

A Rare Incidence of a Tertiary-Level Urology Center in the Clinical Urology

Rabea Ahmed Gadelkareem*, Ahmed Abdelhameed Shahat, Ahmed Mohammed Moeen, Mohamed Farouk Abdelhafez

Assiut Urology and Nephrology Hospital, Faculty of Medicine, Assiut University, Assiut, Egypt

ABSTRACT

Objective: To present our center's experience with cases of long-term unconsummated marriage and the effect of traditional beliefs on seeking proper treatment.

Methods: A retrospective search of our patients' records was done for the reported cases of long-term unconsummated marriage during the period of July 1991-June 2016. Each case was studied for the demographic characteristics including marital ones, clinical works up, and management.

Results: Eighteen couples had an unconsummated marriage that ranged between 7 months and 13 years. Averages of age (mean \pm SD) of husbands and wives at disclosure were 24.43 (30.9 \pm 5.1) and 19-32 (24.9 \pm 3.4) years, respectively. Thirteen couples (72.2%) had rural residence and 15 couples (83.3%) had middle or lower education levels. The underlying etiology was a male factor in 12 cases (66.7%) due to premature ejaculation (16.7%), vasculogenic erectile dysfunction (38.9%), or psychogenic causes (11.1%). The female factor was the cause in 3 cases (16.7%) due to vaginismus (11.1%) or phobia of vaginal penetration (5.5%). All the couples attributed concealment of their conditions to the fear of societal embarrassment on disclosure and expressed beliefs in spiritual factors for etiology. The majority of couples sought traditional treatments including religious rituals or spells (88.9%) and traditional medicines (77.8%), while only 55.5% of cases received allopathic medications. Only 5 couples (27.8%) succeeded to consummate the marriage. Of the divorced 13 couples, 4 couples (30.7%) dropped out thereafter, but 9 females (69.2%) and only 3 males (23%) had consummated the second marriage.

Conclusion: Long-term unconsummated marriage among the heterosexual couples seems to be very rare with different underlying etiologies and high potentials for divorce. It may be concealed for several years without evaluation and proper treatment due to the constraints of low socioeconomic standards and sociocultural and traditional beliefs about its etiology and treatment.

Keywords: Erectile dysfunction; Honeymoon impotence; Marital sexuality; Premature ejaculation; Sexual intercourse; Unconsummated marriage; Vaginismus

*Correspondence to: Rabea Ahmed Gadelkareem, Assiut Urology and Nephrology Hospital, Faculty of Medicine, Assiut University, Assiut, Egypt, Tel: +20 0882080435; E-mail: dr.rabeagad@yahoo.com

Received: January 27, 2021; Accepted: February 10, 2021; Published: February 17, 2021

Citation: Gadelkareem RA, Shahat AA, Moeen AM, Abdelhafez MF, Faddan AA, et al. (2021) Experience of a Tertiary-Level Urology Center in the Clinical Urological Events of Rare and Very Rare Incidence. VII. Sexual Dysfunctions: 1. Long-Term Unconsummated Marriage. *Andrology* 10.214

Copyright: © 2021 Gadelkareem RA, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

INTRODUCTION

The most acceptable societal form of human sexuality is the heterosexual marriage between male and female which provides many advantages and represents a worldwide universal biological sense for human sexual maturity [1,2]. However, there are considerable variations and significant influences of variable sociocultural and environmental effectors such as the cultural, sociodemographic, religious, and ecological conditions [1,3,4]. Unconsummated marriage is the failure to achieve sexual intercourse between married couple partners and represents a common entity in the andrology clinics all over the world with special paradigms in the conservative communities of the oriental culture, where marriage is the only legal and socially acceptable form of human sexuality. So, sociocultural factors such as the spiritual aspects, societal traditions, and religious beliefs of human illnesses may generate a large burden of difficulties about disclosure of this marital problem [2,5-8]. In most instances, it involves the newly married couples during the early times of marriage to be known as honeymoon or wedding night impotence [5]. However, persistent cases usually become concealed from society and unreachable by the medical and health care facilities [2,9]. Only, a few cases with long-term unconsummated marriage may be cautiously transferred to the medical levels. Accordingly, there is limited literature about long-term unconsummated marriage. In light of this complex background, we targeted this very critical situation of long-term unconsummated marriage.

MATERIALS AND METHODS

A retrospective search of the registered data (manual and electronic records) of the patients in our hospital was done to study the cases of long-term unconsummated marriage in the period July 1991- June 2016. The study was approved by the ethical committee of the Faculty of Medicine in our university.

In this study, the expression "long-term unconsummated marriage" was defined as failure to achieve the first marital

sexual intercourse between an officially married couple of male and female for more than 6 months. The duration of 6 months was proposed to exclude honeymoon impotence. Accordingly, we included only those couples who had never achieved first marital sexual intercourse (primary unconsummated marriage) for more than 6 months. However, couples who succeeded to achieve first marital sexual intercourse and failed thereafter, even only once (secondary unconsummated marriage), were excluded. Also, those couples who had short-term unconsummated marriage (less than 6 months), long-term sexual abstinence due to non-sexual chronic illnesses, infectious diseases, traveling, or religious causes were excluded.

Each couple was studied for the demographic variables including age, residence, education and socio-economic levels, job, arrangements and duration of the marriage, consanguinity, and disclosing partner. Clinical variables included the recorded findings of thorough medical, sexual, and psychological history taking including premarital sexual history, expressed traditional beliefs about marital sexuality, medications and drugs, evaluation works up (including serum testosterone, prolactin, and glucose levels and penile Duplex examination), attempted traditional and medical solutions and treatment, possible underlying factor, physical comorbidities, medications, fate of marriage and partners after disclosure of the problem and its attempted management.

RESULTS

There were 18 couples disclosed unconsummated marriage after more than 6 months from the date of marriage. The demographic and marital characteristics were demonstrated in (Table 1). All the couples had classic arrangements of marriage including engagement period, administrative registrations, and wedding ceremony. Nine couples (50%) reported that they lived in the same house of the extended family of the husband or the wife (eg. family house).

Table 1: Relevant demographic and marital characteristics of couples with long-term unconsummated marriage.

S. No.	Age		Residence		Job		Education level*		Relatedness	Duration of marriage**	Disclosing partner	Marital status at disclosure	Fate of marriage
	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife					
1	39	30	Rural		Technician	Teacher	Middle	Middle	Yes	7 y	Wife	Divorced	Divorced
2	26	22	Rural		Worker	Housewife	Middle	Middle	No	2 y	Wife	Married	Divorced
3	28	25	Urban		Engineer	Employee	High	Middle	No	8 m	Husband	Married	Continued

4	25	24	Urban	Driver	Housewife	Middle	Middle	No	7 m	Wife	Married	Divorced
5	24	23	Rural	Farmer	Housewife	Low	None	Yes	2.5 y	Wife	Married	Continued
6	32	30	Rural	Teacher	Housewife	High	Low	Yes	1 y	Husband	Divorced	Divorced
7	33	27	Rural	Farmer	Housewife	Middle	Low	Yes	3 y	Wife	Married	Divorced
8	28	23	Rural	Farmer	Housewife	None	None	Yes	5.5 y	Wife	Married	Divorced
9	27	23	Urban	Nurse	Nurse	Middle	Middle	No	2 y	Wife	Divorced	Divorced
10	31	25	Rural	Farmer	Housewife	None	None	Yes	1.5 y	Wife	Divorced	Divorced
11	29	26	Rural	Worker	Housewife	Low	None	Yes	4 y	Wife	Divorced	Divorced
12	29	21	Rural	Farmer	Housewife	None	None	Yes	1.5 y	Husband	Married	Divorced
13	34	24	Urban	Employee	Housewife	Middle	Low	Yes	9 m	Husband	Married	Continued
14	43	32	Rural	Farmer	Housewife	None	None	Yes	13 y	Wife	Married	Divorced
15	35	22	Rural	Farmer	Housewife	Low	None	Yes	3 y	Wife	Divorced	Divorced
16	26	19	Rural	Worker	Housewife	Low	None	Yes	2 y	Husband	Married	Continued
17	29	24	Urban	Technician	Employee	High	Middle	No	1.5 y	Husband	Married	Continued
18	38	28	Rural	Worker	Housewife	Low	Low	Yes	2 y	Wife	Married	Divorced

Husbands Age Mean \pm SD is 31.1 \pm 5.1 years and Wives Age Mean \pm SD is 24.9 \pm 3.4 years.

*: Education level: It was considered high for the college or higher education, middle for secondary school education, low for preparatory and primary schools, and none for the illiterates

**: Duration of marriage represents the duration of unconsummated marriage until either divorce or resolution of the problem

Most of the current couples (90%) expressed a belief that their unconsummated marriage could be attributed to spiritual causes such as magical rituals that might have been arranged by others. All the couples attributed the long term concealment of the problem to the fear of having unpleasant and shameful societal feedbacks, in the case of disclosure. Other reasons included unawareness with the availability of treatment (39%) and waiting for a spontaneous resolution (33.3%).

No cases of sexual abuse were reported. Ten husbands (55.6%) were smokers, while all the female partners were non-smokers. Sexual and medical findings including premarital history, laboratory and penile Duplex examination, and attempted treatments were demonstrated in (Table 2). Physical examination revealed unremarkable findings for Erectile Dysfunction (ED). The underlying cause of unconsummated marriage was male factor in 12 couples (66.7%), female factor in 3 couples (16.7%), and unknown in other 3 couples (16.7%).

All the couples sought traditional solutions for the problem such as religious rituals and/or traditional medications. Sixteen couples (88.9%) reported that they visited holy places or practiced certain rituals in the purpose of blessing for resolution of their unconsummated marriage. Also, 14 couples (77.8%) reported administration of traditional medications that were prescribed and prepared by non-medical prescribers including herbal apothecarists, village wise persons, or traditional healers.

Only five couples (27.8%) had chances to treat their problem and consummated their marriage. Four divorced couples

(22.2%) dropped out thereafter without follow up. The fate of the other divorced males with different underlying causes was that they stayed unmarried for prolonged periods (maximally, 5 years of follow up) in 6 cases (33.3%). However, only 3 males of those who presented during the last decade of the study duration were treated by penile prosthesis to have successful second marriage and children. On the other hand, all the other 9 divorced females had consummated the second marriage.

Table 2: Findings of evaluation works up, diagnosis and treatment of long-term unconsummated marriage.

No.	Pre-marital history		Evaluation at presentation			Proposed underlying cause**	Attempted treatment approaches		
	Sexual activities	Drugs	Physical signs	Laboratory profiles	Penile Duplex		Religious rituals	Traditional medications	Allopathic medications
1	None	None	Left varicocele	Normal	Normal	Unknown	Yes	Yes	PDE-5I
2	Masturbation	Tramadol	None	Normal	Venous leakage	ED	Yes	None	ICI
3	None	None	Right Hydrocele	Normal	Normal	Vaginismus	Yes	Yes	PDE-5I
4	None	Tramadol	None	Normal	Venous leakage	ED	Yes	None	PDE-5I
5	Masturbation	None	Left varicocele	Normal	Normal	Unknown	Yes	Yes	ICI
6	None	None	None	NA	Normal	Unknown	Yes	Yes	None
7	None	None	Glanular hypospadias	Normal	Venous leakage	ED	Yes	Yes	PDE-5I
8	None	None	None	Normal	Normal	PE	Yes	Yes	None
9	Masturbation	Unknown	None	↑ Glucose	Arterial insufficiency	ED	Yes	None	None
10	None	None	None	NA	Normal	PE	Yes	Yes	PDE-5I
11	None	None	None	Normal	Venous leakage	ED	Yes	Yes	None
12	Unknown	None	None	Normal	Normal	Psychogenic ED	Yes	None	PDE-5I
13	None	Unknown	None	Normal	Normal	Vaginismus	None	Yes	None
14	Sporadic*	None	None	Normal	Penile curvature	Penile curvature	Yes	Yes	None
15	None	None	None	↑ Prolactin	Normal	PE	Yes	Yes	None
16	None	None	None	None	Normal	Phobia of vaginal penetration	Yes	Yes	None

17	Sporadic	None	None	Normal	Venous leakage	ED	None	Yes	PDE-5I
18	None	None	None	Normal	Normal	Psychogenic ED	Yes	Yes	PDE-5I

ICI: Intra-corporeal injections, PE: Premature ejaculation, ED: Erectile dysfunction, PDE-5I: Phosphodiesterase-5 inhibitors, NA: Not available data

*: Sporadic means: sporadic premarital sexual relationships which were mostly illegal.

** : Psychogenic erectile dysfunctions were characterized from vasculogenic ones by description as (Psychogenic ED)

DISCUSSION

Unconsummated marriage has been defined as the failure to achieve successful sexual intercourse at the beginning of a marriage that may continue for a long time [10]. It has been commonly employed to represent honeymoon or wedding night impotence which is a relatively common problem among the newly married couples in the conservative communities [5,6]. Unconsummated marriage is a complex form of sexual dysfunctions, where it represents a real threat to the continuation of marriage and makes divorce a highly potential outcome. This state has significant contributions from religious and sociocultural backgrounds. Moreover, it may get more complexed, when it is concealed between the affected couples for several years or decades [5,11].

The current results provided many characteristics for the long-term unconsummated marriage. Firstly, the long-term concealment of the unconsummated marriage reached up to 13 years. Secondly, the variable underlying causes between the unknown causes and organic ED with contributions of the female factors. Thirdly, the prominent socio-demographic and socio-cultural effects were represented by the attribution of the etiology to traditional beliefs such as intentional magic rituals that could be arranged by others and seeking treatment by arranging antagonistic rituals or receiving traditional medicines. These sociocultural aspects of unconsummated marriage might have a psychological role in the etiology, disclosure, and treatment. They have been studied among the Arab-Muslim and other populations [2,12,13].

The expression "long-term" was employed to represent the unusually long duration that was needed to disclose unconsummated marriage among those couples and to differentiate it from honeymoon ED. Previous studies from our locality followed the general attitude of considering that unconsummated marriage is mainly involving the newly married couples in the form of honeymoon ED with less attention to the long-term cases [5,6,14]. However, the current study targeted only the cases of long-term concealment of the unconsummated marriage and described the relevant demographics and the traditional beliefs in etiological factors and treatment. Long-term unconsummated marriage is rare in the literature and it has been reported mainly in case reports or have just been mentioned within the series of honeymoon ED. The relatively small number of cases that presented during the 25 years of the current study may refer to either the relatively lower incidence of long-term unconsummated marriage or the potential significant proportions of concealed cases [4-8].

Unconsummated marriage represents a wide spectrum of sexual dysfunctions that are attributed to either male or female factors. Male factors include all types of ED and premature ejaculation. Psychogenic ED is diagnosed by exclusion of the organic causes. Besides the thorough and comprehensive history taking and physical examination, exclusion of psychogenic ED may indicate hormonal testing and penile Duplex examination. Psychotherapy may be indicated in some cases that fail to respond to allopathic medications represented mainly by phosphodiesterase-5 inhibitors [5-8,14-17]. On the other hand, female factors are represented mainly by vaginismus and some psychological disturbances. Vaginismus has a significant contribution from the underlying sociocultural backgrounds [2,5,6,11]. Recently, a growing bulk of research has been built in the literature about the variably attempted interventions for the management of vaginismus with unconsummated marriage [2,9,18,19].

Cultural and religious factors affect human sexuality within the frame of two main paradigms which are common in the conservative communities. Firstly, male's machismo, as an expression for masculinity, depends on his capabilities to achieve sexual intercourse and pregnancy in a consummated marriage. Secondly, the female's marianismo or chastity represents a matter of honor for the pre-marriage age and needs to be crowned by consummated official marriage and pregnancy [4,12]. In unconsummated marriage, however, these paradigms come into conflict with one another. In most instances, the matter of disclosure is governed by shame from society. Long-term concealment of unconsummated marriage in our study was attributed to avoiding societal drawbacks, mainly to the male partner.

Our retrospective study revealed that many cases had no definite cause for unconsummated marriage and some of them improved spontaneously with attribution of this improvement to the effect of traditional rituals and medications. Spiritual magical beliefs and traditions have been accused of ED etiology in different cultures with a special paradigm in the Arab-Muslim culture [2,12]. Certain beliefs from old cultures may still active in modern cultures and communities. The belief in the role of the supernatural powers in ED is an ancient concept and it may have its influential effect until the present era [20]. The existence of these beliefs could be scientifically formulated into the psychogenic form of mental accommodation because it is not amenable for proof by the available tools of sciences [2,12].

In the current study, the fate of marriage depended on disclosure of the problem, resolution of the underlying cause

and sexual beliefs of the couples. Many couples got divorced before disclosure of unconsummated marriage and many divorced partners had a successful second marriage. This may refer to the possibility of the consummation of their first marriage if they disclosed it before the divorce. Also, beliefs in the presence of supernatural powers such as concepts of magic rituals and evil eye as causes for unconsummated marriage could affect seeking the effective treatment other than the traditional methods [12]. However, the spontaneous consummation of marriage after seeking treatment by traditional rituals and medicines may empower these beliefs. It has been reported that traditional sexual beliefs may affect the quality of sexual function [2,11,21]. Religion is a strong cultural factor that impacts sexual activities among the Muslim populations. While the Islamic laws encourage sexual activities among the couples of heterosexual marriage as the only accepted form of sexuality, they strictly control disclosure of the marital sexual activities to the society [2,12,22,23]. Traditional habits such documentation of the bride's virginity and hasty coitus on the first night of marriage represent intense social pressure on the newly married couples [2,24]. However, the long-term effect is commonly attributed to more aggressive factors such as organic ED and premature ejaculation in males and vaginismus and phobia of vaginal penetration in females [2,9]. It could be promoted by the traditional belief in the arranged magic rituals from others. However, the etiology in many instances is unknown. The current study showed a strong attitude of attributing the unconsummated marriage to these beliefs among those couples of low socioeconomic standards and seeking treatment from traditional healers and practicing certain rituals. Although these rituals looked as religion-based, most of them are prohibited by the Islamic rules. This could be attributed to the overcome of traditions over sound religious and medical rules in association with absent education about marital sexuality [2,12].

Treatment of ED as a complex disease mandates a holistic approach that considers the body, mind, and spirit [25,26]. Therapy of ED includes allopathic, traditional, complementary and alternative medicines. Each country or population has its traditional remedies for the treatment of chronic diseases such as diabetes mellitus and sociocultural diseases such as ED [2,27,28]. In the current series, traditional treatment varies from the very crude ritual and blessing arrangements such as visiting holy places to the locally prepared medicines. Traditional magic rituals and religious incantations were used by the affected couples. Also, traditional medications were prescribed and prepared by non-medical prescribers such as herbal apothecaries, herbalists, village wise persons, and spiritual healers.

Owing to the extended time period of the current study, the revolution in the management of ED was noticeable in the tried medical treatment. Late cases had the advantages of trying phosphodiesterase-5 inhibitors and penile prosthesis. However, these forms of treatment did not prevent the separation of couples due to the concealment of the situation to the time after divorce in many cases.

To our knowledge, the current study is the first one from our country that targets this critical and complex medico-social problem of long-term unconsummated marriage. Also, it may

motivate other researchers to investigate more effective methods for early detection of the condition. Moreover, it may help avoid divorce among married couples who may disclose unknown or trivial reasoning for their separation and divorce to society under the effect of potential embarrassment and shame.

Limitations of the current study included retrospective nature due to the rarity of the long-term unconsummated marriage. Also, this rarity resulted in this relatively small number of cases. In spite of the significant Christian proportion of the population in our country, all the detected cases were Muslim couples and this could be attributed to proposed sociocultural and religious regulations. Moreover, proposed interpretations of the unknown causes with the significant involvement of the traditional habits and beliefs were mostly speculative due to absent evidence-based studying and non-obvious nature.

CONCLUSION

Long-term unconsummated marriage among the heterosexual couples seems to be a very rare incident that may be caused by psychogenic, organic, combined, or unknown etiologies. In comparison to the literature, causes of long-term unconsummated marriage are relatively more aggressive than the causes of early unconsummated marriage and honeymoon impotence. It may extend to several years and may be disclosed only after divorce. Sociocultural and traditional constraints and beliefs are major contributors to the long-term concealment of unconsummated marriage which provides high potentials for divorce.

REFERENCES

1. Uddin ME. Marital duration and sexual frequency among the Muslim and Santal couples in rural Bangladesh: A cross-cultural perspective. *Int J Humanit Soc Sci.* 2007;1:182-191.
2. Zgueb Y, Ouali U, Achour R, Jomli R, Nacef F. Cultural aspects of vaginismus therapy: A case series of Arab-Muslim patients. *Cogn Behav Therapist.* 2019;12:e3.
3. Heinemann J, Atallah S, Rosenbaum T. The impact of culture and ethnicity on sexuality and sexual function. *Curr Sex Health Rep.* 2016;8:144-150.
4. Gindin LR, Resnicoff D. Unconsummated marriages: A separate and different clinical entity. *J Sex Marital Ther.* 2002;28:85-99.
5. Badran W, Moamen N, Fahmy I, El-Karakasy A, Abdel-Nasser TM, Ghanem H. Etiological factors of unconsummated marriage. *Int J Impot Res.* 2006;18:458-463.
6. Ghazi S, Shaltout A. Unconsummated marriage: Relationship between honeymoon impotence and vaginismus. *Med J Cairo Univ.* 2009;77:103-107.
7. Bokaie M, Khalesi ZB, Yasini-Ardekani SM. Diagnosis and treatment of unconsummated marriage in an Iranian couple. *Afr Health Sci.* 2017;17:632-636.
8. Naseri A, Malekir ad AA, Gorjina A, Asha y eri H, F athi A, F athi A. Unconsummated marriage. *Health.* 2015;7:207-210.
9. Muammar T, McWalter P, Alkhenizan A, Shoukri M, Gabr A, Bin Muammar AA. Management of vaginal penetration phobia in Arab women: A retrospective study. *Ann Saudi Med.* 2015;35:120-126.
10. Silvaggi M, Michetti PM, Rossi R, Fabrizi A, Tripodi F, Simonelli C. Is "Unconsummated Marriage" still an appropriate term? A snapshot of reality. *Perceptions Reprod Med.* 2017;1:1-6.

11. Chakrabarti N, Sinha VK. Marriage consummated after 22 years: A case report. *J Sex Marital Ther.* 2002;28:301-304.
12. Rahman S. Female sexual dysfunction among Muslim women: Increasing awareness to improve overall evaluation and treatment. *Sex Med Rev.* 2018;6:535-547.
13. Ghorashi Z, Najafi MB, Khoei EM. Religious teachings and sexuality of women living in Rafsanjan: A qualitative inquiry. *Int J Reprod Bio Med.* 2017;15:771-778.
14. El-Meliegy A. A retrospective study of 418 patients with honeymoon impotence in an andrology clinic in Jeddah, Saudi Arabia. *Eur J Sexol.* 2004;13:1-4.
15. Addar MH. The unconsummated marriage: Causes and management. *Clin Exp Obstet Gynecol.* 2004;31:279-281.
16. Ghanem H, Zaazaa A, Kamel I, Anis T, Salem A, Guindi AE. Short term use of sildenafil in the treatment of unconsummated marriages. *Int J Impot Res.* 2006;18:52-54.
17. Shamloul R. Management of honeymoon impotence. *J Sex Med.* 2006;3:361-366.
18. Banerjee K, Singla B. Pregnancy outcome of home intravaginal insemination in couples with unconsummated marriage. *J Hum Reprod Sci.* 2017;10:293-296.
19. Fadul R, Garcia R, Zapata-Boluda R, Aranda-Pastor C, Brotto L, Parron-Carreno T. Psychosocial correlates of vaginismus diagnosis: A case-control study. *J Sex Marital Ther.* 2019;7:1-11.
20. Yamanaka Y. The tradition of healing with magical spells as seen in Buddhist texts. *Nihon Ishigaku Zasshi.* 2009;55:77-96.
21. Nobre PJ, Pinto-Gouveia J. Dysfunctional sexual beliefs as vulnerability factors to sexual dysfunction. *J Sex Res.* 2006;43:68-75.
22. Sungur MZ, Bez Y. Cultural factors in the treatment of sexual dysfunction in Muslim clients. *Curr Sex Health Rep.* 2016;8:57-63.
23. Mahajan PT, Pimple P, Palsetia D, Dave N, De Sousa A. Indian religious concepts on sexuality and marriage. *Indian J Psychiatry.* 2013;55:256-262.
24. Zargooshi J. Unconsummated marriage: Clarification of aetiology; treatment with intracorporeal injection. *BJU Int.* 2000;86:75-79.
25. Cantwell MF. Map of the spirit: Diagnosis and treatment of spiritual disease. *Adv Mind Body Med.* 2008;23:6-16.
26. Pastuszek AW. Current diagnosis and management of erectile dysfunction. *Curr Sex Health Rep.* 2014;6:164-176.
27. Ojewole JA. African traditional medicines for erectile dysfunction: Elusive dream or imminent reality? *Cardiovasc J Afr.* 2007;18:213-215.
28. Napoli M. The plants, rituals and spells that 'cured' helminthiasis in Sicily. *J Ethnobiol Ethnomed.* 2008;4:21.