of the sexual partner and the partner relationship itself; and history of the specific sexual problem. Some instruments to assess these aspects are the LoPiccolo Sexual Interaction Inventory[4] and the Golombok Rust Inventory of Sexual Satisfaction (GRISS),[5] although they have not been validated in European Spanish, unlike the Sexual Functioning Questionnaire (CSFQ).[6]

Differential diagnosis

The factor that best differentiates organic from psychogenic causes is the presence of morning or nocturnal erections reported by the patient. The presence of an erection in noncoital sexual circumstances, such as foreplay or masturbation, may also be assessed. Other aspects that should be taken into account are age and the mode of onset of ED, which is usually abrupt for psychogenic ED and slow and subtle for organic ED (except in the case of rupture of the corpora cavernosa). A careful assessment of these aspects, together with the patient's medical history and attention to risk factors, can provide a reliable diagnostic discrimination. As an aid to diagnosis, the psychiatrist can also request basic laboratory tests (see core document).

Therapeutic proposal

It is mandatory that the psychiatrist performs a 'general intervention' in any patient with ED, which consists of reassuring the patient, providing appropriate sexual information, and modifying any erroneous beliefs or expectations. Specifically, the psychiatrist may choose one or more of the following:

Sex therapy

The psychiatrist should be familiar with the basic principles of sex therapy (eg, prohibition of intercourse, sensate focus, voluntary loss of erections, no expectations about response). Success of therapy depends on a number of conditions, such as the availability of a stable and cooperative partner, ability of both patient and partner to change attitudes toward sexual activity, a level of education sufficient to understand the causes of the problem and the objectives sought by treatment, and absence of a severe underlying psychopathology in both.

Pharmacological therapy

Pharmacological therapy is indicated when the above-mentioned conditions are not met, when prior sex therapy has failed, or when the patient is too mentally blocked to attempt a psychological approach. Pharmacological therapy can be used in combination with psychological therapy to obtain initial results that boost patient self-confidence and help psychological treatment progress. The treatment of first choice is oral drug therapy.

Despite the proven efficacy of sildenafil (76% improvement rate in patients with depression, compared with 18% for placebo),[7] some patients may not use the drug correctly. Therefore, it is imperative to accompany the prescription with a series of guidelines about its use:

- emphasize the need for sexual stimulation;
- explain that it is not necessary to take the drug exactly 1 h before sexual activity; this may cause problems in obsessive patients;
- try to avoid negative expectations about intercourse;
- focus your attention on the erotic aspects and not on the outcome;
- do not pay attention to possible failures with the first doses. In fact, although most men respond within a couple of trials, it can take up to eight attempts for some men to become successful with sildenafil.

If the patient does not have any underlying organic disorder, the dose of sildenafil should be reduced gradually until the patient no longer requires medication, or once the patient has recovered his confidence in his sexual functioning and the concomitant problems have been resolved.

A second therapeutic option is intracavernous injection of vasoactive drugs. Alprostadil (5–20 μg) is the most widely used, although it requires prior training of the patient. Both the physician and the patient should know how to manage possible immediate side effects such as local bruising, pain, burning or pressure, and in a few cases, priapism. Long-term side effects include fibrosis of the corpora cavernosa or a reduction or loss of efficacy of the injection, which requires the dose to be increased or the addition of concomitant therapy. Thus, prescription of intracavernous alprostadil should be reserved for psychiatrists who are familiar with the drug and capable of responding to possible complications, either independently or in coordination with the urologist/andrologist specialized in ED.

Evaluation and treatment of ED caused by psychoactive drugs is also the responsibility of the psychiatrist. The basic strategy in patients with ED secondary to psychoactive drugs is to reduce the dose or substitute the drug for another agent that does not affect erectile function. If this is not possible, the use of coadjuvants should be considered: bromocriptine (if hyperprolactinemia is present) or sildenafil, whose efficacy in treating ED induced by SSRIs is well documented.[8]

Referral criteria

In general, referral is necessary in cases in which the use of second- or third-line treatments is required. In addition, if, after the differential diagnosis process described earlier, the presence of an organic disorder is still questionable or clearly suspected, the patient should be referred to:

- A urologist/andrologist specialized in ED for assessment of potential organic factors.
- An appropriate specialist (urologist/andrologist specialized in ED, angiologist, endocrinologist or neurologist) if the organic factor implicated in ED is known with certainty. Psychiatrists familiar with the diagnostic techniques used in ED (nocturnal penile tumescence recording, visual stimulation using Rigiscan® with or without vasoactive drugs, Doppler ultrasonography, electromyography, cavernosography) can request these tests to exclude organic causes of ED or to refer the patient directly to the appropriate specialist.
- In any of the above-mentioned cases, when the therapeutic measures taken have failed, second- or third-line treatments are required.
- In cases in which the psychiatrist is not sufficiently familiar with care of this type of patient.
- In the case of a psychologist or psychiatrist without training in sexology, when the intervention of a sexologist is considered necessary to perform sex therapy.

References

1 Feldman HA *et al*. Impotence and its medical and psychosocial correlates: results of the Massachusetts Male Aging Study. *J Urol* 1994; **151**: 54–61.
2 Teusch L *et al*. Different patterns of sexual dysfunctions associated with psychiatric disorders and psychopharmacological treatment. Results of an investigation by semistructured interview of schizophrenic and neurotic patients and methadone-substituted opiate addicts. *Pharmacopsychiatry* 1995; **28**: 84–92.
3 Montejo AL, Llorca G, Izquierdo JA, Rico-Villademoros F. Incidence of sexual dysfunction associated with antidepressant agents: a prospective multicenter study of 1022 outpatients. Spanish Working Group for the Study of Psychotropic-Related Sexual Dysfunction. *J Clin Psychiatry* 2001; **62**: 10–21.

4 LoPiccolo J, Steger JC. The sexual interaction inventory: a new instrument for assessment of sexual dysfunction. *Arch Sex Behav* 1974; **3**: 585–595.
5 Rust J, Golombok S. The GRISS: a psychometric instrument for the assessment of sexual dysfunction. *Arch Sex Behav* 1986; **15**: 157–165.
6 Bobes J *et al.* Evaluating changes in sexual functioning in depressed patients: sensitivity to change of the CSFQ. *J Sex Marital Ther* 2002; **28**: 93–103.
7 Hargreave T. Efficacy of sildenafil in the treatment of erectile dysfunction in patients with depression. Presented at the Annual Congress of the Collegium Internationale Neuro-Psychopharmacologicum, Glasgow, UK 1998.
8 Nurnberg HG *et al.* Efficacy of sildenafil citrate for the treatment of erectile dysfunction in men taking serotonin reuptake inhibitors. *Am J Psychiatry* 2001; **158**: 1926–1928.