Effect of erectile dysfunction on quality of life

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أثر خلل وظيفة الانتصاب على جودة الحياة

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خلاصة: يُعَدُّ خلل وظيفة الانتصاب من أهم أنواع خلل الوظائف الجنسية وأكثرها شيوعاً لدى الذكور. وقد أُجريت دراسة مقطعية على 388 من المرضى الذكور الذين راجعو ستاً من عيادات طب الذكورة وطب الجهاز البولي في جدَّة لأول مرة على مدى 3 شهور. وقد تم تصنيف خلل وظيفة الانتصاب إلى خللٍ خفيف (21 % من المرضى) وخلل متوسط (60 % منهم) وخللٍ شديد (19 %) ووجد أنه مرتبط ارتباطاً شديداً بالعمر. وبعد تضبيط النتائج وفق العمر فإن ما كان مرتبطاً ارتباطاً يُعتدُّ به إحصائياً بشدة الخلل في وظيفة الانتصاب هو قلة النشاط البدني، وتعاطي المُسْكِرات وإدمان المخدِّرات، فيما لم يكن هذا الارتباط ذا اعتداد إحصائي بالنسبة لارتفاع ضغط الدم وأمراض القلب والتدخين. وقد كان قرابة ثلثي المرضى يعانون من سوء نوعية الحياة، وكان خلل الانتصاب هو العلامة الوحيدة الهامة المنبئة عن ذلك. ولم يكن الخلل الشديد في سوء الانتصاب من المؤشِّرات على المراضة المشتركة.

ABSTRACT Erectile dysfunction (ED) is one of the most common diseases of male sexual dysfunction. A cross-sectional study of 388 ED patients who attended six andrology and urology clinics in Jeddah for the first time was performed during a period of 3 months. ED was rated as mild (21% of patients), moderate (60%) or severe (19%), and was strongly associated with age. After adjusting for age, only lack of exercise, alcohol consumption and drug addiction were significantly associated with severity; hypertension, cardiac diseases and smoking were not. About two-thirds of the patients had poor quality of life; severe ED was the only significant predictor of this. Severe ED was not an indicator for co-morbidities.

Effet du dysfonctionnement érectile sur la qualité de la vie

RESUME Le dysfonctionnement érectile est l'une des affections les plus courantes en matière de dysfonctionnement sexuel chez l'homme. Pendant une période de trois mois, une étude transversale a été réalisée sur 388 patients atteints de dysfonctionnement érectile qui consultaient pour la première fois dans six cliniques d'andrologie et d'urologie à Djeddah. Le dysfonctionnement érectile était classé comme bénin (21 % des patients), modéré (60 %) ou sévère (19 %), et il était fortement associé à l'âge. Après ajustement en fonction de l'âge, seuls le manque d'exercice, la consommation d'alcool et la toxicomanie étaient significativement associés à la sévérité, l'hypertension, les maladies cardiaques et le tabagisme ne l'étant pas. Les deux tiers des patients environ avaient une mauvaise qualité de vie ; le dysfonctionnement érectile sévère en était le seul facteur prédictif significatif. Le dysfonctionnement érectile sévère n'était pas un indicateur de comorbidités.

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Introduction

Erectile dysfunction (ED) is defined as the inability to achieve or maintain an erection satisfactory for sexual performance [1]. It is one of the most common disorders of male sexual dysfunction. Recent estimates suggest that 10–20 million men in the United States experience ED, that approximately 40% of men in their 40s suffer from some degree of impotence and that prevalence increases to 67% by age 70 [2]. A variety of medical, psychological and lifestyle factors have been implicated in the etiology of ED [2–4] and the condition has a negative impact on self-esteem, quality of life and interpersonal relationships [1].

We assessed the severity of ED among patients attending various andrology and urology clinics in Jeddah, Saudi Arabia, investigated the association between some risk factors of ED and its severity, and determined the impact of ED on quality of life.

Methods

This was a multicentre cross-sectional study of ED patients attending selected andrology and urology clinics in Jeddah, Saudi Arabia.

Jeddah is one of the largest cities in Saudi Arabia with an estimated population in 1996 of 1 500 000 people. A number of hospitals and medical centres in Jeddah (5 governmental and 9 private) are known to provide medical care for ED patients through specialized andrology or urology clinics. Using the proportionate allocation method of sampling, 2 governmental and 4 private clinics were selected. The choice was based upon the interest of the specialists who run such clinics and their willingness to participate in the study. A total of 6 specialized clinics (3 andrology and 3 urology) participated in the study.

The target sample comprised all patients attending the 6 selected clinics for the first time during the allocated period of 3 months (n = 468) who were diagnosed with ED (based on the definition of ED and thorough sexual history). Of these, 388 patients agreed to participate in the study (a response rate of 83%).

All ED patients were required to answer an interview questionnaire. The questionnaire comprised data on sociodemographic characteristics, such as age, education, occupation and marital status, and history of possible risk factors. Risk factors included diabetes mellitus, hypertension, heart disease and smoking history, i.e. current smoker, ex-smoker or non-smoker. Positive history of these factors was confirmed from the patient's files when available, and through previous diagnosis and/or medication. Physical activity was classified as active and inactive participation. Inactive patients were those who did not perform any physical activity or those whose activity during work or leisure time did not exceed half an hour per week.

Severity of ED was determined by the use of 9 questions as answered by the patients. These questions, with some modifications, were validated by Feldman et al. [2]. Degree of severity was estimated using a scoring system in which the response to each question was given a score of 0 to 2. Total scores ranged from 0 to 18 points and severity of ED was classified as mild (13–18 points), moderate (7–12 points) or severe ED (0–6 points).

The quality of life rating scale consisted of 5 statements [5]. A scoring system was applied for calculating the degree of quality of life. Each statement was given a score of 0 to 4 points and the total score ranged

from 0 to 20. Quality of life was classified as good with a score of 15–20 points, fair with a score of 10–14 points or poor with a score of 0–9 points.

Additional sexual information, such as onset of disease and duration, was sought in order to assess the type of erectile dysfunction. Each patient was interviewed by the physician who ran the clinic from which that patient was selected.

Data were analysed using *SPSS* and *Epi-Info*. Simple descriptive statistics and summaries were performed and the relationships between variables were explored by means of simple cross-tabulations. To compare categorical data, the Pearson chi-squared test and the chi-squared test for linear trend were applied, while the Student *t*-test and simple factorial ANOVA were applied to compare the quantitative data. Adjustment for age was made when testing the relationships between the severity of ED and each of the possible risk factors. Multiple regression analysis was applied to determine the relation between quality of life as a dependent variable and some risk factors as independent variables.

Results

A total of 388 ED patients were included in the present study, 314 of whom were Saudi (80.9%) and 74 were non-Saudi (19.1%). Their ages ranged from 20 years to 86 years with a mean age ± standard deviation of 43.23 ± 12.56 years. Of the patients included in the study, 32 were single (8.2%), 255 married with one wife (65.7%), 82 married with two wives (21.1%), 10 with three wives (2.6%) and 2 with 4 wives (0.5%), 6 (1.5%) were divorced and 1 (0.3%) was widowed.

As regards education, 130 patients (33.5%) had higher than secondary education, 92 (23.7%) had completed secondary education, while 166 (42.8%) had less than secondary education. As regards employment, 39.9% were government employees, 36.3% were employed in the private sector, 13.1% were retired and 3.1% were students.

Approximately one-third of the patients (35.1%) complained of sudden ED, while for the other two-thirds, the onset of the condition was gradual (64.9%) (Table 1). The mean age at onset was 39.6 ± 12.4

Table 1 **Distribution of patients according to pattern of erectile dysfunction (ED)**

Pattern	No.	%
Type of onset		
Sudden	135	35.1
Gradual	250	64.9
Total	385	100.0
Age of onset (years)		
< 30	105	27.5
30–	191	50.0
50+	86	22.5
Total	382	100.0
Mean age ± *s*	39.6 ± 12.4	
Duration (years)		
< 1	99	25.5
1–	185	47.7
5–	59	15.2
10+	45	11.6
Total	388	100.0
Mean duration ± *s*	3.5 ± 5.1	
Severity of ED		
Mild (score = 13–18)	83	21.4
Moderate (score = 7–12)	230	59.3
Severe (score = 0–6)	75	19.3
Total	388	100.0
Mean score ± *s*	9.30 ± 3.45	

s = *standard deviation.*

years. The average duration of ED was 3.5 ± 5.1 years. Those who had suffered from the condition for 10 or more years constituted approximately 11.6% of all patients.

Approximately 60% of the patients suffered from moderate ED and 19% from severe ED, whereas those with mild ED constituted 21% of the study sample. The mean sexual activity score for all patients was 9.30 ± 3.45 points.

The responses of the 388 ED patients to nine sexual activity questions from the Massachusetts Male Aging Study (MMAS) [2] are given in Table 2. About one-third of patients had less than one sexual activity in a week (35.2%) and less than one full erection within 24 hours (39.3%). About 53% of the patients had trouble getting and keeping an erection, while 19% had no single erection upon awakening for a week. One-half of the patients were satisfied with their partners. Furthermore, one-half considered their partners were satisfied. Those who reported satisfaction with the frequency of their sexual activities constituted 54.3% of all patients, while those satisfied with their sex life constituted only 5.2%.

The frequency of possible risk factors for ED among patients and their association with the severity of ED in terms of the sexual activity score are given in Table 3. Lack of exercise was the most frequent risk factor (82.2%), followed by smoking (55.9%) and the regular use of medications (43.6%). Diabetes was reported by 29.6% of the patients and 14.7% reported hypertension. Other risk factors included drug addiction (7.7%), alcohol consumption (12.6%) and cardiac diseases (5.2%).

The risk factors for ED significantly associated with sexual activity score were: advancement in age ($P < 0.001$), diabetes mellitus ($P = 0.001$), alcohol consumption ($P = 0.007$), medication ($P = 0.012$), drug addiction ($P = 0.003$), lack of exercise ($P =$

Table 2 **Response of patients to sexual activity questions from MMAS**

Question	No.	%
Sexual activity (no. times/week) (n = 372)		
Two or more	136	36.6
One	105	28.2
Less than one	131	35.2
Full erection (no. times/24 hours) (n = 387)		
Two or more	87	22.5
One	148	38.2
Less than one	152	39.3
Trouble getting erection (n = 376)		
No	113	30.1
Yes	199	52.9
No sexual intercourse	64	17.0
Trouble keeping erection (n = 375)		
No	122	32.5
Yes	193	51.5
No sexual intercourse	60	16.0
Awaken with erection (n = 384)		
More than once a week	177	46.1
Less than once a week	134	34.9
No erection	73	19.0
Satisfaction with sex life (n = 381)		
Satisfied	20	5.2
Neutral	80	21.0
Dissatisfied	281	73.8
Satisfaction with partner (n = 350)		
Satisfied	175	50.0
Neutral	140	40.0
Dissatisfied	35	10.0
Partner's satisfaction (n = 349)		
Satisfied	162	46.4
Neutral	161	46.1
Dissatisfied	26	7.5
Satisfaction with frequency of sexual activity (n = 346)		
Satisfied	188	54.3
Dissatisfied	158	45.7

MMAS = Massachusetts Male Aging Study [2].

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A WHO intercountry meeting on mental health held in the Syrian Arab Republic in 1985 highlighted the importance of developing comprehensive national mental health programmes. These programmes should have clear objectives, targets and plans of activities based on the principle of integration of mental health into general health services at primary health care level (WHO 1985). The main strategy proposed for achieving these objectives was to rapidly provide short goal-oriented mental health training for primary care in rural and district centres. It has been convincingly demonstrated in a number of countries during the past decade that, with appropriate training, health staff at primary care level can adequately look after a limited number of serious and common mental disorders with the aid of two or three essential neuropsychiatric drugs and psychosocial interventions. Furthermore, such training in psychosocial knowledge and skills can improve the quality of general health services.

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