Sexual Dysfunction in Patients with Major Depression

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Fifty male patients diagnosed as major depression according to DSM-III-R were selected randomly from psychiatric outpatient clinic. They were initially assessed by psychometric tools as regards personality, anxiety and depression. Also their psychosexual functioning were asked about. Serum level of testosterone and prolactin were measured.

Patients received treatment with tricyclic antidepressants for six months after which they were reassessed.

Patients were divided into two groups according to their sexual functioning. Results showed that there were o statistically significant differences between both groups as regard level of depression and hormones. However the group with sexual dysfunction was significantly older in age, had a higher level of anxiety, more introvert and with higher level of criminality and neuroticism.

After treatment most of patients showed improvement but some patients did not improve. Even some developed decrease in their sexual performance.

There was a significant increase in the level of prolactin and significant decrease in the level of testosterone after treatment in whole patients. But there was no significant difference between those who improved and those who did not.

Also there is no significant difference between the patients who developed side effect of the antidepremants and who did not develop such side effect which was decreased in sexual performance. The implications of these findings were discussed.

(Egypt.J. Psychiat.,1992,15:184-191).

Introduction

Impotence is a common disorder, that can have a profound effect on patients' well being Increasingly, the psychiatrist has been asked to work in the evaluation and treatment of people with impotence (Krane et al. 1989).

Libido and potency may be reduced or abolished in endogenous depression. However sexual interests and desires are probably affected as a general consequence of the depressed state, rather than because of any physiological mechanism (Small and Small 1975).

Attempts at establishing a relationship bwteen prolactin and depression have yielded conflicting results (Fava,. et al. 1988. In different comparisons of the basal prolactin levels of depressed patients levels have been found to be higher, lower, and the same (Lisansky, et al. 1984).

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Urogenital dysfunction has been observed as an occasional side effect of currently available antidepressants (Gilman et al. 1982, Mitchell and Popkin 1983).

The mechanism of action of the antidepressants is not known with certainty.

A clinical report (Gelenberg et al. 1982) indicated that some antidepressants Similarly several studies reported that treatment with tricyclic antidepressants significantly raised plasma prolactin levels in depressed patients. Yet other investigations failed to detect such an insrease (Lisansky et al 1987)

Fava A. et al (1988) found that plasma prolactin levels significantly increased after successful amitriptyline therapy in depressed patients with abnormal dexamethazone suppression test results before treatment. Such an increase did not take place in depressed patients with normal dexamethasone suppression test findings.

The elevated prolactin levels could conceivably interfere with testicular function (Kulik and Wilbur 1982).

The aim of this work is to study sexual dysfunction in depressed patients and its relation to hormonal disturbance [Testestrone and Prolactin). Also to study the effect of treatment with tricyclic antidepressant on both the sexual dysfunction and the prolactin and testostrone levels.

Subjects and Method

Fifty male patients diagnosed as major Depressive according to DSM III R. (1987) were selected randomly from the outpatient psychiatric clinic of a private hospital in Saudia Arabia.

The diagnosis was carried on by two M.D. qualified psychiatrists.

The patients were interviewed as regards the sexual performance by an M.D. qualified skin and venereal consultant to exclude organic factors.

The testosterone and proactive serum levels were meansrued.

The following Psychometric tests were applied:-

a- Beck's inventory for Depression.

b- Taylor's scale for Anxiety.

c- Eysenk Personality Questionnaire.

The patients received tricyclic antidepressants in the doses of 75 mg to 100 mg/ day for six monthes. No E.C.T. was needed during the treatment cours.

At the end of the six monthes the patients were interviewed again and the level of hormones was restimated.

Results

The patients were classified into two groups:

(1) Those patients who suffered sexual dysfunction from the start (27 patients). Their mean age was 38.5+ 15.35.

(2) The patients who admitted satisfied sexual performance inspite of thier illness (19 patients). Their mean age was 30.32+13.12.

There was no significant difference between the age of both groups.

Table 1

Sexual Dysfunction in Group A.

	No.	%
-Lack of sexual desire	10	37.03
-Sexual dysfunction	17	63.26
.Lack of erection	6	22.22
.Failure to maintain erection	3	11.11
.Premature ejaculation	5	18.52
.Lack of satisfaction	3	11.11

From the above table we can see that lack of sexual desire constituted 37.03% of all the sexual problem while the disturbance of sexual function was about 63.26%.

Table 2
Comparison Between the Means of Psychometric Results of Both Groups.

		Group A	Group B	t	p
Beck's Q.		70±4.52	72.54±5.52	1.67	N.S
Taylor's Q.		32.62±2.61	25.37±4.71	6.51	<0.01
E.P.Q.	P	7.25±2.4	8.32±3.5	1.2	N.S.
	N	16.4±4.31	10.3±2.65	5.38	<0.01
	E	4.54±2.21	9.7±3.25	6.28	<0.01
	L	4.35±1.3	5.42±2.24	3.61	<0.01
	C	9.53±3.32	4.26±2.18	5.91	<0.01

From the above table we can see that there is no significant difference between the means of both groups on Beck's Questionnaire for depression. There were significant differences between the means of Taylor's Questionnaire for anxiety and Eysenk Personality Questionnaire on Neuroticism, criminality and Extraversion subscales.

Table 3
Comparison Between the Means of Hrmonal Level of Both Groups Before Treatment.

Testestrone	Group A	Group B	t	p
Prolactin	18. 4±4.52	19.2±3.43	0.63	N.S.
	6.52±3.12	5.56±2.38	1.1	N.S

From the above table there was no significant difference between the mean serum level of hormones of the two groups.

Table 4
Comparison Between the Past History of Both Groups

	Group A No	%	Group B N0	%	t	p
-Drug Abuse	6	22.22	0	0	2.777	<0.01
-Previous Attacks of the Disease	12	44.44	3	15.79	2.26	<0.05
-Marital Conflicts	15	55.56	5	26.16	1.12	<0.05

From the above table we can notice that drug abuse, recurrent attacks of the illness and marital conflicts were common in Group A.

Table 5
The Change of Sexual Dysfunction in Patients After Treatment

	No Change N	%	Change No	%
- Improvement in Group (A)	7	25.92	20	74.08
- Decrease Sexual Performance in Group (B)	12	63.16	7	36.84

From the above table there was can see that:
a) Most of patients of group A showed improvement in their sexual dysfunction after treatment.
b) 36.84% of patients of group B showed decrease in sexual performance after treatment.

Table 6

Compares the Results of Hormonal levels After Treatment

	Group A				Group B			
	Improved (15)	No Improvement (12)	t	P	Sexual Performance (7)	No (12)	t	P
Prolactin	16.31±3.21	18.22±4.15	1.30	N.S.	20.21±5.61	18.32±4.49	0.76	N.S.
Testestrone	10.12±2.53	8.5±3.41	1.36	N.S.	9.14±3.56	11.52±5.21	1.33	N.S.

From the above table there was no significent differences in the hormonal level between patients who showed improvement and who did not show improvement and also between patients who developed sexual dysfunction as side effects of drugs and who did not develop such side effect.

Table 7

Comparison Between Hormonal level Before and After Treatment.

	Before	After	t	p
Testestrone	18.73 ±7.2	9.91 ±5.4	6.65	<0.01
prolactin	6.12 ±4.32	17.92 ±8.32	8.54	<0.01

From the table there was increase in the level of prolactin and decrease in the level of testosterone after treatment. The dufferebces were stutistically significant.

Four patients were exculded because the possibility of organicity i.e. prostatic.

Discussion

From our work 58.7% of our depressed patients suffered of sexual problems, 37.03% suffered of decreased desire. while 63.26% euffered of sexual dysfunction in the form of lack of erection (22.22%), failure to maintain erection (11.11%), premature ejaculation (18.52%), and lack of satisfaction (11.11%).

Kolodny et al. (1979) found that 70% of depressed patients have impaired libido; sexual dysfunction occurs in fewer than one third of depressed patients.

Also in a series of forty consecutive male patients with unipolar depression, impotence was reported by 27.5% [Kolodny et al. 1979]

Cassidy (1959) found a significant reduction in sexual libido in 83% of a group with manic depressive psychosis. While, Tamburello and Sepulcher (1977) noted that the capacity for erectile response in depression was only slightly diminished from pre-depressive levels.

Kolodny et al. (1979) reported that the sexual impact of depression varies considerably from a person to another and is not always a reflection of the severity of the depression.

In our results, there was no significant difference between depressed patients with sexual dysfunction and those who are not affected sexually as regards level of depression or hormonal level. However, group A with sexual problems were older in age, with higher level of anxie-

ty, more introvert, with higher level of criminality and neuroticism.

Also previous history of drug abuse, recurrent attacks of depression and positive family history of psychiatric illness were more common in group A.

History of marital conflicts and family problems were higher in patients with sexual problems more than in the other group of patients.

However Kolodny et al. (1979) Said that when sexual dysfunction occurs as a result of depression, its existence may be masked by a variety of behavioral and relationship problems. For instance, the depressed person may withdraw from social interaction with others, creating a situation that itself lessens opportunities for sexual activity and emotional intimacy, sometimes, this withdrawal may be misjudged by the spouse or sexual partner as a sign of diminishing affection or sexual attractiveness.

Kaplan (1974) said that there is some evidence to indicate that endocrine, as well as psychological, factors may play a role in the diminished sexuality of depressed patients.

Linkowski et al. (1989) found that in unipolar depressed men, during the acute phase of illness, overall plasma prolactin levels were normal prolactin levels and secretory profiles except that they, like unipolar depressed men, had subnormal prolactin levels during midsleep.

After treatment there was an increase in the level of prolactin and decreuse in the level of testosterone.

These changes were more in those patients with no improvement in sexual power or who developed sexual dysfunction as aside effect of the treatment.

Clinical reports by Gelenberg et al. (1982) indicated that antidepressants can stimulate proactive release.

Fava. et al (1988) found that plasma prolactin levels significantly increased after successful amitriptyline therapy in depressed patients. Elevated proactive levels could conceivably interfere with testicular function (Kulik and Wilbur 1982). However, other researchers said that tricyclic antidepressants do not elevate serum proactive levels (Meltzer et al. 1977).

Lisansky et al. (1987) summarised this contravery results as several studies reported that treatment with tricyclic antidepressants significantly raised plasma proloctin levels in depressed patients, yet other investigations failed to detect such an increase.

There are several likely reasons for the conflicting results. There have been differences between the samples of depressed patients, some groups are quite heterogen ours (Mendlewciz et al. 1980).

There may be another mechanisms through which antidepressants can affect the sexual power:-

1) There is evidence that the antiicholinergic properties of the antidepressants interfere with cholinergic pathway (Horowitz and Goble 1982).

Against it Shen and Mallya (1983) reported that the patients who take antiparkinsonian sonian agents with anticholinergic properties were apparently associated with improvement rather than impairment in erectile functions.

Also many researchers were against this theory (Snyder 1977, Koizumik and Brook 1983, Wagner and Levin 1983).

2) Tricyclic antidepressants potentiate the effect of noradrenaline active transport reuptake mechanism. Noradrenaline potentiation could interfere with coordinated contractions of the smooth muscles of the internal genitalia, thereby inducing a painful spasticity (Kulik and Wilbur 1982).

But still many works were against this theory e.g. Tuck (1973) and Kotin (1976).

3) Kulik and Wilbur (1982) suggested that the different tricyclic antidepressants and neuroleptics affect different alpha receptors in the muscles of the organs involved in the transport of sperms.

From all of the above, we can deduce that many mechanisms and factors can be the cause of side effects of tricyclic antidepressants on the sexual function, and there may be individual susceptibility for every mechanism i.e. not all patients are affected by one mechanism. Some patients are affected by each mechanism and some patients are not affected at all by any of these mechanisms.

Even the sexual dysfunction as a symptom of depression is not the same in all patients.

This may lead us to advice the psychiatrists to bear this in mind they should ask about the sexual power before starting treatment and during follow up and to reassure the patients if there is any problem.

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Problèmes Sexuels chez les Patients Souffrants de Troubles Majeurs de l'Humeur

Cette étude a porté sur 50 patients souffrant de trouble dépressif majeur, afin d'évaluer les problèmes sexuels chez les patients déprimés ainsi que leurs rapports avec les troubles hormonaux. Il s'est avéré que les problèmes sexuels se présentaient plutôt en fonction d'un age plus avencé, un degré d'anxiété plus élevé, l'introversion, la criminalité et le névroticism .

الاختلال الجنسى فى مرض الإكتئاب الجسيم

أجريت هذه الدراسة على خمسين مريضاً بالإكتئاب الجسيم، وقد تم تقييم أعراض القلق والاكتئاب وسمات الشخصية والحالة النفسية الجنسية بالاضافة إلى قياس مستوى الهرمونات الذكريه البرولاكين والتستوستيرون وقد وصفت لهم مضادات الاكتئاب لمدة ستة أشهر ثم أعيد إجراء التقييم النفسى والهرمونى للحالة الجنسية، وقد تم تقسيم المرضى إلى مجموعتين بناءاً على وجود خلل فى الحالة الجنسية، وقد أظهرت النتائج عدم وجود فروقات ذات دلالة بين المجموعتين بالنسبة لمستوى الاكتئاب أو الهرمونات - إلا أن المجموعة التى لديها أعراض خلل فى الناحية الجنسية كانت أكبر فى السن وتتميز بسمات القلق والانطواء والعصابيه والاجرام ، ولم تتحسن الناحية الجنسية لمعظم المرضى بعد العلاج حتى أن بعض المرضى ظهرت لديهم إضطرابات فى الأداء الجنسى، ويناقش البحث النتائج واهميتها الاكلينيكية.