How Cardiologists Should Approach Patients Affected by Vasculogenic Erectile Dysfunction

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Disclosure

Speaker name: .................................................................

I have the following potential conflicts of interest to report:
☒ Consulting and Research Grant from Concept Medical
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐

☐ I do not have any potential conflict of interest
Sexual history taking should **always** be conducted in a culturally sensitive manner, taking account of the individual's background and lifestyle, status of the partner relationship, and the clinician's comfort and experience with the topic.

Sexual inquiry should be incorporated into all new patient encounters, when possible, if only to ask one or two broad questions such as the following:

a) Are you sexually active?

b) Do you have any sexual concerns or problems you would like to discuss?”
## Reasons Given by Patients and Clinicians for not Taking a Sexual History

<table>
<thead>
<tr>
<th>Patients</th>
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<tbody>
<tr>
<td>Lack of opportunity</td>
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<tr>
<td>Sense of embarrassment and shame</td>
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<td>Societal taboo against the open discussion of sexuality</td>
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<td>Not feeling optimistic about the outcome of such a discussion</td>
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<td>Uncertain whether sexual problems/concerns are part of health care</td>
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<td>Uncertain which specialty treats sexual problems/concerns</td>
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<table>
<thead>
<tr>
<th>Clinicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time constraints</td>
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<tr>
<td>Unrealistic fear of offending the patient</td>
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<tr>
<td>Deficits in communication skills</td>
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<td>Reimbursement concerns</td>
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<td>Lack of available or approved treatments</td>
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<td>Growing knowledge gap between developments in sexual medicine and the clinical skills of the clinician</td>
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<td>Discomfort about asking sexual questions to a patient of the opposite gender</td>
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<td>Discomfort about asking sexual questions to a patient under age 18 or over 65</td>
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<tr>
<td>Inadequate training in sexual health</td>
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Which Part of the Sexual Response is Abnormal?

A clear description of the problem is vital. The following information should be elicited:

- Whether the patient has **difficulty obtaining an erection**
- Whether the **erection is suitable for penetration**
- Whether the **erection can be maintained** until the partner has achieved orgasm
- Whether **ejaculation occurs**
- Whether both partners **experience sexual satisfaction**
The Scenarios

Tumescence and Penetration Problem

Arterial Insufficiency

Erection Maintaining Problem

Venous Insufficiency

Mixed Insufficiency

Sangiorgi G et al. Minerva Cardioangiol 2020;
# IIEF-5 for Evaluation of Erectile Dysfunction

**Over the past 6 months:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do you rate your confidence that you could get and keep an erection?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. When you had erections with sexual stimulation, how often were your erections hard enough for penetration?</td>
<td>Almost never/never</td>
<td>A few times (much less than half the time)</td>
<td>Sometimes (about half the time)</td>
<td>Most times (much more than half the time)</td>
<td>Almost always/always</td>
</tr>
<tr>
<td>3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?</td>
<td>Almost never/never</td>
<td>A few times (much less than half the time)</td>
<td>Sometimes (about half the time)</td>
<td>Most times (much more than half the time)</td>
<td>Almost always/always</td>
</tr>
<tr>
<td>4. During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?</td>
<td>Extremely difficult</td>
<td>Very difficult</td>
<td>Difficult</td>
<td>Slightly difficult</td>
<td>Not difficult</td>
</tr>
<tr>
<td>5. When you attempted sexual intercourse, how often was it satisfactory for you?</td>
<td>Almost never/never</td>
<td>A few times (much less than half the time)</td>
<td>Sometimes (about half the time)</td>
<td>Most times (much more than half the time)</td>
<td>Almost always/always</td>
</tr>
</tbody>
</table>

**Severity:**
- **Severe:** 6-10
- **Moderate:** 11-16
- **Slight:** 17-25
- **Absence:** 26-30

Dynamic Doppler for Erectile Dysfunction

- **Inflow insufficiency**: $\text{PSV} < 25 \text{ cm s}^{-1}$, $\text{EDV} < 5 \text{ cm s}^{-1}$, $\text{RI} > 0.8$;
- **Venous leakage**: $\text{PSV} > 25 \text{ cm s}^{-1}$, $\text{EDV} > 5 \text{ cm s}^{-1}$, $\text{RI} < 0.8$;
- **Mixed pathology**: $\text{PSV} < 25 \text{ cm s}^{-1}$, $\text{EDV} > 5 \text{ cm s}^{-1}$, $\text{RI} < 0.8$
Angio-CT for Erectile Dysfunction

Atherosclerotic Distribution in 476 Pelvic Angio-CT

Non-analyzable segments, n/N (%) 95/6,664 (1.4)
Patients with obstructive lesions (diameter stenosis ≥50%), n/N (%) 348/476 (73)
Lesions per patient (n=348) 2.6 ± 1.7
Lesion location (N=921)
  Common iliac a. (Zone 1), n (%) 3 (0.3)
  Internal iliac a. (Zone 2), n (%) 46 (5)
  Ant division (Zone 3), n (%) 53 (6)
  Proximal Int. pudendal a. (Zone 4A), n (%) 110 (12)
  Distal Int. pudendal a. (Zone 4B), n (%) 268 (29)
  Common penile a. (Zone 5A), n (%) 273 (30)
  Distal penile a. (Zone 5B), n (%) 133 (14)
  Obturator a. (Zone 6), n (%) 35 (4)

Diehm N et al. J EVT 2019; 26: 181-190
Sangiorgi G et al It J Cardiol; 2016; 10: 125-21S
CO₂ Angiography for Vasculogenic ED

A B

Pressure 220 mmHg
Volume 80 mL

C D

Normal CO₂ Distribution
Healty Cavernous Tissue

Abnormal CO₂ Distribution
Fibrotic Cavernous Tissue
Contrast Media Subtraction Angiography

- AP Projection
- Omolateral 45° Caudal
- Omolateral 45° Cranial
Conclusions

• Cardiologists should always taken sexual history during patient examination
• The rule «if we don’t ask, they don’t say» is always true in this setting
• IEF-5 questionnaire and Dynamic Doppler examination are usually sufficient to make diagnosis of vasculogenic erectile dysfunction
• Angio-CT and Co₂ angiography should complete the diagnostic «track» and give detailed information on atherosclerotic disease presence and healthy status of the cavernous bodies