The Application of Sex Therapy for Unconsummated Marriage

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Article

Keywords:

Posted Date: August 30th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1990145/v1

Additional Declarations: There is **NO** conflict of interest to disclose.

The Application of Sex Therapy for Unconsummated Marriage

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Objective: To clarify the clinical features and causes of unconsummated marriage (UCM) in China and to report the clinical efficacy and different evolution trends of sex therapy for UCM. **Methods:** A total of 293 UCM couples were evaluated from 2019 to 2022. UCM lasted from 1 month to 10 years. A total of 185 couples received sex therapy (or a combination of negative pressure devices and phosphodiesterase inhibitors), 43 erectile dysfunction (ED) patients received phosphodiesterase inhibitors, 40 ED patients received intracavernosal injection (ICI), and 25 premature ejaculation (PE) patients received local anaesthetics or dapoxetine orally. The median follow-up time was 10.3 months. **Results:** Factors among males and females and common factors may lead to the occurrence of UCM. Almost all patients had a lack of sexual knowledge, male ED (186), PE (49), low libido (16), female genital penetration disorder (vaginismus, coitophobia) (197), sexual arousal disorder (48), and hyposexuality (11) (many patients had more than one factor). A total of 166 couples (89.73%) who received sex therapy successfully completed sexual intercourse, 11 patients withdrew from the treatment, and the average treatment time was 4.5 months. During the follow-up, 35 patients (21.08%) also needed adjuvant drugs (phosphodiesterase inhibitors, local anaesthetics or dapoxetine), and 131 patients (78.92%) performed well. Three pairs (6.98%) in the phosphodiesterase inhibitors

group and 11 pairs (27.50%) in the ICI group were successful; four couples (16.00%) in the local anaesthetic or dapoxetine group were successful, all of whom had normal sexual partners (no organic disease, only lack of sexual knowledge). **Conclusion:** The causes of UCM in China are complex, the therapeutic method of sex therapy (or combined with a negative pressure device and phosphodiesterase inhibitors) is effective, and the follow-up is satisfactory. Oral medication and ICI therapy for PE/ED are not effective for sexual partners with sexual problems.

Unconsummated marriage (UCM) refers to a state in which newlyweds are willing and unable to achieve penile-vaginal intercourse after many attempts [1-2]. Initial reports are mostly from Western countries [3-5]. To date, a large number of cases have been reported worldwide, mostly from India, Iran, Turkey, Egypt and other countries in the Middle East [6-7]. The first sexual experience can have a profound effect on later sexual function and relationships. UCM is one of the most common causes of divorce in the first year of marriage [8]. Normal human sexual behaviour is a biological, psychological, and social process that depends on the precise coordination of psychology hormones, blood vessels and nerves and is influenced by family, social and religious beliefs, lifestyle habits, health status, sexual knowledge, sexual experience, sexual attitudes and interpersonal relationships. UMC is a complex sexual issue that creates multiple problems for couples and society. Influenced by social culture or religion, some countries or regions prohibit premarital sex, and UCM is more common in traditional and conservative religious cultures such as Judaism, Hinduism and Islam [3-5]. Some non-Western societies (China, India, Indonesia, Iran, Palestinian Arabs) value the chastity of partners, which may be one of the reasons why countries such as Iran and India report more cases of UCM [9-10]. In some conservative regions or countries, due to a lack of sexual and reproductive anatomy education, lack of sexual skills and sexual knowledge, women's fear of sexual intercourse, and men's lack of knowledge about the anatomy of the vagina, worries about the size or image of their penis, and fear of failure may lead to UCM [8]. Some countries or regions also have a custom of completing the task of sexual intercourse on the wedding night to prove that the wife is a virgin and for other reasons, which causes anxiety and tension in men and the occurrence of psychological erectile dysfunction (ED), which then leads to UCM [8].

ED and premature ejaculation (PE) are considered to be the two most common causes of UCM caused by male factors [11]. It has been reported that the causes of UCM among males are underestimated [12]. Psychological factors are the main cause of UCM caused by male factors, and anxiety is considered to be the main pathogenic factor, which can lead to severe PE and ED [13-14]. Other reports indicate that organic causes account for approximately 3% to 32.1% of cases of UCM [15]. A variety of female sexual dysfunctions, such as female genital penetration disorder (vaginismus, fear of sexual intercourse), sexual desire disorder, and sexual arousal disorder, can lead to the occurrence of UCM. Studies have shown that the prevalence of female genital penetration disorder in Italy is 7.8% [16]. Approximately 33% of Iranian women suffer from pain or fear during attempted sexual intercourse [17]. This disease has been reported more frequently in relatively conservative countries [18].

Recent studies have shown that vaginismus is more common among women with higher education levels and socioeconomic status [19]. Physiological factors, such as congenital anomalies, local infection, trauma associated with childbirth, genital surgery or vaginal tumours, can cause female genital disorders [20]. Studies have shown that women with genital penetration disorders show a higher incidence of psychological-related disorders [21-25]. Several studies have shown that sexual counselling and sexual therapy can definitely improve the sexual intercourse problems of patients [26-28]. Women's hymen hypertrophy and other reasons are also factors that cannot be ignored in the occurrence of UCM.

At present, there are no epidemiological statistics for UCM in China, but popular science articles related to UCM are very common in nonmedical journals. According to the number of outpatients, the incidence of UCM in China is not low at this stage. There are no similar reports from China worldwide, but this does not mean that UCM is rare or does not exist in China. Given the high global prevalence of various types of sexual dysfunction and the high correlation between UCM and various types of sexual dysfunction, it is reasonable to believe that UCM is more common than currently recognized.

To better diagnose and treat UCM patients, we evaluated 293 UCM couples from Drum Tower Hospital Affiliated with Nanjing Medical University (Nanjing, Jiangsu, China) from 2019 to 2022 and analysed clinical characteristics, causes, treatment methods, results and different evolution trends. The report is as follows.

1 Data and methods

1.1 General information

From January 2019 to January 2022, 293 pairs of patients who were diagnosed with UCM were selected from the andrology department of our hospital. These patients were willing to have sexual intercourse at the beginning of marriage or cohabitation but had been unsuccessful many times. All patients gave informed consent and signed informed consent forms. This study was approved by the Ethics Committee of Gulou Hospital Affiliated with Nanjing Medical University.

All patients underwent medical history collection, a general condition questionnaire (age, education, place of origin, marital history, couple's affection, understanding of the disease, past medical treatment, etc.), physical examination, laboratory tests (routine blood, routine urine, blood glucose, blood lipids, liver and kidney function, prostatic fluid, sex hormones, etc.), and International Index of Erectile Function (IIEF-5) scoring (total score of 25 points, ≤ 21 points considered abnormal). A PE diagnosis scale (premature ejaculation diagnostic tool, PEDT) (the total score was 20 points, ≤ 8 points was normal, 9 or 10 points was abnormal); Female Sexual Function Index (FSFI); Eysenck Personality Questionnaire (EPQ); Symptom Checklist 90 (SCL-90); intracavernosal injection (ICI) + colour duplex Doppler ultrasound (CDDU) (intracavernosal injection of vasoactive drugs; an erection angle greater than 90 degrees within 15 minutes after injection and a maintenance time longer than 15 minutes, with a peak systolic velocity (PSV) ≥ 25 cm/s and end diastolic velocity (EDV) ≥ 5 cm/s was positive), nocturnal penile

tumescence (NPT) test (more than 3 effective erection events during more than 8 hours of sleep time; an effective erection was a glans circumference ≥ 3 cm, penis body ≥ 2 cm, and erection hardness more than 60% for more than 10 minutes), gynaecological specialist examination, etc., were also employed. The patient's clinical history, auxiliary examination and various scale data were evaluated by the same experienced andrologist, gynaecologist and sex therapist who judged the cause of UCM (organic or nonorganic), the proportion and the associated morbidity.

1.2 Treatment

Sexual therapy (or a combination of negative pressure devices and phosphodiesterase inhibitors) was used as first-line therapy. For patients who refused (or time did not permit), the treatment was as follows: ED patients received phosphodiesterase inhibitors (sildenafil 100 mg orally 1 hour before sexual intercourse, or tadalafil 20 mg orally every other day) or ICI (prostaglandin E1, 10 UG/2 ml, Beijing Tide Pharmaceutical Co., Ltd.); ICI was performed by doctors or the patient after being instructed on the method. Patients with PE received either a local anaesthetic (applied to the penis half an hour before sex) or dapoxetine (30 mg orally 1.5 hours before sex).

Sex therapy (1-2 times a week or depending on the patient's specific situation) occurred as follows. In a quiet, safe and peaceful consultation room, the sex therapist listened to the patient and his sexual partner, filled in questionnaires and talked to the patient to understand the patient's basic situation and sexual problems in detail. According to the specific conditions of the patients, combined with general clinical data and special examinations, the possible causes of UCM were found. Targeted, scientific and operable sexual treatment methods were adopted. Regardless of the cause of UCM, both husbands and wives had to be present during sexual therapy to increase patient compliance. Sex therapists focused on observing the psychodynamic changes between husbands and wives in the course of conversation and treatment, and the sexual attitudes and behaviours held by them were conducive to the acceptance of suggestions by both patients. The goal was to eliminate anxiety, depression and other negative emotions caused by UCM. There are various methods of sex therapy, and the emphasis may be different; one method should not be rigidly adhered to, but should aim to achieve better therapeutic effects and better service. Sex therapists should conduct each necessary behavioural observation and behavioural analysis to facilitate the understanding of the treatment effect and the arrangement of the next treatment plan. All kinds of problems in the course of treatment should be found and solved in time. Because of the complexity that leads to UCM, sexual therapy is not static, and therapists can change the treatment according to the actual situation. In the process of sex therapy, vacuum therapy devices or oral phosphodiesterase inhibitors can be used according to the specific conditions of the patients to increase the compliance and effect of sex therapy.

Simultaneously with sex therapy, some patients were treated regularly (1-2 times a week) with an 86-10 male external genital therapy instrument (produced by Shanghai Kejian Rehabilitation Instrument Co., Ltd.). The 86-10 male external genital therapy instrument is a noninvasive negative pressure suction device that can fill the

blood sinus of the corpus cavernosum of the penis and enhance smooth muscle contraction. It is equipped with a temperature-controlled water circulation system that can simulate the temperature environment in a woman's vagina and a pressure regulation system, so that patients can freely adjust the pressure according to their own bearing capacity. The specific treatment method was as follows: the penis was put into the penis sleeve, the negative pressure intensity was adjusted to the degree that the patient could bear, warm water was sucked into the penis sleeve, the maximum number of bubbles was adjusted to start the treatment, and adjustment was carried out at any time according to the treatment condition of the patient. After 5 minutes of general treatment, the patient rested for 3 minutes. During the rest, the anus was guided by lifting exercises to relieve pain and discomfort in the course of treatment. The general basic treatment time was 20 minutes, which could be increased or decreased according to the patient's condition during treatment. The sex therapist accompanied the patient covertly throughout the treatment and adjusted the treatment temperature, negative pressure value and treatment duration suitable for the patient according to the patient's feelings during the treatment.

Some patients were given oral phosphodiesterase inhibitors at the same time as sex therapy, and we administered tadalafil 5 mg orally daily.

1.2.3 Efficacy criteria

Success was indicated by the successful completion of sexual intercourse by both males and females. Failure was indicated by patients' inability to complete sexual intercourse after treatment. Patients who did not continue to receive treatment for other reasons were considered to have denied further treatment.

1.2.4 Follow-up

A total of 293 patients and their sexual partners were followed up for 4-24 months, with a median follow-up of 10.3 months.

2 Results

2.1 General condition and treatment effect

Through the collection of information from medical histories and general information questionnaires (age, education, place of origin, marital history, couple's feelings, understanding of the disease, past medical treatment, etc.), it was found that the duration of UCM ranged from 1 month to 10 years, with an average duration of 181.4 days. The average age of participants aged between 22-47 years was 30.3 years old, and the average age of participants aged between 23-39 years was 26.6 years old; 293 (62.97%) of 369 couples had a senior high school education or below, and 217 (37.03%) had a university education or above; 398 (67.92%) were from rural areas or towns, and 188 (32.08%) were from cities; 13 couples (4. 45%) remarried, and 38 couples (12. 97%) were at risk of divorce. All patients lacked sexual knowledge. Thirty-nine couples (13.31%) had a medical history (including 27 cases of oral phosphodiesterase inhibitor use, 6 cases of oral dapoxetine use, 1 case of oral testosterone undecanoate use, and 5 cases of hymenotomy).

After systematic physical examination, no genital dysplasia, local infection or trauma was found in any of the participants. Routine blood, routine urine, blood

glucose, blood lipid, liver and kidney function, prostatic fluid, sex hormone and other laboratory tests were performed. Three patients had high blood glucose levels, six had high blood lipid levels, and two had low testosterone levels. The results of IIEF-5, ICI + CDDU and NPT test showed that ED was found in 186 cases, including 22 cases of organic ED and 164 cases of psychological ED, and the results of the premature ejaculation diagnosis scale showed that PE was found in 49 cases; hyposexuality was found in 16 cases; female genital penetration disorder (vaginismus, fear of sexual intercourse) was found in 197 cases; sexual arousal disorder was found in 48 cases; and hyposexuality was found in 11 cases (many patients had more than one factor). Some patients had psychological problems, such as depression, anxiety, hostility, paranoia, compulsions, irritability, anxiety, and rigidity.

Among the 186 ED patients, 43 received phosphodiesterase inhibitors (7 of whom had normal female partners (only lack of sexual knowledge) and 36 of whom had female partners with female sexual dysfunction), and 3 couples completed sexual intercourse with normal female partners. ICI was performed for 40 patients (13 with normal sexual partners (only lack of sexual knowledge), 27 partners who had female sexual dysfunction). Among those couples, 11 couples (with normal female sexual partners) completed sexual intercourse. Among 49 PE patients, 25 received local anaesthetic or oral dapoxetine (6 with normal sexual partners (only lack of sexual knowledge), 19 with sexual partners who had female sexual dysfunction), and 4 couples (with normal female sexual partners) completed sexual intercourse. No adverse reactions, such as priapism, occurred in the 40 patients who received ICI. Successful patients had no sexual complaints.

A total of 185 pairs of patients received sexual therapy (combined with a negative pressure device for 103 patients, combined with phosphodiesterase inhibitors for 41 patients); among 53 pairs who had UCM due to male factors alone 47 were successful in sexual intercourse; among 55 pairs who had UCM due to female factors alone, 50 successfully completed sexual intercourse; among 77 pairs who had UCM due to common factors, 69 successfully completed intercourse; and many patient pairs had more than one factor. A total of 166 couples (89.73%) successfully completed sexual intercourse, and 11 patients dropped out of the treatment, with an average treatment time of 4.5 months. During the follow-up, 35 patients (21. 08%) needed adjuvant drugs (phosphodiesterase inhibitors, local anaesthetics, oral dapoxetine) to complete sexual intercourse, and 131 couples (78. 92%) performed well without adjuvant drugs. Twenty-seven patients were pregnant (or had given birth). Among the patients who failed to have sexual intercourse, 7 couples were seeking assisted reproductive technology for fertility, and 12 patients were facing divorce or separation. Figure 1 shows the treatment method and results.

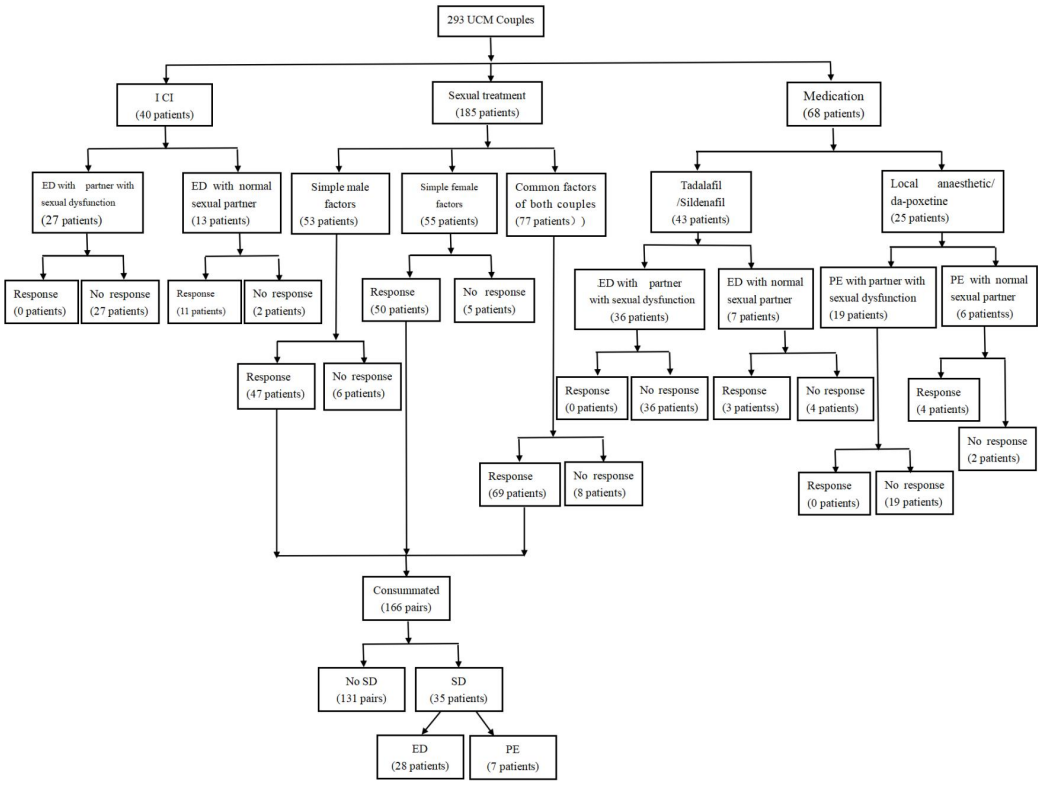

Figure 1 The approaches and outcomes of treatment.

2.2 Adverse reactions

One case of preputial oedema occurred during treatment with negative pressure therapy, which improved after a ’day of rest. Patients with ICI had no adverse reactions, such as priapism, and patients with oral medication had no adverse reactions.

3 Discussion

For 293 patients diagnosed with UCM at the beginning of marriage or cohabitation despite their willingness and unsuccessful attempts to engage in sexual intercourse, we conducted a detailed history collection, specialist examination, scale analysis and special examination of sexual function. To understand the general demographic characteristics of people who experienced UCM in China, in descending order, the causes of prevalence were female genital penetration disorder (vaginismus, fear of sexual intercourse), ED, PE, sexual arousal disorder, and low libido (hyposexuality). Both men and women had a certain number of psychological problems. The diagnostic rate of laboratory evaluation was low, but we believe that the scales and special examination of sexual function were necessary to better

diagnose the main causes of UCM. Many patients had more than one causative factor, and many couples had common causative factors. Through the special examination of sexual function, we found that ED was mostly psychological, which may be caused by fear of failure of sexual intercourse, fear of being rejected by sexual partners, sexual dysfunction problems accompanied by sexual partners and so on.

In terms of treatment, 293 couples chose different treatment methods, among which 39 couples (13.31%) had a history of consultation (including 27 cases of oral phosphodiesterase inhibitor use, 6 cases of oral dapoxetine use, 1 case of oral testosterone undecanoate use, and 5 cases of hymenotomy) but were still unable to complete sexual intercourse and sought treatment again. This reflects the limited effect of oral drugs on improving sexual function and hymenotomy in the treatment of UCM. Of course, cases successfully treated with oral phosphodiesterase inhibitors or hymenotomy may not be revisited, and all revisits are treatment failures. Among our 186 ED patients, 43 were treated with phosphodiesterase inhibitors, including 7 with normal sexual partners (only lack of sexual knowledge) and 36 with partners who had female sexual dysfunction. After treatment, all three individuals who completed sexual intercourse were patients with normal sexual partners, and none of the 36 couples with a female who had female sexual dysfunction successfully engaged in sexual intercourse. Iranian scholar Javaad Zargooshi treated 50 UCM patients with oral phosphodiesterase inhibitors (sildenafil in 46 cases, tadalafil in 4 cases), and 4 patients completed sexual intercourse [8]. Therefore, we believe that phosphodiesterase inhibitors are not ideal for the treatment of UCM. Forty patients were treated with ICI, including 13 patients with normal sexual partners (only lack of sexual knowledge), 27 patients with female sexual dysfunction, and 11 pairs of patients who completed sexual intercourse, all of whom had normal sexual partners. The total efficacy rate was approximately 27.50%, which was far from the results reported by Javaad Zargooshi. Javaad Zargooshi performed ICI on 239 patients with UCM, 221 of whom completed sexual intercourse, with a total efficacy rate of approximately 92.47%. According to our analysis, this may be related to the different treatment populations. Among 417 UCM patients reported by Javaad Zargooshi, there were only 34 cases of vaginal spasm, while among our 293 patients, there were 197 cases of female genital penetration disorder (vaginal spasm, fear of sexual intercourse). The 13 patients with successful ICI were all normal sexual partners (only lacked sexual knowledge), and the success rate was approximately 84.62%. Female genital penetration disorder is essentially a psychosexual disorder, mostly due to a lack of sex education. The vast majority of patients have never observed their genitals before coming to see a doctor, have never engaged in masturbation and lack sexual skills. Many women's fear of sexual intercourse cannot be overcome by their husbands' erection, and many husbands of such patients lack sexual knowledge. In the course of our sexual therapy, a great deal of time was often needed to teach patients with female genital penetration disorders (vaginismus, fear of sexual intercourse) about sexual knowledge and to overcome their inner fears, often taking 3-4 hours to take a step at a time. The most important thing in treating these patients is the patience and understanding of doctors and always encouraging patients to build up confidence

and try. Therefore, the treatment of patients with female genital penetration disorder is an organic combination of sex education, sex therapy and psychotherapy, not just medical guidance or the husbands' attempts to engage in intercourse''. Therefore, we believe that ICI therapy can be attempted only for sexual partners who lack sexual knowledge, but simple ICI therapy is not recommended for couples whose women have genital penetration disorders (vaginismus, fear of sexual intercourse).

Most UCM patients need sex education and sex therapy. Among our 293 patients, 7 couples completed sexual intercourse with only instruction on sexual knowledge and techniques. Sexual therapy is a general term for the treatment of male and female sexual dysfunction and various forms of sexual confusion using psychoanalysis and behaviour modification techniques. Effects are produced by adapting to the medical model of "physiology, psychology and society". In the process of sex therapy, sex therapists should actively eliminate the anxiety of patients, determine the problems by inquiring and examining the sexual attitude and behaviours of patients, personality characteristics, marital status, etc., carry out necessary behavioural observations and behavioural analyses, and formulate treatment goals. Sexual therapy must follow the principle of participation of both men and women, which is also helpful to correctly understand the doctor's guidance and treatment intentions. However, in countries or regions where UCM is prevalent, it is difficult to find qualified sexual counsellors or therapists [8]. Even so, when some UCM patients are given sex education, sexual skill guidance and psychological counselling, the recovery rate of UCM can be greatly improved [25-29]. A study on UCM treatment in Iran reported that patients with vaginismus could improve their UCM status by having sexual and reproductive health professionals counsel them about their emotions, thoughts, and experiences and answer questions about sexual intercourse [26]. Another study on vaginal penetration disorder in women showed that the efficacy rate could reach 96% through sex education and systematic desensitization therapy [30]. Through sexual psychology and sexual behaviour treatments, satisfactory therapeutic effects can be achieved for a variety of female sexual dysfunctions [31-32]. Cognitive and behavioural therapy can reduce the anxiety of ED patients, increase sexual stimulation, enhance beliefs, and improve the intimacy and communication skills of couples [33]. Among our 293 pairs of UCM patients, 185 pairs of patients received sex therapy, among whom 103 were treated with negative pressure devices and 41 were treated with phosphodiesterase inhibitors. One of the characteristics of sexual therapy is that it takes a long time. Doctors and patients need enough patience and confidence to adhere to it. In the course of treatment, the average treatment time was 4.5 months. In the course of treatment, 11 couples terminated treatment. The longest marriage was 5 years; the husband had psychological ED and the wife had a fear of sexual intercourse. This couple was treated for 7 months, and now the woman has been pregnant for 9 months. The main purpose of adding negative pressure devices and phosphodiesterase inhibitors in the process of sexual therapy is to make patients see the effect more intuitively and increase compliance.

Conclusion

The aetiology of UCM is complex, and many patients have more than one

causative factor. Oral phosphodiesterase inhibitors are not the ideal choice for the treatment of UCM. ICI therapy can be attempted for sexual partners who only lack sexual knowledge, but simple ICI therapy is not recommended for couples whose women have genital penetration disorders (vaginismus, fear of sexual intercourse). What UCM patients need more is sex education and sex therapy, not general medical guidance. Sexual therapy (or a combination of negative pressure devices and phosphodiesterase inhibitors) was effective, and the follow-up was satisfactory.

ACKNOWLEDGMENTS

The work was supported by the grants of: National Natural Science Foundation of China (No. 81671452), Nanjing Medical Technology Development Project (No. YKK19059).

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