Role of venereal disease in increased risk of erectile dysfunction in men attending a tertiary health centre in south India

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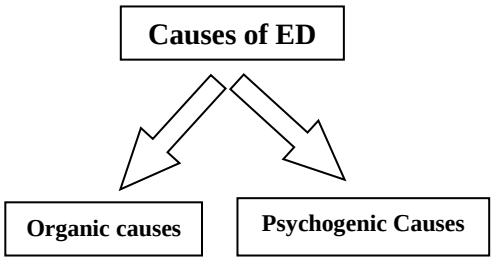
Abstract

Erectile dysfunction(ED) is a major cause of concern among men. Sexual health is as important as physical health as it has a significant effect on the quality of life both in the patient and his spouse. Men with a previous history of venereal disease tend to have sexual dysfunctions due to feelings of guilt, fear of acquisition of HIV and transmitting it to their partners. Apart from the physical effect, the psychological effect of having an STD may also have an adverse impact on both male sexual function and fertility. For example genital herpes is a very agonizing disease as it is not completely curable. The psychological distress and psychosexual problems associated with a diagnosis of genital herpes is huge as the patient is always anxious about getting another episode. This will affect the quality of his sexual life. A cross sectional observational study was conducted among 100 sexually active men aged between 18 and 65 attending the STD OPD in a tertiary care centre, Southern India to assess the prevalence and risk factors of erectile dysfunction and to determine the association between venereal disease and erectile dysfunction, where they were asked to fill the questionnaire which included socio demographic profile, history of medical diseases and venereal diseases and International Index of Erectile Function questionnaire (IIEF-5).[1,2] Also a detailed physical examination was conducted. We found that 35 out of 100 patients had erectile dysfunction. In 35 patients, 19 had mild, 9 had moderate and 7 had severe erectile dysfunction. Diabetes was the most common association followed by alcohol consumption, intake of anti- hypertensive drugs and cigarette smoking. The prevalence of ED increased with age and was found to be less in the literate population. We also found that the previous history of venereal disease did not increase the risk of erectile dysfunction in our study.

Keyword: Venereal disease, Risk factors, Erectile dysfunction, IIEF-5 questionnaire.

Introduction

Erectile dysfunction (ED) is a major cause of concern among men. A mutually satisfying sexual life is mandatory for marital harmony. This condition is often under diagnosed and under treated as patients with ED feel inhibited to disclose it. Erectile dysfunction (ED) is defined as the inability to sustain an erection sufficient enough for sexual gratification.



-Vasculogenic
-Anatomic
-Neurogenic
-Endocrinological

-Generalised unresponsiveness
-Generalised inhibition
-Situational
-Partner related
-performance related
-psychological stress

Disorders associated with erectile dysfunction are Cardiovascular disorders, Endocrine disorders, Neurological disorders, Urological disorders, Hepatic disorders, Pulmonary disorders, Genetic disorders, Nutritional disorders, Psychiatric disorders, infections, drugs, poisonings and surgical procedures.

Aim

To assess the prevalence and risk factors of erectile dysfunction among sexually active men attending STD clinic in a tertiary care centre.

Methodology

A questionnaire which had 4 parts was translated into the vernacular language and asked to fill on the spot. The four parts are as follows-

1. Socio demographic profile, including age, weight, height for BMI calculation, marital status and educational status.
2. H/O hypertension, coronary artery disease, diabetes, dyslipidemia, chronic kidney disease and previous venereal disease.
3. Life style habits like smoking and alcohol.
4. International Index of Erectile Function (IIEF-5):
    1) How often were you able to get an erection during sexual activity? (0=no sexual activity; 1=almost never/never; 2=a few times; 3=sometimes; 4=mostly; 5=almost always/always)
    2) When you attempted sexual intercourse, how often were you able to penetrate (enter) your partner? (0=no sexual activity; 1=almost never/never; 2=a few times; 3 = sometimes; 4=mostly; 5=almost always/always)
    3) During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner? (0=no sexual activity; 1=almost never/never; 2=a few times; 3=sometimes; 4=mostly; 5=almost always/always)
    4) When you attempted sexual intercourse, how often was it satisfactory for you? (0=no sexual activity; 1=almost never/never; 2=a few times; 3=sometimes; 4 =mostly; 5=almost always/always)
    5) How do you rate your confidence that you could get and keep an erection? (1=very low; 2=low; 3= moderate; 4=high; 5=very high).

The scores for various degree ED included mild (21-12), moderate (11-8) and severe (7-0).

Results

The results were analyzed for the prevalence of ED and its associations including previous history of STDs. Among the patients aged less than 30 years 22.7% had ED. In 30-45 years 31.25% had ED but in the age group of 45-60 years 38.75% had ED. It was noted that ED increases with age. ED was more common in married men (41.6%) than single men. Educated men with ED was 21.6%. Based on the BMI 41.17% men with normal weight had ED. Among the overweight men 69.57% had ED and 77.8% of the obese men had ED (Table 1). Among organic causes for ED in our 35 patients, Diabetes Mellitus was the most common association (42.3%). Alcohol consumption, intake of anti-hypertensive drugs and smoking were the next common associations. In this study 35.7% of patients on anti-hypertensive drugs had erectile dysfunction. 35.7% of smokers and 38.8 % of alcoholics had erectile dysfunction. In this study 25% of chronic kidney disease patients had erectile dysfunction (Table 2). Various parameters of the psychogenic causes for erectile dysfunction were analyzed, of which stress was the prime factor. In our study, our questionnaire included previous history of venereal disease or sexual promiscuity as a cause for ED as they can lead to stress/depression; but those factors did not have any impact on the sexual life of the individuals. Overall, out of 35 patients with ED, 19 had mild, 9 had moderate and 7 had severe ED. (Fig. 1)

Table 1: Socio Demographic Profile

Age in Years	**(N=100)**	**With ED in Number (%) {N=35}**	**Without ED (%) {N=65}**
<30 Years	22	5 (22.7)	17 (77.3)
30-45Years	32	10 (31.25)	22 (68.75)
45-60 Years	26	10 (38.46)	16 (61.54)
>60Years	20	9 (45)	11 (35%)
Marital Status		**With ED**	**Without ED**
Single (n=32) Married (N= 60)		8 (25%) 25 (41.6%)	24 (75%) 35 (58.4%)
Educational Status		**With ED**	**Without ED**
Literate(N=42)		11 (26.1%)	31 (73.9%)
Illiterate(N-58)		29 (50%)	29 (50%)
Body Mass Index		**With ED**	**Without ED**
Normal (N=68)		28 (41.17%)	38 (58.83%)
Over Weight(N=23)		16 (69.57%)	7 (30.43%)
Obese(N=9)		7 (77.8%)	2 (22.2%)

Table 2: Association of Ed with comorbidities

Risk Factors	With ED in Number (%)	Without ED in Number (%)
Diabetes Mellitus(N-26)	11 (42.3)	15 (57.7)
Coronary Artery Disease(N=10)	3 (30)	7 (70)
Chronic Kidney Disease(N=4)	1 (25)	3 (75)
Dyslipidemia (N=8)	2 (25)	6 (75)
Anti-Hypertensive Drugs(N=14)	5 (35.7)	9 (64.3)
Alcohol(N=18)	7 (38.8)	11 (61.2)
Smoking(n=14)	5 (35.7)	8 (64.3)
Previous Venereal Disease(n=6)	0	6 (100)

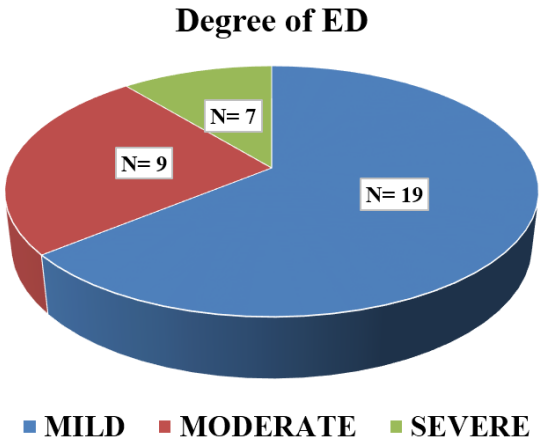


Fig. 1: Degree of ED

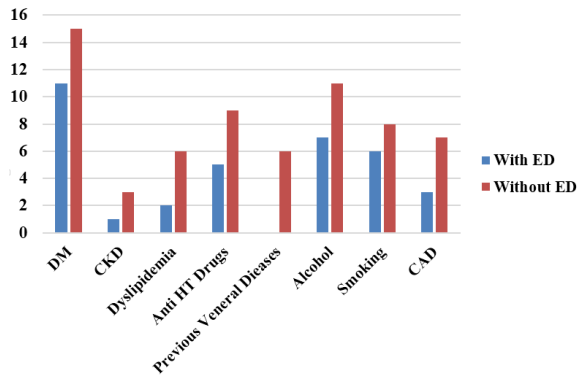


Fig. 2: Association of Ed with comorbidities

Discussion

ED is one of the major social problems causing significant distress in men. ED has been the focus of public attention in recent times. Among sexual disorders ED is currently one of the most common problem in men worldwide. It ranges from partial decrease in penile rigidity to a complete erectile failure. All sexually active males attending the OPD for various health issues for a period of 3 months were included. The prevalence of ED was 35% compared to 15.77% in the study done by Satyanarayana Rao et al in Mysore. Among the patients <30 yrs. 22.7% of the patients had ED. In 30-45 yrs. 31.25% had ED but in the age group of 45-60 yrs. 38.75% had ED. A significant proportion of patients > than 60 yrs, 45% had ED. According to our study prevalence of ED increased with age. This was consistent with the study done by Bacon et al,[3] where they have found out that ED prevalence increased as age advances. ED was more common in married men (41.6%) when compared to single/separated/divorced men. 21.6% of educated men had ED as per our study. This showed that ED was found to be less in educated men when compared to uneducated men. According to the BMI 41.17% men with normal weight had ED. Among the overweight men 69.57% had ED and 77.8% of the obese men had ED. Our study had significant correlation between BMI and ED which was similar with the study done by Bacon et al[4] where they found that increased BMI was a risk factor for ED. Men with increased weight have been found to have endothelial dysfunction which could be an early marker of coronary artery disease and atherosclerosis. Out of the six patients who gave a history of venereal disease none had ED.

Epidemiological studies suggest that diabetes[5,6] is associated with an increased risk of ED, which has been found to be occurring in ≥50% of men with diabetes worldwide. In the Massachusetts Male Aging Study,[7] diabetic men showed a threefold increase in ED when compared to men without diabetes. In our study diabetes was found to be the most common association with 42.3% of the diabetic men having ED. (Fig. 2) The prevalence was slightly increased when compared to the study by Shreyas et al[8] which showed that diabetes mellitus and alcohol dependence doubled the risk of ED.

Patients taking antihypertensive drugs are reported to have more sexual problems when compared to general population. Occurrence of sexual dysfunction in patients with hypertension may not only negatively affect the drug compliance and leads to decrease in quality of life. Hence it is necessary to be aware of the various sexual side effects produced by antihypertensive drugs. In the study done by Mikhailidis et al[9] patients on drugs for hypertension reported increase in prevalence of ED.

A study done by Garko et al[10] in Nigeria found that the drugs used to treat hypertension blocked angiotensin 2 which was necessary to achieve tumescence. In this study 35.7% of patients on anti-hypertensive drugs had

ED. Diuretics may also relax muscles in the circulatory system. This may decrease the blood flow to the penis necessary for an erection. Beta-blockers such as propranolol may induce ED through central and peripheral (genital) effects as it increases the latency to initial erection and reduces the number of erectile reflexes. Calcium channel blockers have not been found to cause ED.

Smoking is an independent risk factor for vascular impotence, and is found to be involved in other forms of ED. 35.7% of smokers had erectile dysfunction which is higher when compared to the study done by Feldman et al[(11)] in Massachusets and Mirone et al.[(12)]

There is a strong link between ED and heart disease. Several studies have shown that if a man has ED, he has a greater risk of having heart disease as in the study done by Feldman et al and dyslipidemia.[(13)] In our study 25% of the men with dyslipidemia had ED.

Chronic and persistent alcohol use tends to induce sexual dysfunction, which further leads to marked distress and interpersonal anxiety. This, in turn, is known to worsen the alcohol abuse. Sexual dysfunction in alcoholic is due to the depressant effect of alcohol. 38.8% of men who consume alcohol had ED in this study.

Sexual dysfunction is common in men with CKD,[(14)] as both the disease conditions share the same patho physiological causes, such as vascular and hormonal abnormalities and are both affected by similar coexisting co morbid conditions such as cardiovascular disease, hypertension and diabetes mellitus. Any chronic disease will lead to psychologic impact which we see in CKD patients.

Sexual dysfunction is highly prevalent in patients who are on hemodialysis according to a study done by Arslan et al.[(15)] Almost 70% of men with CKD report to have erectile dysfunction (ED) and these reports are higher than in the general population. In this study 25% of chronic kidney disease patients had ED.

None of the patients who had a previous history of venereal disease had ED. Venereal disease is a mental trauma due to which patients experience a temporary dip in their sexual function. Our patients did not have ED and this could be due to the complete comprehensive treatment they have received and do not have any psychological issues leading to sexual disorders.

Conclusion

ED is a common problem in our society but men with it feel hesitant to disclose it as it's personal and not a life threatening condition. Hence it is important to address this issue in the vulnerable population and solve it using psychological support and drugs which can make men with erectile dysfunction lead a better life. In our study venereal disease had no correlation with ED.

Limitation of the Study

This study is done in a tertiary care STD clinic where the patients get appropriate treatment and counseling and hence it could be a reason for the lack of a positive correlation between ED and history of venereal disease. The exact correlation can be determined if the study has been done in the general population with a large sample size.

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