Sexual Dysfunction in Jordanian Diabetic Women

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Objective: To estimate the prevalence of female sexual dysfunction (FSD) in diabetic and non diabetic Jordanian women.

Research design and methods: Data were collected from 1137 married females using the Arabic translation of the Female Sexual Function Index (FSFI) Questionnaire.

Results: Prevalence of sexual dysfunction in diabetic females 50 years or older was 59.6% versus 45.6% in non diabetics (P=0.003). Diabetic women had more dysfunction of desire, arousal, lubrication and orgasm than non diabetics. Glycemic control, smoking, dyslipidemia, hypertension, autonomic neuropathy and peripheral neuropathy did not have significant effect on FSD. Age, BMI, duration of diabetes, the presence of CAD, nephropathy and retinopathy had a negative effect on FSD.

Conclusion: Prevalence of FSD among Jordanian females was found to be significantly higher in diabetic women compared to non diabetic women.
Female Sexual Dysfunction is a common problem, affecting 30-78% of women (1). The prevalence in diabetic women is estimated to be 20-80% (2). In Arab countries, there is only one report that addressed this issue (1). Islam, the religion of the vast majority of Arab countries, is a very open religion regarding sexual relations, but tribal and social attitudes are widely different reaching sometimes to the taboo level. In Jordan talking about sex openly is not easy. However, when talking about sex professionally women are very perceptive (3).

FSD is defined as disorders of libido, arousal, orgasm, and sexual pain that lead to personal distress or interpersonal difficulties. It is multifactorial in etiology with physiological and psychological roots. (4)

In the 1950s, sexual dysfunction in diabetic men caught attention, but sexual dysfunction in women remained neglected entirely until Kolodny’s article in 1971 (5). Diabetic women are prone to experience decreased sexual desire and dyspareunia, and decreased sexual arousal and inadequate lubrication. (8)

Studies of sexual dysfunction in normal and diabetic women are few in the Arab countries, and Jordan is no exception. The purpose of this study was to address this issue in Jordan.

METHODS

Between October 2006 and August 2007, 1137 married females were studied at the NCDEG, Amman, Jordan. Women were grouped into diabetic married group (n= 613) and a non diabetic married group (n=524). Diabetic females were those attending the Diabetes and Endocrinology clinics at the NCDEG and non diabetic were their female companions, and health workers at the center. Divorced, widowed, seriously ill, pregnant females, lactating or on contraceptive pills were excluded. The study was approved by the Ethics Committee.

All women were invited to attend face to face interview with one of our female authors. Privacy, and confidentiality were assured. The structured interviews were based on the 19-item Female Sexual Function Index (FSFI) Questionnaire (6), which was translated to Arabic, and was tested for validity and reproducibility. Scores of the six domains are added to obtain the full scale score. For individual domain scores, scores of the individual items that comprise the domain are multiplied by the domain factors, where higher scores indicate less dysfunction. (6)

Demographic data including age, BMI, type and duration of diabetes were recorded. The presence of hypertension, dyslipidemia, nephropathy, retinopathy, autonomic and peripheral neuropathy, CAD were documented depending on the females’ history, physical examination, medical records and investigations done for each of diabetic complications. HBA1c values in the last 4 consecutive clinic visits were attained from the females medical records.

Statistical analysis: Data were statistically analyzed using the Statistical Package for Social Sciences (SPSS), version 15. Prevalence and degree of each component of the FSFI was measured. Analysis of variance (ANOVA) test was used to find out the factors affecting the outcome of each element of sexual dysfunction. Significant factors were then subjected to multivariate logistic regression analysis to assess the independent effect of each factor after controlling for potential confounders. All numbers were expressed as mean ± SD. P value of 0.05 or less was considered statistically significant.

RESULTS

Descriptives: The age of diabetic females ranged from 23 to 68 years with a
mean (SD) of 46 (11) years and the age of non diabetic females ranged from 22 to 70 years with a mean (SD) of 51 (10) years.

Prevalence and types of FSD: The prevalence of FSD in diabetic women 50 years or older was significantly higher compared to non diabetics (Table 1). Desire, arousal, lubrication and orgasm were more significantly affected in older diabetic women. While in younger females, a significant difference was only found in desire.

Multivariate analysis showed that glycemic control, type of diabetes, smoking, hypertension, dyslipidemia, peripheral and autonomic neuropathy did not have a significant effect on FSD. On the other hand, the duration of diabetes, age, BMI, the presence of CAD, nephropathy and retinopathy had a significant detrimental effect on female sexual function.

CONCLUSIONS
This study showed that diabetic women in Jordan had more FSD compared to non-diabetic women. The prevalence of FSD in our study is in agreement with the global prevalence. In our study, the prevalence of hypoactive sexual desire in diabetic women aged 50 years or older was significantly higher than non diabetic females (Table 1). This finding is in agreement with other studies (1,2). Arousal disorder was found to affect diabetic females 50 years or older more than non diabetics. This is concordant with the study of Enzlin and associates (7).

Neurovascular processes that mediate genital vasocongestion are impaired in diabetes. (8) In our study, vaginal dryness was found significantly more in diabetic women compared to non diabetic women. Orgasmic dysfunction was more prevalent in older diabetic women in comparison to their non diabetic counterparts. Kolodny et al. reported a higher frequency of orgasmic dysfunction in diabetics compared with hospitalized women for various reasons. (5) There was no significant difference in the occurrence of dyspareunia between diabetic and non diabetic women (P=0.221). However, diabetic women were less satisfied with their sexual life. This goes with the findings of Enzlin and associates (7).

Sexual dysfunction among diabetic Jordanian women is common. This prevalence is significantly higher than in non diabetic older than 50 years.
REFERENCES

Table 1 Prevalence and types of FSD in diabetic and non diabetic females

<table>
<thead>
<tr>
<th>Dysfunction</th>
<th>Age&lt; 50 years Non diabetics n (%)</th>
<th>Age&lt; 50 years Diabetics n (%)</th>
<th>Age≥50 years Non diabetics n (%)</th>
<th>Age≥50 years Diabetics n (%)</th>
<th>Non diabetics Mean (± SD)</th>
<th>Diabetics Mean (± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire</td>
<td>236(65.2)</td>
<td>165(57.1)*</td>
<td>95(59)</td>
<td>252(78.5)*</td>
<td>3.5 (1.5)</td>
<td>3.3(1.6)</td>
</tr>
<tr>
<td>Arousal</td>
<td>176(48.6)</td>
<td>146 (50)</td>
<td>84(52.2)</td>
<td>210(65.4)*</td>
<td>3.6 (1.6)</td>
<td>3.3(1.8)*</td>
</tr>
<tr>
<td>Lubrication</td>
<td>97(26.8)</td>
<td>89(30.5)</td>
<td>53(32.9)</td>
<td>167(52)*</td>
<td>4.4(1.7)</td>
<td>3.8(1.9)*</td>
</tr>
<tr>
<td>Orgasm</td>
<td>194(28.7)</td>
<td>100 (34.2)</td>
<td>62(38.5)</td>
<td>165(51.4)*</td>
<td>4.2(1.7)</td>
<td>3.8(1.9)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>124(34.3)</td>
<td>116(39.7)</td>
<td>60 (37.3)</td>
<td>138(43.0)</td>
<td>4.4(1.6)</td>
<td>4.1(1.7)*</td>
</tr>
<tr>
<td>Pain</td>
<td>301(83.4)</td>
<td>243(83.8)</td>
<td>128(80.0)</td>
<td>260(83.3)</td>
<td>2.5(1.3)</td>
<td>2.5(1.3)</td>
</tr>
<tr>
<td>Total</td>
<td>137 (38.1)</td>
<td>117 (40.8)</td>
<td>73 (45.6)</td>
<td>186 (59.6)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Denotes significance ( P<0.05 ) with the non diabetic group within the same age group.