How Cardiologists Should Approach Patients Affected by Vasculogenic Erectile Dysfunction

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Disclosure

Speaker name:

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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

1st: Sexual Clinical History

- 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

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

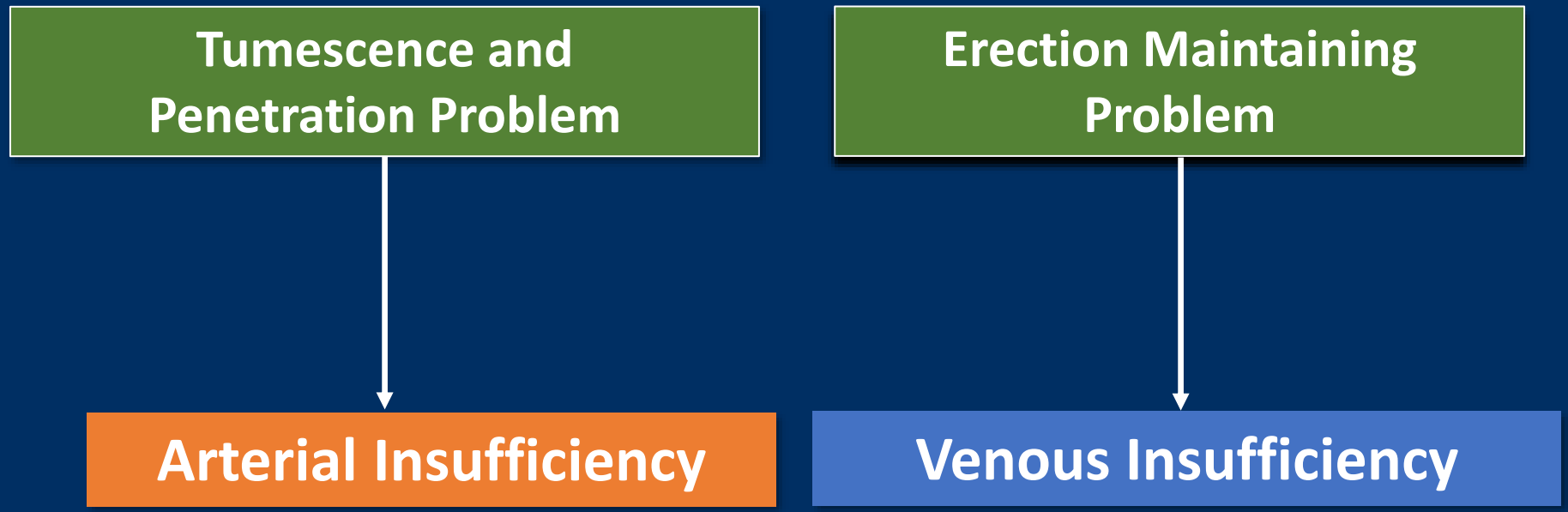
Althof SE et al. J Sex Med 2013;10:26–35

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



Sangiorgi G et al. Minerva Cardioangiol 2020;

IIEF-5 for Evaluation of Erectile Dysfunction

Over the past 6 months:

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

Severe
6-10

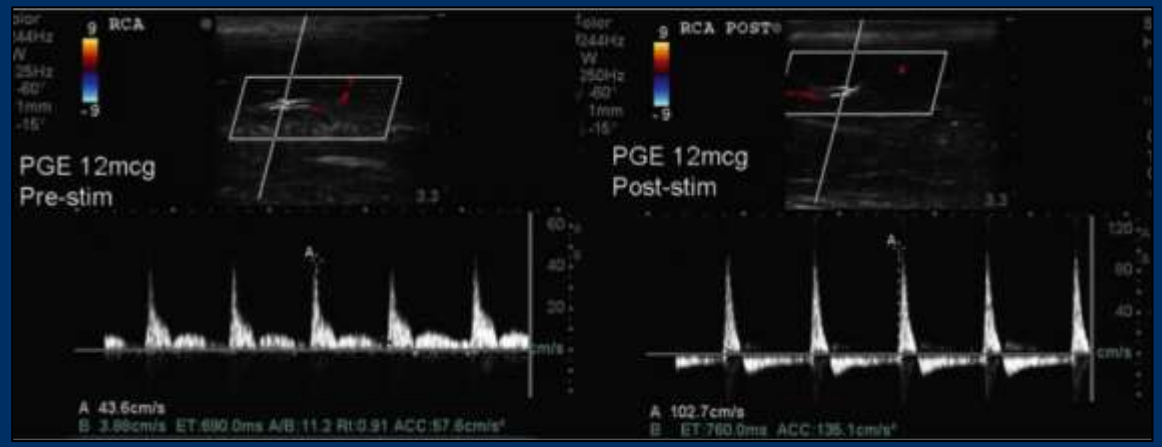
Moderate
11-16

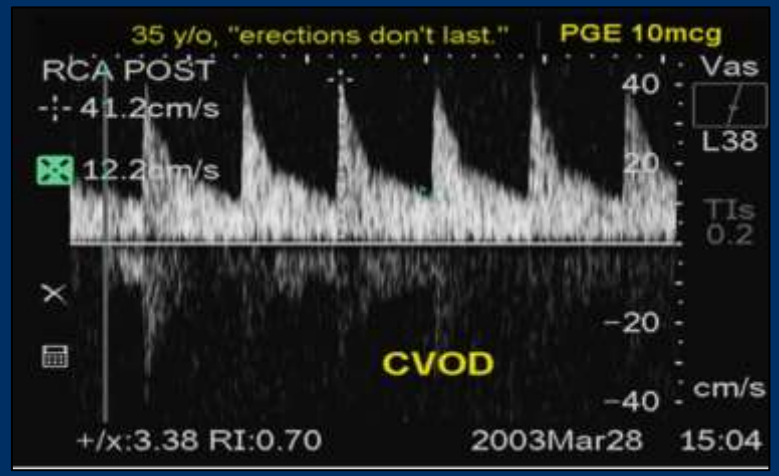
Slight
17-25

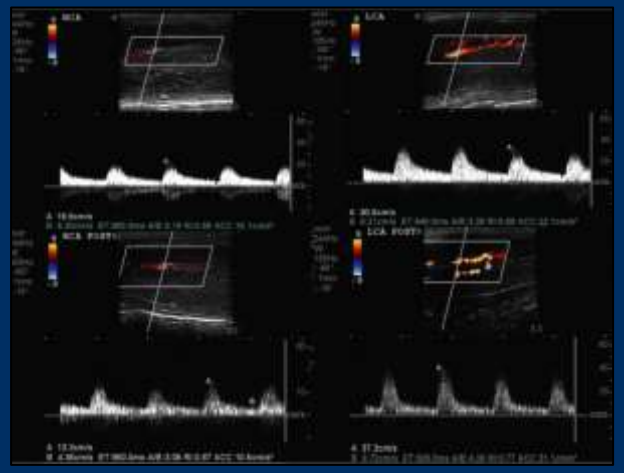
Absence
26-30

Hatzichristou D et al. J Sex Med 2016; 13:1166-1182

Dynamic Doppler for Erectile Dysfunction



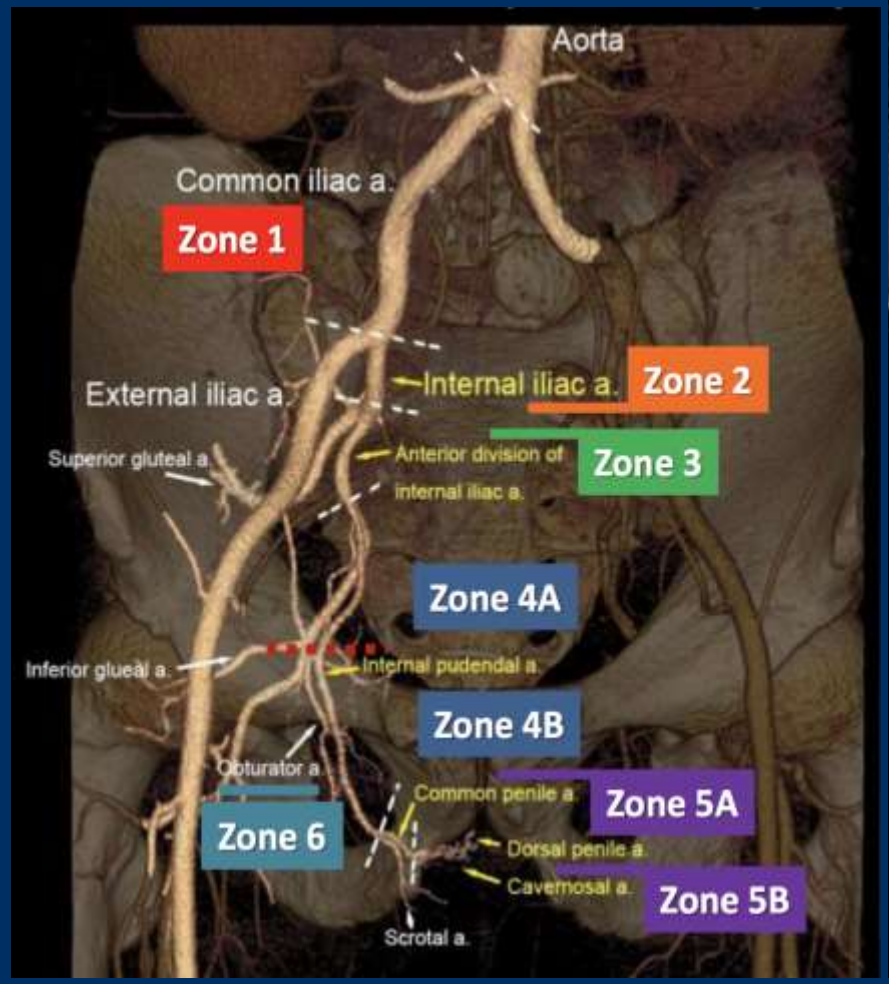




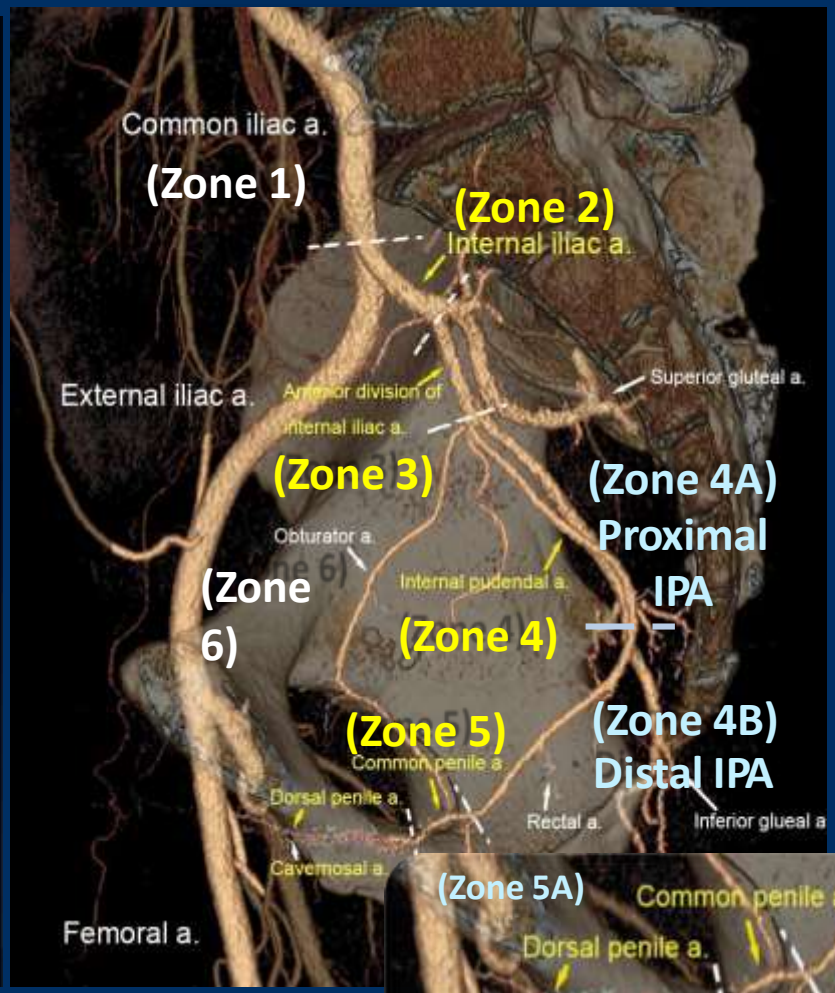
- Inflow insufficiency: PSV <25 cm s^{-1}, EDV <5 cm s^{-1}, RI > 0.8;
- Venous leakage: PSV > 25 cm s^{-1}, EDV > 5 cm s^{-1}, RI < 0.8;
- Mixed pathology: PSV < 25 cm s^{-1}, EDV > 5 cm s^{-1}, RI < 0.8

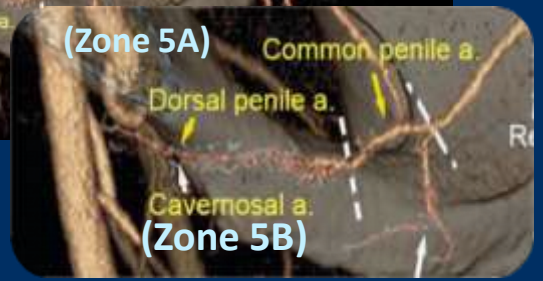
Angio-CT for Erectile Dysfunction

Anteroposterior Projection



Lateral Projection





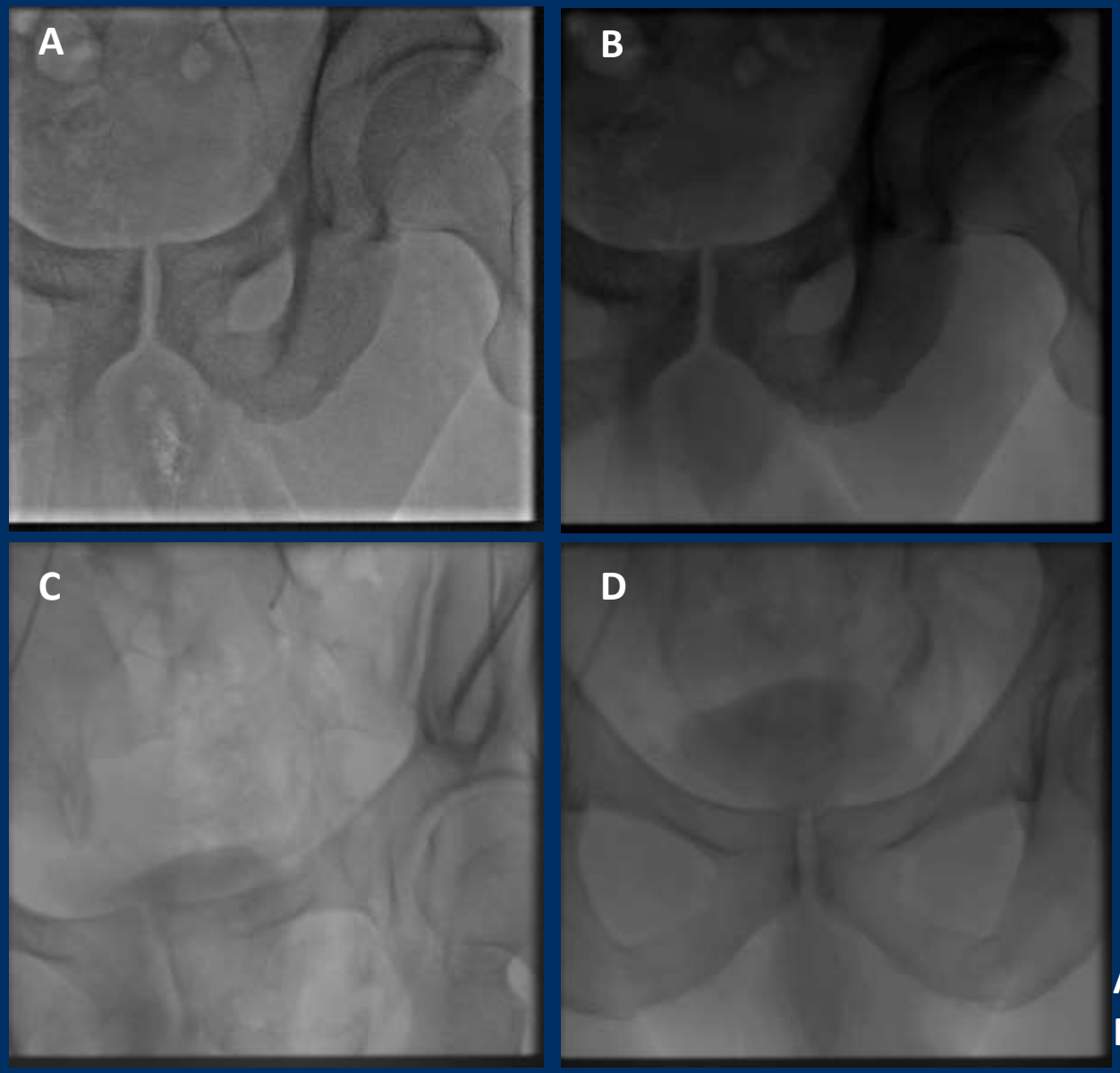
Wang TD, et al. J Am Coll Cardiol 2013;62:B160

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)

Wang TD et al. J Am Coll Cardiol 2013;62:B160
Diehm N et al. JEVT 2019; 26: 181-190
Sangiorgi G et al It J Cardiol; 2016; 10: 12S-21S

CO_2 Angiography for Vasculogenic ED



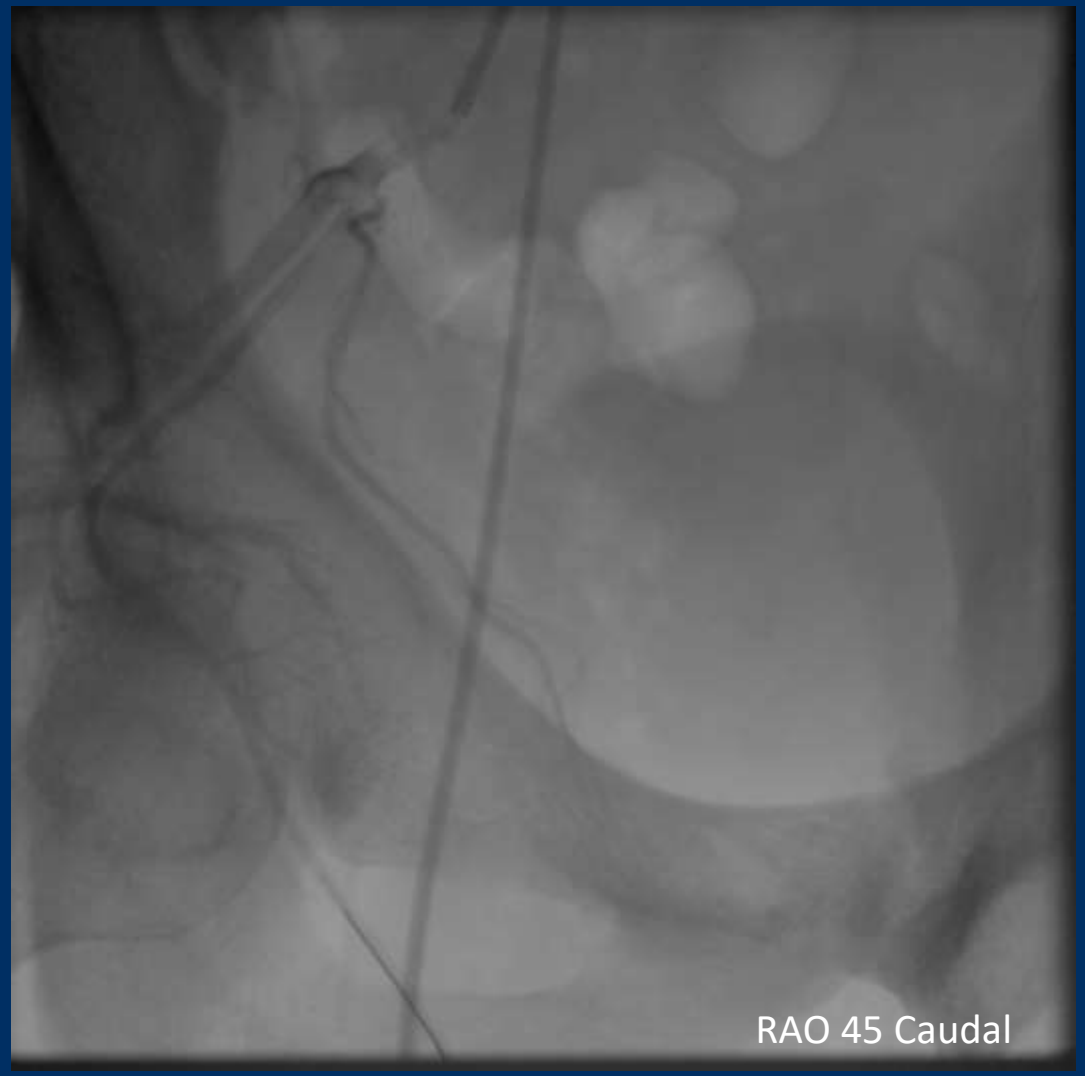
Pressure 220 mmHg
Volume 80 mL

Normal Co_2 Distribution
Healty Cavernous Tissue

Abnormal Co_2 Distribution
Fibrotic Cavernous Tissue

LINC

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 Co_2 angiography should complete the diagnostic «track» and give detailed information on aterosclerotic disease presence and healthy status of the cavernous bodies