The interplay between premature ejaculation and erectile dysfunction: a systematic review and meta-analysis

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Premature ejaculation and erectile dysfunction are frequently comorbid

1) One out of three men with erectile dysfunction reports premature ejaculation
   (Corona et al., J Androl 2006;27:86–93)

2) More than 30% of subjects reporting premature ejaculation complain erectile dysfunction
   (McMahon et al., J Sex Med 2012;9:454–65)

Specific determinants and underlying factors linking ED and PE have yet to be clearly identified
Aim

To review and meta-analyze all available data regarding the relationship between PE and ED

Search terms: premature ejaculation AND erectile dysfunction

Search from January 1, 1969 up to April 1, 2015

All trials evaluating the risk of ED in subjects with or without PE were included
Records identified on Medline search N=474

Records removed from the analysis
Reviews N =157
No data on ED in patients with or without PE N=186
Women N=14
Animal studies N=6
Adolescents N=7

Specific subpopulations
• Men with chronic prostatitis /chronic pelvis syndrome N=26
• Men with ED N=11
• Men with couple infertility N=6
• Men with alcohol dependence N=2
• Men with opioid dependence N=3
• Men with HIV N=2
• Men with neurological diseases N=6

Women N=14

Full-text papers assessed for eligibility N= 40

Studies included in quantitative analysis N=18

Risk of ED in PE n=15*

IEF-5 score in men with or without PE n=3*°

IELT in men with or without ED n=2

Records removed from the analysis
Reviews N =5
No data on ED in patients with or without PE N =14
Comments or letters N =1

Men with chronic prostatitis /chronic pelvis syndrome N=2

Corona et al., J Sex Med 2015;12:2291–2300
<table>
<thead>
<tr>
<th>Study name</th>
<th>Odds ratio</th>
<th>Lower limit</th>
<th>Upper limit</th>
<th>p-Value</th>
<th>Relative weight</th>
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<tbody>
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<td>El-Sakka et al., 2003</td>
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<td>4.63</td>
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<td>Shaeer et al., 2012</td>
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<td>1.57</td>
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</tbody>
</table>

**Overall**

<table>
<thead>
<tr>
<th>Odds ratio</th>
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<td>3.83</td>
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<td>5.88</td>
<td>0.00</td>
<td>6.89</td>
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</tbody>
</table>

Corona et al., J Sex Med 2015;12:2291–2300
### Difference in IIEF-5 score in men with or without premature ejaculation

<table>
<thead>
<tr>
<th>Study name</th>
<th>Statistics for each study</th>
<th>Difference in means and 95% CI</th>
<th>Relative weight</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Difference in means</td>
<td>Lower limit</td>
<td>Upper limit</td>
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<tr>
<td>El-Sakka et al., 2008</td>
<td>-3,90</td>
<td>-4,28</td>
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<tr>
<td>Liang et al 2010</td>
<td>-5,90</td>
<td>-6,09</td>
<td>-5,71</td>
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<tr>
<td>Gao et al., 2014</td>
<td>-0,58</td>
<td>-1,04</td>
<td>-0,12</td>
</tr>
</tbody>
</table>

**Overall**

-3,47  -6,43  -0,50  0,02

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Corona et al., J Sex Med 2015;12:2291–2300
Subjects with premature ejaculation more probably report erectile dysfunction
• Subjects with premature ejaculation more probably report erectile dysfunction

Is there any factor affecting the probability for subjects with premature ejaculation of having also erectile dysfunction?
Influence of age on risk of erectile dysfunction related to premature ejaculation

S = 0.05 [0.04; 0.06]; p < 0.0001
I = -0.91 [-1.37; -0.44]; p = 0.0001

Corona et al., J Sex Med 2015;12:2291–2300
Influence of education level on risk of erectile dysfunction related to premature ejaculation

Corona et al., J Sex Med 2015;12:2291–2300
Influence of relationship on risk of erectile dysfunction related to premature ejaculation

Corona et al., J Sex Med 2015;12:2291–2300

S= -0.03[-0.04; -0.02]; p<0.0001
I = 3.60[2.91; 4.29]; p<0.0001
Subjects with premature ejaculation more probably report erectile dysfunction.

Risk of erectile dysfunction related to premature ejaculation is higher in men:
- Older
- With lower education
- With unstable couple relationship
Influence of anxiety on risk of erectile dysfunction related to premature ejaculation

Corona et al., J Sex Med 2015;12:2291–2300
Influence of depression on risk of erectile dysfunction related to premature ejaculation

S=0.05[0.04;0.07];p<0.0001
I=0.48[0.27;0.69];p<0.0001

Corona et al., J Sex Med 2015;12:2291–2300
• Subjects with premature ejaculation more probably report erectile dysfunction
• Risk of erectile dysfunction related to premature ejaculation is higher in men:
  – Older
  – With lower education
  – With unstable couple relationship
  – With severer anxiety and depressive symptoms
Influence of diabetes mellitus on risk of erectile dysfunction related to premature ejaculation

S=-0.006[-0.001;-0.003];p<0.001
I=1.585[1.501;1.668];p<0.0001

Corona et al., J Sex Med 2015;12:2291–2300
Influence of hypertension on risk of erectile dysfunction related to premature ejaculation

S=-0.04[-0.05;-0.03];p<0.0001
I=2.32[2.03;2.60];p<0.0001

Corona et al., J Sex Med 2015;12:2291–2300
Influence of dyslipidemia on risk of erectile dysfunction related to premature ejaculation

Corona et al., J Sex Med 2015;12:2291–2300
• Subjects with premature ejaculation more probably report erectile dysfunction
• Risk of erectile dysfunction related to premature ejaculation is higher in men:
  – Older
  – With lower education
  – With unstable couple relationship
  – With severer anxiety and depressive symptoms
  – With better metabolic profile
Influence of history of PE on risk of erectile dysfunction related to premature ejaculation

Corona et al., J Sex Med 2015;12:2291–2300
• Subjects with premature ejaculation more probably report erectile dysfunction
• Risk of erectile dysfunction related to premature ejaculation is higher in men:
  – Older
  – With lower education
  – With unstable couple relationship
  – With severer anxiety and depressive symptoms
  – With better metabolic profile
  – **With acquired premature ejaculation**
Conclusions

ED and PE cannot be considered as distinctly separate entities

They should be not categorized in rigid diagnostic figures, but should be seen in a dimensional perspective

Older men, with lower level of education, without stable relationship and with depressive or anxiety symptoms more frequently experience both ED and PE

Their simultaneous presence is less dependent on organic factors

Understanding this dimensional perspective might help sexual health care professionals in providing the most appropriate therapeutic approach
Acknowledgements

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