The Impact of Interferon Therapy on the Sexual Function of Hepatitis C Male Patients

Ali Mahran, MD
Ass. Prof. of Andrology and Sexology
Assuit University, Egypt
Introduction

• Hepatitis C virus (HCV) infection represents a major health problem and is estimated to affect 170 million persons worldwide.
• While some chronic Hepatitis C patients maintain normal sexual function and a healthy interest in sex, many experience reduced libido, erectile dysfunction and diminished sexual satisfaction.
• Cases of erectile dysfunction in men with chronic hepatitis C have been reported, but it is unclear whether the blame should be placed on the virus itself or on poor liver function caused by the infection.
• Additionally, antiviral medications (interferon therapy) typically used to battle Hepatitis C virus may cause sexual dysfunction and decreased libido.
Aim of the study

To evaluate the impact of interferon therapy on male sexual function in Hepatitis C patients.
Material and methods

• One hundred patients suffering from Hepatitis C infection were included in the study.

• All participants underwent
  o History taking including IIEF-5 score
  o General and local examination
  o Hormonal profile assessment
  o Pharmacopenile duplex ultrasonography
Results

- Fifty two (52%) patients were receiving interferon and forty eight (48%) patients were not receiving interferon.
• The IIEF-5 score of patients on interferon (12±4.5) was significantly lower than patients not receiving interferon (18±6.5) (P=0.022).

• Moreover, IIEF-5 score showed significant negative correlation with the duration of interferon therapy (r=0.366, P=0.01).
IIEF-5 score in interferon and non interferon treated groups:

<table>
<thead>
<tr>
<th>Items of IIEF-5 score</th>
<th>Interferon treated group (52%)</th>
<th>Non interferon treated group (48%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>IIEF1</td>
<td>2.1</td>
<td>4.4</td>
<td>0.9</td>
</tr>
<tr>
<td>IIEF2</td>
<td>3.4</td>
<td>5.2</td>
<td>1.2</td>
</tr>
<tr>
<td>IIEF3</td>
<td>3.2</td>
<td>3.5</td>
<td>1.2</td>
</tr>
<tr>
<td>IIEF4</td>
<td>2.2</td>
<td>4.2</td>
<td>0.7</td>
</tr>
<tr>
<td>IIEF5</td>
<td>2.6</td>
<td>2.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Total IIEF-5 score</td>
<td>12.7</td>
<td>18.7</td>
<td>4.5</td>
</tr>
</tbody>
</table>

IIEF-5 score in interferon and non interferon treated groups:
Forty (76.9%) patients on interferon reported low or absent sexual desire compared to twenty two (45.8%) patients of non-interferon treated group (P= 0.001).
• Total testosterone among interferon treated patients (188 ± 13.7 ng/dL) was significantly lower than non-interferon treated patients (270 ± 18.6 ng/dL) (P=0.001).
• Similarly, free testosterone level among interferon treated patients (3 ± 1.2 ng/dL) was significantly lower than non-interferon treated group (7 ± 2.3 ng/dL) (P=0.05).
Correlation between duration of interferon therapy and serum total testosterone level:
Correlation between duration of interferon therapy and serum free testosterone level:

\[ r = -0.252 \]

\[ P = 0.01 \]

\[ r^2 = 0.063 \]
• Serum estradiol level among interferon treated patients (80 ± 12.3 pg/ml) were significantly higher than non-interferon treated patients (58 ± 13.3 pg/ml) (P=0.01).
Correlation between duration of interferon therapy and serum estradiol level:

Correlation Coefficient: r = 0.337
P-value: P = 0.002
• Serum prolactin level showed no significant difference between the interferon treated (13 ± 4.3 ng/ml) and the non-interferon treated groups (12 ± 3.5 ng/ml) (P=0.59).
As regards penile duplex results, thirty eight (73%) patients on interferon showed vasculogenic erectile dysfunction compared to thirty two (66.7%) patients not receiving interferon (P=0.11).
Conclusion

Interferon had negative impact on male sexual function.

Patients on interferon showed

- lower IIEF-5 score
- loss of desire
- lower total and free testosterone levels
- higher estradiol level

However, interferon did not affect penile hemodynamics.
THANK YOU