La diagnostica sessuologica in endocrinologia

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FoRiSIE Winter School in Clinical Endocrinology

7-11 gennaio 2019

Villa Tuscolana Park Hotel
Frascati - Roma
Outline

• Erectile dysfunction

• Premature ejaculation
Sexual inventories
REVIEW

Inventories for male and female sexual dysfunctions

G Corona¹,³, EA Jannini²,³ and M Maggi¹

¹Andrology Unit, Department of Clinical Physiopathology, University of Florence, Florence, Italy and ²Course of Endocrinology & Medical Sexology, Department of Experimental Medicine, University of L'Aquila, L'Aquila, Italy
Self-report questionnaires

Structured interviews

Set of standardized, written probe questions requiring a finite number of responses
<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized</td>
<td>Risk of oversimplification</td>
</tr>
<tr>
<td>Easy to administer</td>
<td>Sensitive to language differences</td>
</tr>
<tr>
<td>Score</td>
<td>Sensitive to ethnic and religious factors</td>
</tr>
<tr>
<td>Cut-off</td>
<td>Sensitive to education factors</td>
</tr>
<tr>
<td>Inexpensive</td>
<td>Sensitive to cultural factors</td>
</tr>
</tbody>
</table>
Self-report questionnaires

Structured interviews

Set of standardized, written probe questions requiring a finite number of responses

these tools are...
Self-report questionnaires

Gold standard to evaluate the outcome of therapies

but...
Self-report questionnaires

No information regarding pathogenesis of sexual problem

moreover...
Self-report questionnaires

Self-filled in
Self-report questionnaires

Possibility to not correctly understand the question
Self-report questionnaires

Mistakes
Self-report questionnaires

Interruption of physician-patient relationship
Self-report questionnaires

Structured interviews

Set of standardized, written probe questions requiring a finite number of responses

But…
Structured interviews

The question is read to respondents by the physician who can explain the technical terms used.

reducing...
Structured interviews

...risk of

Misunderstandings

Embarrassing questions
Structured interviews

The question is read to respondents by the physician who can explain the technical terms used facilitating...
Structured interviews

A virtuous, intimate physician-patient relationship
Structured interviews

The question is read to respondents by the physician who can explain the technical terms used.
Structured interviews

information concerning pathogenetic components involved in sexual problem
Male sexual inventories

• Self-report questionnaires on sexual function
• Self-report questionnaires on quality of life in ED patients
• Self-report questionnaires on satisfaction with ED treatments
• Structured interviews on ED
• Self-report questionnaires on premature ejaculation
Outline

• Erectile dysfunction

• Premature ejaculation
Male sexual inventories

- Self-report questionnaires on sexual function
- Self-report questionnaires on quality of life in ED patients
- Self-report questionnaires on satisfaction with ED treatments
- Structured interviews on ED
- Self-report questionnaires on premature ejaculation
IIEF  International Index of Erectile Function

15 items, 5 domains:

- Erectile function
  6 items

- Orgasmic function
  2 items

- Sexual desire
  2 items

- Sexual desire
  2 items

- Intercourse satisfaction
  3 items

- Overall satisfaction
  2 items

Rosen et al Urology. 1997;49:822
IIEF  International Index of Erectile Function

Score

5 ____________________________________________ 75

Worse sexual problem

Rosen et al Urology. 1997;49:822
Erectile function domain of IIEF-15 (IIEF-6)

6 items

- Erection frequency (IIEF-15, item 1)
- Erection firmness (IIEF-15, item 2)
- Penetration ability (IIEF-15, item 3)
- Maintenance frequency (IIEF-15, item 4)
- Maintenance ability (IIEF-15, item 5)
- Erection confidence (IIEF-15, item 15)

Cappelleri et al. Urology. 1999;54:346
Erectile function domain of IIEF-15 (IIEF-6)

Score

26-30 no ED
22-25 mild ED
17-21 mild to moderate ED
11-16 moderate ED
6-10 severe ED

Cappelleri et al Urology. 1999;54:346
Sexual Health Inventory for Men (SHIM)

5 items

Erection confidence (IIEF-15, item 15)

Erection firmness (IIEF-15, item 2)

Maintenance frequency (IIEF-15, item 4)

Maintenance ability (IIEF-15, item 5)

Intercourse satisfaction (IIEF-15, item 7)
Sexual Health Inventory for Men (SHIM)

Score

22-25 no ED
17-21 mild ED
12-16 mild to moderate ED
8-11 moderate ED
7-1 severe ED

Rosen et al., Int J Impot Res. 1999;11:319
Erectile dysfunction

- IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
Male sexual inventories

• Self-report questionnaires on sexual function
• Self-report questionnaires on quality of life in ED patients
• Self-report questionnaires on satisfaction with ED treatments
• Structured interviews on ED
• Self-report questionnaires on premature ejaculation
Controversies in Sexual Medicine

Organic vs. Psychogenic? The Manichean Diagnosis in Sexual Medicine

Emmanuele A. Jannini, MD,* Marita P. McCabe, PhD, FAPS,† Andrea Salonia, MD,‡ Francesco Montorsi, MD,‡ and Benjamin D. Sachs, PhD§

Conclusions. The reader of the Journal will judge if there is still a room for the Manichean diagnosis of different sexual dysfunctions or if it is time to completely change our perspective on this essential aspect of clinical sexual medicine. Jannini EA, McCabe MP, Salonia A, Montorsi F, and Sachs BD. Organic vs. psychogenic? The manichean diagnosis in sexual medicine. J Sex Med 2010;7:1726–1733.
Structured interview on erectile dysfunction (SIEDY©): a new, multidimensional instrument for quantification of pathogenetic issues on erectile dysfunction

L Petrone¹, E Mannucci², G Corona¹, M Bartolini³, G Forti¹, R Giommi⁴ and M Maggi¹*

¹Andrology Unit, ²Endocrinology Unit, ³Radiology Units; and ⁴Department of Clinical Physiopathology, University of Florence and International Institute of Sexuology, Florence, Italy

➢ Scale 1 = organic component
➢ Scale 2 = relational component
➢ Scale 3 = intrapsychic component
Structured interview on erectile dysfunction (SIEDY®): a new, multidimensional instrument for quantification of pathogenetic issues on erectile dysfunction

L Petrone¹, E Mannucci², G Corona¹, M Bartolini³, G Forti¹, R Giommi⁴ and M Maggi¹*

¹Andrology Unit, ²Endocrinology Unit, ³Radiology Units; and ⁴Department of Clinical Physiopathology, University of Florence and International Institute of Sexology, Florence, Italy

- Scale 1 = organic component
- Diabetes/hypertension/dyslipidemia
- Neurological diseases
- Reduced nocturnal erection or ejaculate volume
Sensibility = 68%
Specificity = 68%
Cross-sectional & observational prospective studies of ED at the University of Florence
- SIEDY©
- ANDROTEST©
- Physical examination, hormonal parameters, psychiatric symptoms (MHQ)
- Basal and dynamic penile color Doppler ultrasound

Corona et al., J. Sex. Med. 2010; 7:1918
Observational prospective study (2000-2007) of ED subjects at the University of Florence
- SIEDY©
- ANDROTEST©
- Physical examination, hormonal parameters, psychiatric symptoms (MHQ)
- Basal and dynamic penile color Doppler ultrasound

1687 Male subjects with sexual dysfunction

Mean follow up 4.3 ± 2.6 years

City of Florence Registry Office:
- major adverse cardiac events (MACE)
- ischemic heart disease (ICD 410-4)
- other heart diseases (ICD 420-9)
- sudden death for cardiac d. (ICD 798-799)
- cerebrovascular diseases (ICD 430-4, 436-8)
- peripheral arterial diseseas (ICD 440)

Corona et al., J. Sex. Med. 2010; 7:1918
Observational prospective study (2000-2007) of ED subjects at the University of Florence
- SIEDY©
- ANDROTEST©
- Physical examination, hormonal parameters, psychiatric symptoms (MHQ)
- Basal and dynamic penile color Doppler ultrasound

Corona et al., J. Sex. Med. 2010; 7:1918
Risk for incident major cardiovascular events (MACE) as derived from Kaplan Mayer curves in subjects with or without pathological SIEDY scale 1 in the different age tertiles

Corona et al., Best Pract Res Clin Endocrinol Metab. 2013;27:581
Erectile dysfunction

- IIEF-15/IIEF-EFD/IIEF-5 most frequently used self-reported questionnaires for ED
- Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
ED is a risk factor for forthcoming CV diseases

**Total CV events**

<table>
<thead>
<tr>
<th>Author</th>
<th>Population</th>
<th>RR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Araujo 2010</td>
<td>GEN</td>
<td>1.40</td>
<td>1.04 - 1.88</td>
</tr>
<tr>
<td>Batty 2010</td>
<td>DM</td>
<td>1.19</td>
<td>1.08 - 1.32</td>
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<tr>
<td>Blumentals 2003, 2004</td>
<td>GEN</td>
<td>1.86</td>
<td>1.29 - 2.68</td>
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<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>1.42</td>
<td>1.04 - 1.94</td>
</tr>
<tr>
<td>Chung 2011</td>
<td>GEN</td>
<td>1.35</td>
<td>1.13 - 1.61</td>
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<tr>
<td>Frantzen 2006</td>
<td>GEN</td>
<td>1.70</td>
<td>0.90 - 3.26</td>
</tr>
<tr>
<td>Gazzaruso 2008</td>
<td>DM</td>
<td>2.10</td>
<td>1.62 - 2.73</td>
</tr>
<tr>
<td>Hotaling 2012</td>
<td>GEN</td>
<td>0.93</td>
<td>0.70 - 1.23</td>
</tr>
<tr>
<td>Inman 2009</td>
<td>GEN</td>
<td>1.80</td>
<td>1.20 - 2.70</td>
</tr>
<tr>
<td>Ma 2008</td>
<td>DM</td>
<td>1.58</td>
<td>1.08 - 2.31</td>
</tr>
<tr>
<td>Ponholzer 2010</td>
<td>GEN</td>
<td>0.92</td>
<td>0.53 - 1.60</td>
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<tr>
<td>Schouten 2008</td>
<td>GEN</td>
<td>1.75</td>
<td>1.30 - 2.35</td>
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<tr>
<td>Thompson 2005</td>
<td>GEN</td>
<td>1.45</td>
<td>1.25 - 1.69</td>
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</table>

**Cerebrovascular events**

<table>
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<tr>
<th>Author</th>
<th>Population</th>
<th>RR</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td>Batty 2010</td>
<td>DM</td>
<td>1.36</td>
<td>1.11 - 1.67</td>
</tr>
<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>1.10</td>
<td>0.64 - 1.90</td>
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<tr>
<td>Chung 2011</td>
<td>GEN</td>
<td>1.35</td>
<td>1.13 - 1.61</td>
</tr>
<tr>
<td>Gazzaruso 2008</td>
<td>DM</td>
<td>2.44</td>
<td>0.91 - 6.54</td>
</tr>
<tr>
<td>Ponholzer 2010</td>
<td>GEN</td>
<td>1.88</td>
<td>0.71 - 4.99</td>
</tr>
<tr>
<td>Thompson 2005</td>
<td>GEN</td>
<td>1.79</td>
<td>1.15 - 2.79</td>
</tr>
</tbody>
</table>

**CV events** 1.44[1.27;1.63]

**CE events** 1.39[1.23;1.57]

**CV mortality**

<table>
<thead>
<tr>
<th>Author</th>
<th>Population</th>
<th>RR</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td>Araujo 2009</td>
<td>GEN</td>
<td>1.43</td>
<td>1.00 - 2.05</td>
</tr>
<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>1.93</td>
<td>1.13 - 3.29</td>
</tr>
<tr>
<td>Gazzaruso 2008</td>
<td>DM</td>
<td>1.47</td>
<td>0.30 - 7.14</td>
</tr>
<tr>
<td>Hotaling 2012</td>
<td>GEN</td>
<td>0.93</td>
<td>0.70 - 1.23</td>
</tr>
</tbody>
</table>

**CV mortality** 1.19[0.97;1.46]

**Cerebrovascular events**

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<tr>
<td>Batty 2010</td>
<td>DM</td>
<td>1.26</td>
<td>1.01 - 1.57</td>
</tr>
<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>1.16</td>
<td>0.99 - 1.35</td>
</tr>
<tr>
<td>Chung 2011</td>
<td>GEN</td>
<td>1.84</td>
<td>1.21 - 2.80</td>
</tr>
<tr>
<td>Hebert 2009</td>
<td>HF</td>
<td>2.17</td>
<td>0.95 - 4.98</td>
</tr>
<tr>
<td>Thompson 2005</td>
<td>GEN</td>
<td>1.22</td>
<td>0.94 - 1.58</td>
</tr>
</tbody>
</table>

**All-cause mortality**

<table>
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<tr>
<th>Author</th>
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<th>95% CI</th>
</tr>
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<tbody>
<tr>
<td>Araujo 2009</td>
<td>GEN</td>
<td>1.44</td>
<td>1.00 - 2.05</td>
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<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>1.93</td>
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</tr>
<tr>
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<td>DM</td>
<td>1.47</td>
<td>0.30 - 7.14</td>
</tr>
<tr>
<td>Hotaling 2012</td>
<td>GEN</td>
<td>0.93</td>
<td>0.70 - 1.23</td>
</tr>
</tbody>
</table>

**All-cause mortality** 1.25[1.12;1.39]

**Myocardial infarction**

<table>
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<th>RR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blumentals 2004</td>
<td>GEN</td>
<td>1.99</td>
<td>1.17 - 3.38</td>
</tr>
<tr>
<td>Böhm 2010</td>
<td>CVD</td>
<td>2.02</td>
<td>1.13 - 3.60</td>
</tr>
<tr>
<td>Gazzaruso 2008</td>
<td>DM</td>
<td>1.96</td>
<td>0.70 - 5.49</td>
</tr>
<tr>
<td>Thompson 2005</td>
<td>GEN</td>
<td>1.50</td>
<td>1.20 - 1.87</td>
</tr>
</tbody>
</table>

**Myocardial infarction** 1.62[1.34;1.96]
ED subjects are “lucky” because they have a unique chance to:

- undergo medical examination
- improve not only their sexual life
- but, most importantly, their overall health
What can we say to Mario (54 ys old) and Rosina (51 ys old)?
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- Pay attention Mario ED is a symptom of an underlying problem. Talk to your general physician or to an andrologist … Rosina please convince Mario to go to the doctor.
Structured interview on erectile dysfunction (SIEDY©): a new, multidimensional instrument for quantification of pathogenetic issues on erectile dysfunction

L Petrone1, E Mannucci2, G Corona1, M Bartolini3, G Forti1, R Giommi4 and M Maggi1*

1Andrology Unit, 2Endocrinology Unit, 3Radiology Units; and 4Department of Clinical Physiopathology, University of Florence and International Institute of Sexuology, Florence, Italy

- Scale 2 = relational component
- Partner’s diseases
- Partner’s libido and climax
- Partner’s menopausal symptoms
Presence of conflicts within the couple and/or Reported extramarital affairs

Assumed as reflected the presence of a dysfunctional relationship.
Sensibility = 59%  
Specificity = 78%

Proportion free of MACE (Kalplan-Meier curves) as a function of baseline reported partner’s hypoactive sexual desire in a consecutive series of 1687 ED subjects at the University of Florence, Florence, Italy.

Follow up (years)

Proportion free of MACE

No partner HSD
Mild partner’s HSD
Moderate partner’s HSD
Severe partner’s HSD

p<0.0001 vs. no HSD
p<0.0001 vs. no HSD

Having a partner who love you is not only fun,
...but it also protects from MACE (Cox regression HR=2.01 [1.34-3.02])
Proportion free of MACE (Kalplan-Meier curves) as a function of baseline reported partner’s hypoactive sexual desire in a consecutive series of 1687 ED subjects at the University of Florence, Florence, Italy.

What does it mean?

Having a partner who love you is not only fun, ...but it also protects from MACE (Cox regression HR=2.01 [1.34-3.02])
“Widowhood effect”: decreased male survival following the death of a spouse

Widowhood effect:

Widowhood effect:

The partner pushes the other to:

↓ risky behaviors

↑ healthy behaviors

↑ use healthcare services
Erectile dysfunction

- IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
- Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
- Pathological SIEDY Scale 2 predicts impaired couple fitness and reduced partner love predicts MACE
What can we say to Mario (54 ys old) and Rosina (51 ys old)?

- Pay attention Mario ED is a symptom of an underlying problem. Talk to your general physician or to an andrologist … Rosina please convince Mario to go to the doctor
- The lack of love represents an independent CV risk factor
Psychobiological Correlates of Women’s Sexual Interest as Perceived by Patients with Erectile Dysfunction

Giovanni Corona, MD,* ‡ Elisa Bandini, MD,* Alessandra Fisher, MD,* Maseroli Elisa, MD,* Valentina Boddi, MD,* Giancarlo Balercia, MD,† Alessandra Sforza, MD,‡ Gianni Forti, MD,* Edoardo Mannucci, MD,§ and Mario Maggi, MD*

*Andrology Unit, Department of Clinical Physiopathology, University of Florence, Florence Italy; †Endocrinology Unit, Polytechnic University of Marche, Ancona, Italy; ‡Endocrinology Unit, Medical Department, Azienda Usl, Maggiore-Bellaria Hospital, Bologna, Italy; §Diabetes Section Geriatric Unit, Department of Critical Care, University of Florence, Florence, Italy

DOI: 10.1111/j.1743-6109.2010.01812.x
Erectile dysfunction + Perceived reduced partner’s sexual interest

Later referral to Andrology Clinic

Later checking for ED comorbidities

Corona et al., J Sex Med. 2010;7:2174

Risky behaviours

More MACE

Love protects a Lover’s life
Structured interview on erectile dysfunction (SIEDY©): a new, multidimensional instrument for quantification of pathogenetic issues on erectile dysfunction

L Petrone¹, E Mannucci², G Corona¹, M Bartolini³, G Forti¹, R Giommi⁴ and M Maggi¹*

¹Andrology Unit, ²Endocrinology Unit, ³Radiology Units; and ⁴Department of Clinical Physiopathology, University of Florence and International Institute of Sexuology, Florence, Italy

- Scale 3 = intrapsychic component
- Job satisfaction/stress
- Conflicts within couple and family
- Extramarital affairs, patient’s libido
SIEDY Scale 3, a New Instrument to Detect Psychological Component in Subjects with Erectile Dysfunction

Giovanni Corona, MD, PhD, Valdo Ricca, MD, Elisa Bandini, MD, Giulia Rastrellì, MD, Helen Casale, MD, Emmanuele A. Jannini, MD, Alessandra Sforza, MD, Gianni Fortì, MD, Edoardo Mannucci, MD and Mario Maggi, MD

*Andrology and Sexual Medicine Unit, Department of Clinical Physiopathology, University of Florence, Florence Italy; †Psychiatry Unit, Department of Neurological and Psychiatric Sciences, University of Florence, Florence Italy; ‡School of Sexology, Department of Experimental Medicine, University of L’Aquila, L’Aquila, Italy; §Endocrinology Unit, Medical Department, Azienda Usl, Maggioro-Bellaria Hospital, Bologna, Italy; †Endocrinology Unit, Department of Clinical Physiopathology, University of Florence, Florence Italy; **Diabetes Section Geriatric Unit, Department of Critical Care, University of Florence, Italy

DOI: 10.1111/j.1743-6109.2012.02762.x
Prevalence of psychopathology in a subset of 484 heterosexual ED subjects at the University of Florence, Florence, Italy

- No psychopathology: 8%
- History for psychiatric disturbances: 19.9%
- Use of psychotropic medication: 5.8%

Sensitivity = 76%
Specificity = 61%

ROC curve for SIEDY scale 3 score in detecting psychopathology (medical history of psychiatric disturbances and the use of psychotropic medication).

Scale 3

Sensibility = 76%
Specificity = 61%


≥3.0
Adjusted (age and $\Sigma$-MHQ-score) risk for pathological SIEDY scale 3 score in the validation sample

Having a MHQ-D score in the highest quintile is associated with an increase risk of MACE (Cox regression HR= 2.097 [1.11-3.96])
Depression and the risk for cardiovascular diseases: systematic review and meta analysis

Koen Van der Kooy\textsuperscript{1}, Hein van Hout\textsuperscript{1*}, Harm Marwijk\textsuperscript{1}, Haan Marten\textsuperscript{1}, Coen Stehouwer\textsuperscript{2} and Aartjan Beekman\textsuperscript{3}

\textsuperscript{1}VU University Medical Center, Amsterdam, The Netherlands
\textsuperscript{2}Department of Internal Medicine, University Hospital Maastricht, Maastricht, The Netherlands
\textsuperscript{3}Psychiatry, GGZ Buitenamstel, Amsterdam, The Netherlands

Higher risk of MI \hspace{1cm} 1.60 [1.34-1.92]
Higher risk of CHD \hspace{1cm} 1.48 [1.29-1.79]
Higher risk of stroke \hspace{1cm} 1.43 [1.17-1.79]
Higher risk of CVD \hspace{1cm} 1.63 [1-26-2.12]
Perceived Partner’s HSD

PSV < 25 cm/sec

MHQ-D score 5° quintile

- Relational domain of ED
- Organic domain of ED
- Intra-psychic domain of ED
Adjusted hazard ratio for MACE (Cox regression analysis) as a function of partner’s HSD, PSV at PCDU and MHQD in a consecutive series of 1687 ED subjects at the University of Florence, Florence, Italy

Perceived Partner’s HSD

PSV < 25 cm/sec

MHQ-D score 5° quintile

**Adjusted for**
- Age
- morbidity index (# drugs)
- ΣMHQ

Relational, organic & intra-psychic ED determinants independently increases the risk of incident MACE
Erectile dysfunction

- IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
- Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
- Pathological SIEDY Scale 2 predicts impaired couple fitness and reduced partner love predicts MACE
- Organic, relational and intrapsychic factors mutually interact in the pathogenesis of ED and its associated CV risk
What can we say to Mario (54 ys old) and Rosina (51 ys old)?

- Pay attention Mario ED is a symptom of an underlying problem. Talk to your general physician or to an andrologist … Rosina please convince Mario to go to the doctor
- The lack of love represents an independent CV risk factor
- Mario, please listen to Rosina
- Your problem cause should be indentified within the couple carefully evaluating all risk factors
Clinical examination

As complete as possible!
Andrological examination

Testis
Andrological examination

Penis
25-30% of patients with locally confined prostate cancer have normal PSA.
Erectile dysfunction

• IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
• Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
• Pathological SIEDY Scale 2 predicts impaired couple fitness and reduced partner love predicts MACE
• Organic, relational and intrapsychic factors mutually interact in the pathogenesis of ED and its associated CV risk
• Clinical and andrological evaluation as complete as possible

K. Hatzimouratidis (Chair), F. Giuliano, I. Moncada, A. Muneer, A. Salonia (Vice-chair), P. Verze

British Society for Sexual Medicine Guidelines on the Management of Erectile Dysfunction in Men—2017

Geoff Hackett, MD,1 Mike Kirby, MD,2 Kevan Wylie, MD,3 Adrian Heald, MD,4 Nick Ossei-Gerning, MD,5 David Edwards, MD,6 and Asif Muneer, MD, FRCS(Urol)7

Hackett et al., J Sex Med. 2018; 15:430
Structured interview on erectile dysfunction (SIEDY©): a new, multidimensional instrument for quantification of pathogenetic issues on erectile dysfunction

L Petrone¹, E Mannucci², G Corona¹, M Bartolini³, G Forti¹, R Giommi⁴ and M Maggi¹*

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➤ Scale 1 = organic component
➤ Diabetes/hypertension/dyslipidemia
➤ Neurological diseases
➤ Reduced nocturnal erection or ejaculate volume
Biochemical evaluation of ED: Summary

<table>
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<th></th>
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<th>Total testosterone</th>
<th>SHBG</th>
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</table>
Erectile dysfunction

- IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
- Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
- Pathological SIEDY Scale 2 predicts impaired couple fitness and reduced partner love predicts MACE
- Organic, relational and intraspsychic factors mutually interact in the pathogenesis of ED and its associated CV risk
- Clinical and andrological evaluation as complete as possible
- First line biochemical evaluation: fasting glucose, lipid profile and total testosterone
**Instrumental evaluation of ED: Summary**

<table>
<thead>
<tr>
<th></th>
<th>Penile doppler ultrasound</th>
<th>NPT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EAU</strong></td>
<td>Rare cases</td>
<td>Rare Cases</td>
</tr>
<tr>
<td><strong>BSSM</strong></td>
<td>Rare cases</td>
<td>Rare Cases</td>
</tr>
</tbody>
</table>
Erectile dysfunction

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• First line biochemical evaluation: fasting glucose, lipid profile and total testosterone
• Instrumental test are suggested only in rare cases
Primary ED (not caused by organic disease or psychogenic disorder).

- Young patients with a history of pelvic or perineal trauma, who could benefit from potentially curative vascular surgery.
- Patients with penile deformities which might require surgical correction (e.g., Peyronie’s disease, congenital curvature).
- Patients with complex psychiatric or psychosexual disorders.
- Patients with complex endocrine disorders.
- Specific tests may be indicated at the request of the patient or his partner.
- Medico-legal reasons (e.g., implantation of penile prosthesis to document end stage ED, sexual abuse).

Although recent studies claim a good predictive value of PSV measurement in this flaccid state, the universal consensus is to perform the study under pharmacologically induced erection.

With regard to the drug for pharmacological induced erections, ICI with 10 mg PGE1 has been considered as a reasonable initial injection dose to be used but there is no consensus.

Redosing with trimix (alprostadil 10 mg + phentolamine 1 mg + papaverine 30 mg) has been suggested in confirming arterial insufficiency.
No arteriogenic ED

Arteriogenic ED

PSV cm/sec

25

35
Proportion free of MACE (Kalplan-Meier curves) as a function of baseline dynamic PDU (PGE1 10 µg) in a consecutive series of 1687 ED subjects at the University of Florence, Florence, Italy

Having a dynamic PSV < 25 cm/sec is associated with an increased risk of MACE (Cox regression HR=2.67 [1.42-5.04])

Corona et al., J. Sex. Med.2010; 7:1918
Proportion free of MACE (Kalplan-Meier curves) as a function of baseline flaccid PSV at PCDU in a consecutive series of 1687 ED subjects at the University of Florence, Florence, Italy.

Having flaccid PSV < 13 cm/sec is associated with an increased risk of MACE (Cox regression HR=1.69 [1.00-2.86]).
Flaccid Penile Acceleration as a Marker of Cardiovascular Risk in Men without Classical Risk Factors

Giulia Rastrelli, MD, PhD,* Giovanni Corona, MD, PhD,*† Francesco Lotti, MD,* Antonio Aversa, MD, PhD,‡ Marco Bartolini, MD,§ Mario Mancini, MD,‖ Edoardo Mannucci, MD,** and Mario Maggi, MD*

*Sexual Medicine and Andrology Unit, Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy; †Endocrinology Section, Maggiore Hospital, Bologna, Italy; ‡Department of Experimental Medicine, University of Rome “La Sapienza”, Rome, Italy; §Diagnostic Imaging Department, Azienda Ospedaliera Universitaria Careggi, Florence, Italy; ‖Urology Unit, San Paolo Hospital, Milan, Italy; **Diabetes Section Geriatric Unit, Department of Critical Care, University of Florence, Florence, Italy

DOI: 10.1111/jsm.12342
Annual incidence of MACE

Follow-up (years)

Proportion free of MACE

Rastrelli et al., J Sex Med 2014;11:173
<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>YES</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>2.791 [1.382-5.634]; p=0.004</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>3.297 [1.617-6.722]; p=0.001</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Body Mass Index ≥35 kg/m²</td>
<td>2.445 [1.296-4.615]; p=0.006</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Age ≥55 years</td>
<td>3.094 [1.000-9.756]; p=0.05</td>
<td>NS</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted for: Age, BMI, Lifestyle, CDS, D-PSV<25 cm/s

Rastrelli et al., J Sex Med 2014;11:173

Flaccid Acceleration vs. Flaccid Acceleration ≥ 1.17 m/sec² p<0.0001
Erectile dysfunction

- IIEF-15/IIEF-EFD/ IIEF-5 most frequently used self-reported questionnaires for ED
- Pathological SIEDY Scale 1 score predicts impaired penile blood flow and MACE
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- Organic, relational and intraspychic factors mutually interact in the pathogenesis of ED and its associated CV risk
- Clinical and andrological evaluation as complete as possible
- First line biochemical evaluation: fasting glucose, lipid profile and total testosterone
- Flaccid PSV < 13 cm/sec and flaccid acceleration < 1.17 m/sec2 predict CV events
Outline

- Erectile dysfunction
- Premature ejaculation
Standard Operating Procedures in the Disorders of Orgasm and Ejaculation

Chris G. McMahon, MBBS, FACHSHM,* Emmanuele Jannini, MD,† Marcel Waldinger, MD, PhD,‡ and David Rowland, PhD§

*Australian Centre for Sexual Health, Sydney, Australia; †University of L’Aquila, Endocrinology and Medical Sexology, Experimental Medicine, L’Aquila, Italy; ‡Leidenburg Hospital, Psychiatry and Neurosexology, The Hague, The Netherlands; §Valparaiso University, Psychology, Valparaiso, IN, USA

DOI: 10.1111/j.1743-6109.2012.02824.x

“. . . ejaculation which always or nearly always occurs prior to or within about one minute of vaginal penetration, the inability to delay ejaculation on all or nearly all vaginal penetrations, and the presence of negative personal consequences, such as distress, bother, frustration and/or the avoidance of sexual intimacy”
Intravaginal ejaculation latency time measured with stopwatch in 110 men with lifelong premature ejaculation

1. Ejaculation that always or nearly always occurs prior to or within about 1 minute of vaginal penetration (lifelong PE) or a clinically significant and bothersome reduction in latency time, often to about 3 minutes or less (acquired PE).

2. The inability to delay ejaculation on all or nearly all vaginal penetrations.

3. Negative personal consequences, such as distress, bother, frustration, and/or the avoidance of sexual intimacy.
Premature ejaculation

- IELT best method for PE evaluation in clinical trials
Male sexual inventories

- Self-report questionnaires on sexual function
- Self-report questionnaires on quality of life in ED patients
- Self-report questionnaires on satisfaction with ED treatments
- Structured interviews on ED
- Self-report questionnaires on premature ejaculation
Development and Validation of a Premature Ejaculation Diagnostic Tool

Tara Symonds\textsuperscript{a,\*}, Michael A. Perelman\textsuperscript{b}, Stanley Althof\textsuperscript{c}, François Giuliano\textsuperscript{d}, Mona Martin\textsuperscript{e}, Kathryn May\textsuperscript{a}, Lucy Abraham\textsuperscript{a}, Anna Crossland\textsuperscript{a}, Mark Morris\textsuperscript{a}
PEDT

5 items:

Difficulty in delaying ejaculation

Ejaculation before patient need

Ejaculation after minimal stimulation

Frustration related to PE

Leave partner sexually unfulfilled

Rosen et al., Eur Urol. 2007;52:565
PEDT

Score

\[ \leq 8 \text{ no PE} \]

\[ 9-10 \text{ probable PE} \]

\[ \geq 11 \text{ PE} \]
Premature ejaculation

- IELT best method for PE evaluation in clinical trials
- PEDT most frequently self reported questionnaire PE
Aetiology

PE

Life-long

Acquired

Psychological or relationship problems

Organic

Urological dysfunctions:
- Prostatitis
- ED

Hormonal dysfunction

Serefoglu et al., J Sex Med. 2014;11:1423
Prostatitis

EP Totali n=46
EP Prim. n=21
EP Second. n=25
Controlli sani n=30

Screponi et al., Urology 2001;58:198
Consecutive series of 244 men (mean age $35.2 \pm 7.8$) with couple infertility
Correlation between ejaculatory and erectile dysfunction

E. A. JANNINI,* F. LOMBARDO† and A. LENZI†


Possible relationship between ED and PE
## Risk of ED in subjects with or without PE

<table>
<thead>
<tr>
<th>Study name</th>
<th>Statistics for each study</th>
<th>Odds ratio and 95% CI</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Odds ratio</td>
<td>Lower limit</td>
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<tr>
<td>El-Sakka et al., 2003</td>
<td>4,919</td>
<td>2,677</td>
</tr>
<tr>
<td>Basile_fasolo et al., 2005</td>
<td>7,933</td>
<td>6,987</td>
</tr>
<tr>
<td>Laumann et al., 2005</td>
<td>5,621</td>
<td>3,174</td>
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<tr>
<td>Porst et al., 2006</td>
<td>9,303</td>
<td>4,764</td>
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<tr>
<td>El-Sakka et al., 2008</td>
<td>2,132</td>
<td>1,519</td>
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<tr>
<td>Malavige et al., 2008</td>
<td>4,410</td>
<td>2,076</td>
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<td>Son et al., 2010</td>
<td>1,491</td>
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<td>Vakalopoulus et al., 2011</td>
<td>3,963</td>
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<td>Wei et al., 2011</td>
<td>2,026</td>
<td>1,153</td>
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<tr>
<td>Lee et al., 2012</td>
<td>11,063</td>
<td>6,590</td>
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<tr>
<td>McMahon et al., 2012</td>
<td>3,280</td>
<td>2,322</td>
</tr>
<tr>
<td>Shaeer et al., 2012</td>
<td>2,573</td>
<td>1,721</td>
</tr>
<tr>
<td>Shaeer et al., 2013</td>
<td>18,940</td>
<td>2,367</td>
</tr>
<tr>
<td>Gao et al., 2013</td>
<td>1,586</td>
<td>1,289</td>
</tr>
<tr>
<td>Corona et al., 2014.</td>
<td>2,686</td>
<td>1,573</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>3,826</strong></td>
<td><strong>2,488</strong></td>
</tr>
</tbody>
</table>

**Meta Analysis**

Corona et al., J Sex Med. 2015;12:2291
Prevalence of sexual dysfunction before and after recovery from hyperthyroidism (A) and hypothyroidism (B)

Carani et al., J Clin Endocrinol and Metab 2005;90:6472
Premature ejaculation

- IELT best method for PE evaluation in clinical trials
- PEDT most frequently self reported questionnaire PE
- Prostatitis, ED and hyperthyroidism possible causes of acquired PE
Hazard ratio for premature ejaculation according to the hormonal milieu in 1962 subjects with sexual dysfunction (w/o hyperprolactinemia and medication) at the University of Florence, Italy

Adjusted for:
Age
Smoking and drinking behaviours
ED severity
Anxiety and depressive symptoms
Psychiatric disease

Corona et al., Nat Rev Urol. 2012;9:508
CONCLUSIONS

• Organic, relational and intrapsychic factors mutually interact in the pathogenesis of ED and its associated CV risk

• Prostatitis, hyperthyroidism and ED should be ruled out in PE subjects
Acknowledgements

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Prof M. M. Maggi