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Psychological, social, and behavioural benefits for men following effective erectile dysfunction (ED) treatment: men who enjoy better sex experience improved psychological well-being

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Abstract

The ability to perform sexually and satisfy a partner is frequently perceived by men as defining their masculinity. Erectile dysfunction (ED) and loss of erection hardness can have a profoundly adverse effect on their psychological well-being. The loss of self-esteem associated with ED may, in turn, have an impact on their relationship with their sexual partner, which may result in a withdrawal from intimacy and of affection by their partner, leading to a vicious circle of behavioural change that may further compound the damage to the relationship and both partners psychological well-being. In some men, psychosocial distress caused by ED may develop into secondary depression, or it may aggravate depressive tendencies. This synergistic interaction between ED, depression, and physical illness means that a correct differential diagnosis is essential to target treatment on the leading cause of depression. Phosphodiesterase type 5 (PDE5) inhibitors have been used successfully to improve erection hardness in men with depression both alone and in combination with antidepressant therapy. Furthermore, recent prospective studies have demonstrated that by increasing erection hardness and the frequency of successful intercourse attempts, effective treatment of ED has positive effects on a man's psychological health and quality of sex life. The result is an increased desire for sexual intimacy that improves a man's relationship with his partner and overall life satisfaction.

1. Introduction

We previously proposed three principal factors necessary for men with erectile dysfunction (ED) to experience better sex:

- Enhanced hardness of erection
- Enhanced perception of partner sexual satisfaction
- Enhanced self-esteem and sexual confidence of the man

In the preceding article, we examined the importance of a hard erection to men as a whole, and the impact of ED and subsequent loss of hardness in terms of masculinity, self-esteem, and self-confidence for the man, and sexual satisfaction for both him and his partner.

In this article, we examine how successful treatment of ED is associated with improvements in a man's self-esteem, emotional well-being, sexual satisfaction, and relationships.

2. Emotional impact of ED

Although the frequency of sexual intercourse declines with age, sexual activity remains an important part of the lives of the majority of middle-aged and elderly people throughout the world [1–3]. The majority of men and women in the Nicolosi study [2] reported engaging in sexual intercourse during the previous 12 months; they also believed that satisfactory sex is essential to maintain a relationship. Compared with women, however, men are more likely to

emphasise the importance of sex within the relationship and to report that they have recently engaged in sexual intercourse [1,2].

Because of the importance that men ascribe to sexual activity, ED and loss of erection hardness have a profoundly adverse effect on their emotional well-being [4]. A man's most common initial reaction to ED is a sense of emasculation, since the ability to perform sexually and satisfy their partner is an important marker of masculinity for many men [5]. The resulting loss of self-esteem [6] may have a serious impact on a man's relationship with his sexual partner. Because of his fear of erectile "failure," a man may fear rejection by his partner and will seek to avoid sexual situations, especially those that may progress to sexual intercourse. This reaction is likely to mean that he also avoids acts of intimacy such as hugs, cuddles, and kisses that might lead to intercourse. This behaviour might be interpreted by his partner as a general withdrawal of affection, and, since men often do not feel able to discuss their erectile problems [5], his partner may in turn withdraw affection, initiating a vicious circle of behaviour that compounds the damage to the relationship and the man's self-esteem.

Kaplan [7] explores the theory that men may have difficulty in accepting any sign of affection, which may cause loss of desire and/or arousal disorder in the female partner. He becomes the "inducer" and she becomes the "carrier" of a secondary sexual dysfunction, which may further disrupt the sexual script of the couple. Her frustrated/irritated/embittered disinterest for sexual intimacy may become a further problem when the partner finally decides to ask for help for his ED. The negative attitude of the female partner to resume sexual activity after years of sexual silence is one of the most unaddressed reasons for the high dropout rate from an otherwise successful treatment for ED [7].

At the same time, the loss of self-esteem and associated feelings of inadequacy may have an impact on a man's day-to-day relationships with friends and work colleagues. Many men feel too embarrassed to confide in their male friends about their erectile problems and report feeling that they are "the only one" affected by ED or that they are "old before their time" [5]. At the same time, their reluctance to seek medical help about health problems in general, especially about something so personal [8], means that they are unable to share their concerns about ED with their family doctor or a specialist. This behaviour compounds their sense of inadequacy, feelings of isolation, and loss of confidence and self-esteem. The "collusion of silence"—when the man feels too ashamed to disclose and the physician is too busy to ask—is another reason for the delay in the diagnosis and treatment of ED. However, it should be mentioned that not all men with ED are bothered by the condition and will therefore not seek medical advice. Even so, it would be prudent for the physician to enquire about sexual function with their male patients to identify and ascertain if they are likely to be at risk of associated health problems such as cardiovascular or metabolic disease.

3. ED, depression, and physical disease

In some men, the psychosocial distress associated with erectile dysfunction may develop into "secondary" depression or aggravate depressive tendencies. Depressive symptoms are common in men with ED regardless of age or marital status [9,10], but the connection between ED and depression is not always one of cause and effect [11]. Some men with previously diagnosed depression experience iatrogenic ED attributable to sexual impairment as a side-effect of certain antidepressant medication. Such impairment might include reduction in sexual interest, ejaculatory delay, anorgasmia, and ED. Equally, ED may be symptomatic of a primary depressive disorder, since men who are depressed often have ED prior to treatment [12], possibly because of the influence of depression on erectile neurophysiology [11]. Depression has a strong inhibitory effect on the seeking-appetitive-lust system, one of the basic emotion command systems that fuels sexual desire and male proceptive behaviour [13].

Depression may also be precipitated by underlying physical disease that frequently coexists in men with ED [11]. This is not an unusual finding, since depressive illness is strongly associated with organic disease in general, being found in up to one third of physically ill patients attending hospital [14].While sadness and anxiety are clearly part of a normal psychological response to life stresses such as physical illness, these feelings may result in a major depressive disorder (MDD) in predisposed individuals. It is also possible that direct causal mechanisms may be involved when depression occurs in illnesses such as Parkinson disease [15]. Depression may act equally as a risk factor for organic disease; for example, the presence of depression increases the risk of ischaemic heart disease in otherwise healthy individuals and is consistently associated with worse outcomes in those already diagnosed with this condition [16].

Depression and physical illness appear to act synergistically to increase the risk of ED. In a large global survey, overall prevalence of ED was 10% in men without comorbidity, 17% in men with hypercholesterolaemia only, and 20% in men with depression only, but increased to 33% in men reporting both depression and one other comorbid condition [9]. This relationship between ED, depression, and physical illness is not surprising, because any condition that impairs the neurovascular events that result in erection or their controlling psychological and hormonal factors may be responsible for ED [17]. Consequently, although ED has traditionally been classified as either psychological or organic in origin, it is increasingly clear that most men have ED of mixed aetiology, in which the emotional and psychological factors described above exacerbate symptoms that are primarily organic in origin.

4. Improving erectile function and psychological health

The emotional consequences of ED include depression, anxiety, and loss of self-esteem [18]. The synergistic interaction between ED, depression, and physical illness means that a correct differential diagnosis is essential to target treatment to the primary disease. In men with depressive symptoms severe enough to meet the criteria for MDD, it is essential to initiate specific treatment directed at the psychiatric illness before attempting to manage their ED symptoms. Family practitioners may well be able to institute treatment, but many urologists will prefer to refer affected patients to a colleague. It should, however, be borne in mind that most antidepressant drugs adversely affect sexual function, and that a patient's erectile function should be reassessed and, if necessary, ED treatment should be initiated once he has responded to his antidepressant therapy. Indeed, a Cochrane review [19] found that, in those patients who were currently on antidepressant medication, the addition of sildenafil resulted in less sexual dysfunction at the end point, as measured by rating scales including the International Index of Erectile Function (IIEF), a finding borne out by a further recent study [20] on men with MDD treated with sildenafil who experienced improved erectile function and overall sexual satisfaction over a 6-wk period. For men with milder depression, it also may be appropriate to concurrently begin treatment of their ED with a phosphodiesterase type 5 (PDE5) inhibitor, since clinical trials with these agents also have included men with these symptoms [18,21,22].

All three PDE5 inhibitors have been shown to be effective in men with ED and comorbid depression [23–28]; however, a majority of the evidence for the efficacy of PDE5 inhibition in these patients relates to sildenafil. Sildenafil is effective in improving erectile function in men with major depression treated with selective serotonin reuptake inhibitors [20,29,30] and in men with milder depressive symptoms who were not receiving concomitant antidepressant therapy [31]. In the latter group of men, those who responded to sildenafil experienced not only improved erectile function, but also significant improvements in depressive symptoms that were comparable to those seen in clinical trials of drug or nondrug interventions for MDDs [31].

Successful treatment of ED with sildenafil may also enhance men's compliance with their antidepressant treatment, and the beneficial effects of sildenafil in improving erection hardness in men with ED associated with depression and

antidepressant therapy appears to be maintained in the long term (ie, over 26 wk) [24]. Such results should not be interpreted to suggest that PDE5 inhibitors have a primary effect on depression, since these intermittently administered, peripherally acting drugs have no known effects on the central nervous system. It is more likely that, by increasing erection hardness and successful intercourse attempts, effective treatment of ED has positive effects on a man's mood, self-esteem, self-confidence, and quality of sex life [18], resulting in an increased desire for sexual intimacy that improves a man's relationship with his partner and overall life satisfaction [32].

Post hoc analyses of clinical trials have demonstrated an association between improved erectile function, greater relationship satisfaction, and disease- specific psychosocial parameters [33,34]. This association has now been confirmed in prospective studies that used the ED-specific Self Esteem and Relationship (SEAR) questionnaire to assess improvements in self-esteem, psychosocial quality of life, and relationship satisfaction as primary end points. In a multicentre, open-label study [35] including 382 men, 10-wk treatment with sildenafil significantly improved intercourse success and SEAR psychosocial quality of life parameters from baseline. Furthermore, improvements on the SEAR self-esteem subscale and sexual relationship domain correlated significantly with positive effects of treatment on erectile function and intercourse success.

Similar benefits were reported in a double-blind study in which 553 patients were randomised to sildenafil or placebo. After a 12-wk treatment, erectile function had improved by one or more severity categories in 85% of men receiving sildenafil, compared with 46% treated with placebo. In both sildenafil and placebo groups, scores on SEAR components – that is, sexual relationship domain, confidence domain (self-esteem subscale and relationship subscale), and overall score – showed minimal or negative changes in men whose erectile function did not improve, but rose among men with improved function. In men receiving sildenafil, changes in SEAR components correlated with the degree of improvement in erectile function.

These positive benefits of treatment with a PDE5 inhibitor on improving a man's erection hardness and psychological health are maintained with long-term treatment. In a 36-wk, open-label extension of a double-blind study [36], all men received sildenafil but remained blind to their original treatment. By the end of the study, men randomised to placebo had achieved favourable SEAR self-esteem subscale scores and erectile function scores similar to those who had received sildenafil during the double-blind phase of the study. Again, significant correlations were seen between changes in self-esteem and erectile function.

While these studies demonstrate the potential beneficial effects of treatment with sildenafil on men's general psychosocial health and quality of life, it is important to bear in mind that some couples may also require referral for relationship or psychosexual therapy. This therapy may be particularly important if sex has been absent from the relationship for a long period and the couple needs help to re-establish sexual intimacy, or when unresolved relationship issues may adversely affect re-engagement in sexual intimacy and, consequently, adherence to ED treatment advice.

5. Conclusions

Effective diagnosis and treatment of ED have many benefits for a man beyond improving his erectile function. Any consultation about ED provides the opportunity to offer general health information and to identify occult organic disease, or the progression of a previously existing condition in a population of patients who are notoriously reluctant to seek medical help for their health concerns. Successful treatment of ED may improve men's sexual self-confidence, self-esteem, and psychological wellbeing, and, in turn, contribute to an improvement in their relationship with their partner—leading ultimately to better sex.

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