CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
JANUARY 19-21 2017
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER
PARIS, FRANCE

Sexual dysfunction following aortic repair: do we need a trial?

Malikov S, Koenig J,

Settembre N, Bouzian Z

Service de Chirurgie Vasculaire,
Nancy, France

www.cacvs.org

Disclosure

Speaker name: Malikov Serguei

I have the following potential conflicts of interest to report:

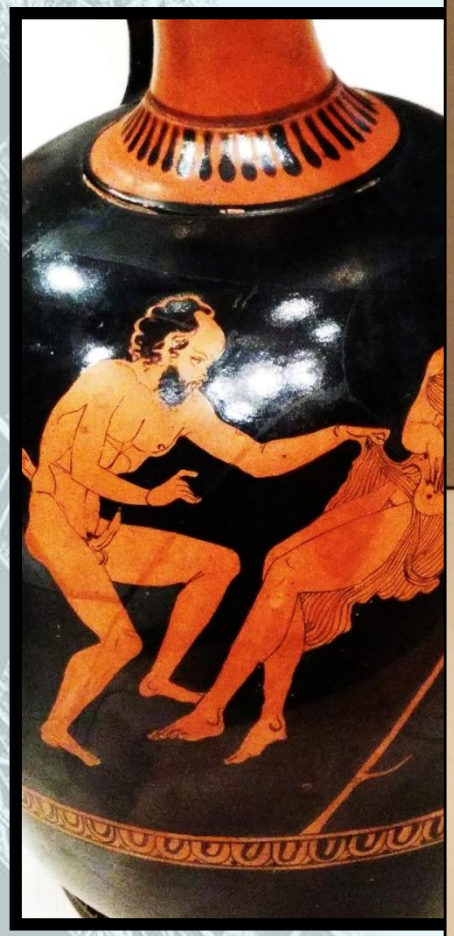
Consulting:

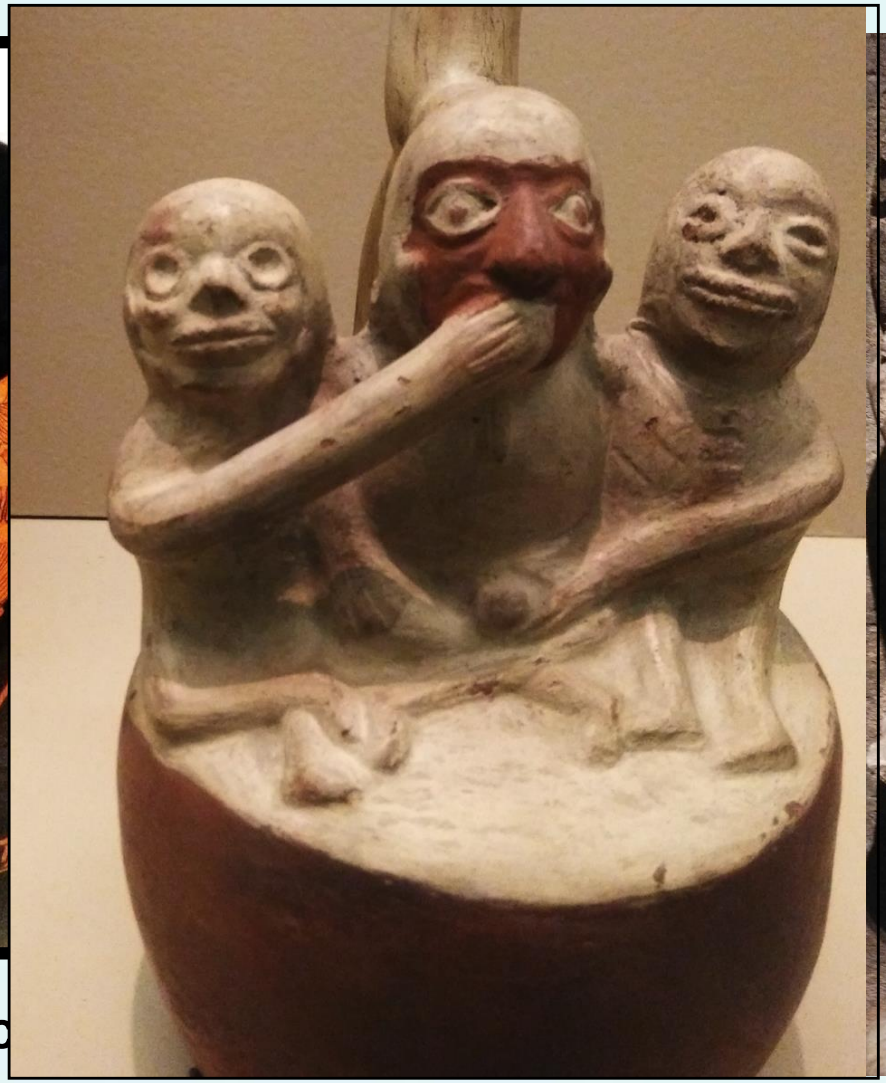
Bard

Gore

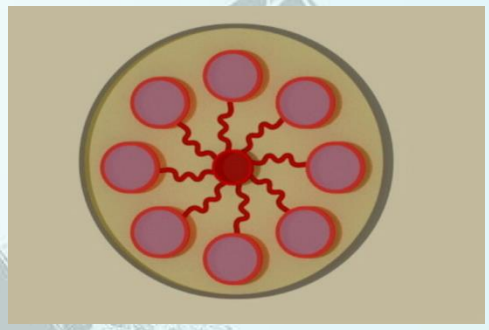
Siemens

Sexual function is an important quality of life criterion





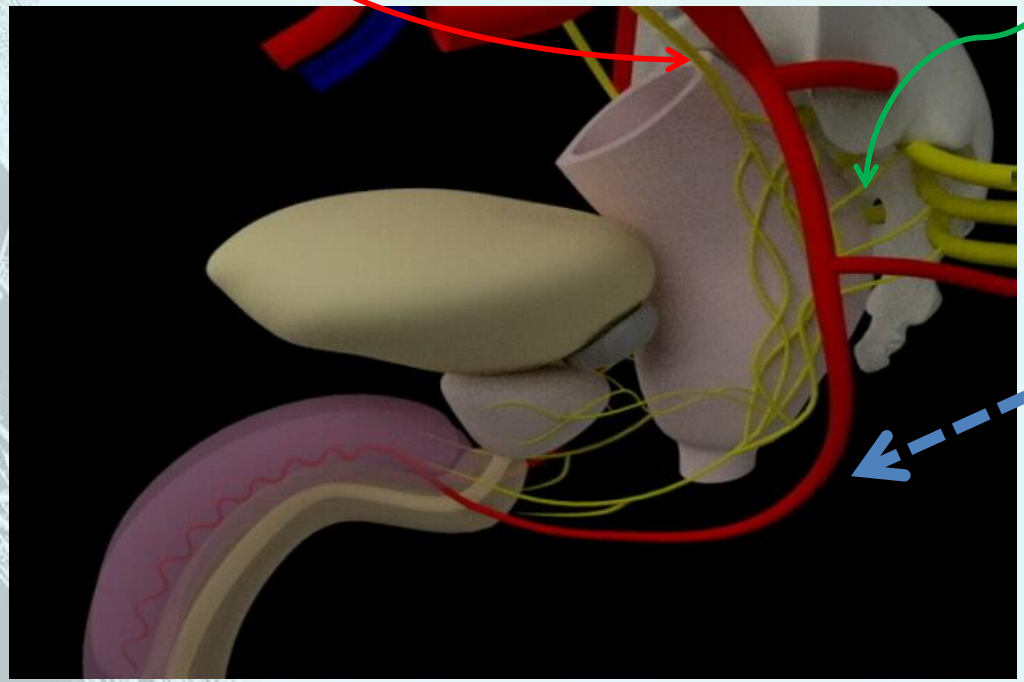
Wagner G, Impotenc



Penile erection

sympathetic fibres
have an inhibitory effect

parasympathetic fibres
are responsible for the erection



arterial inflow:
- internal iliac arteries,
- internal pudendal a.
- corpora cavernosa a.
  > 25 ml/min

Ejaculation

Sympathetic fibres

(lumbar sympathetic chain Th12-L3)

Emission

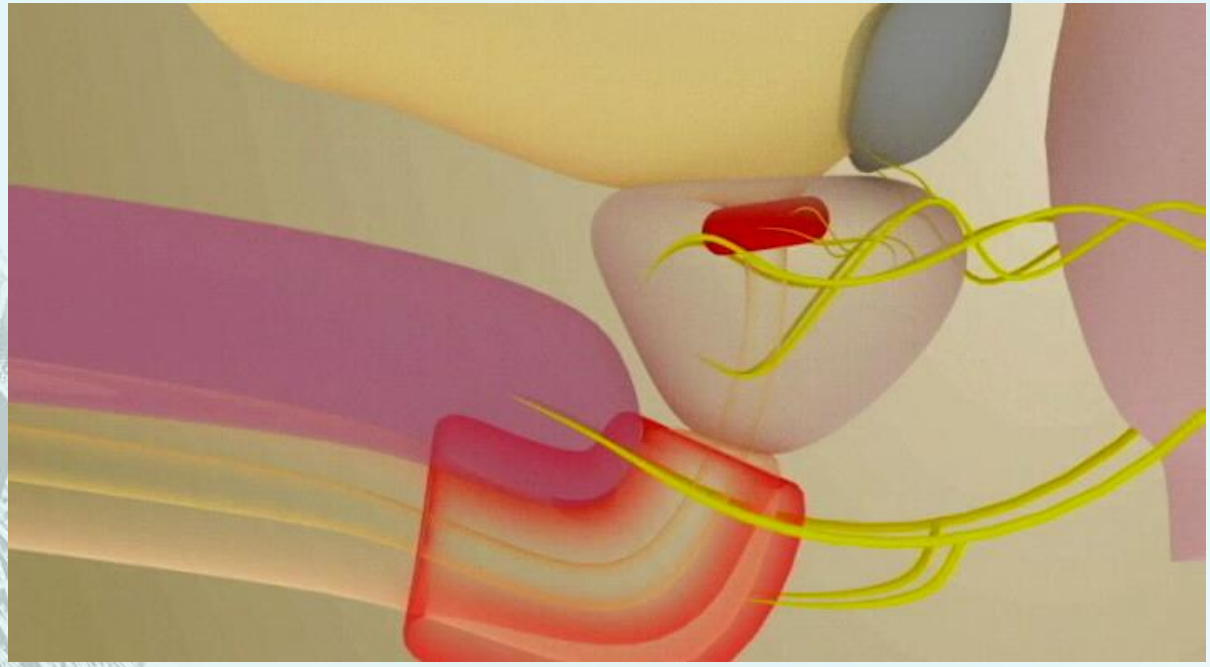
- Vesical collar closure
- Prostate contraction

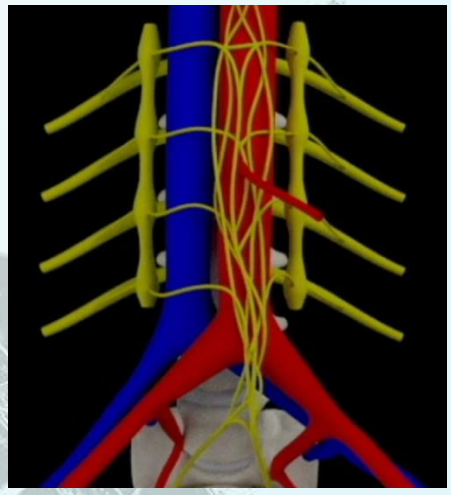
Parasympathetic fibres

(Sacral parasympathetic center lower and upper hypogastric plexus)

Expulsion

- Periurethral muscle contraction





Aorto-iliac surgery

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
JANUARY 19-21 2017
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER
PARIS, FRANCE

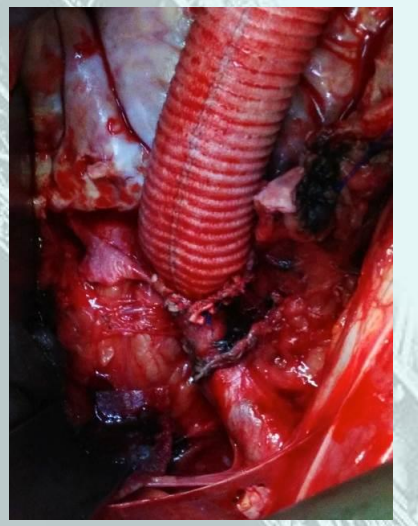
autonomic nerve injury:
dissection
or clamping

Erectile dysfunction

- Imbalance
- Psychogenic erectile dysfunction

Ejaculation dysfunction ++ :

- "**dry** orgasm,"
- Retrograde ejaculation

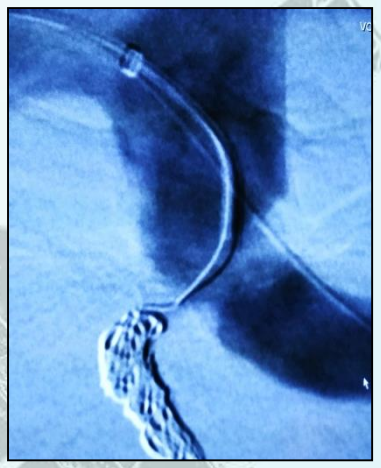


4-38 %

Hartmann, Br J Cancer, 1999

Unilatéral	21 %
Bilatéral	75 %

Jacobsen, Br J Cancer, 1999



Endovascular treatment of aortoiliac occlusive lesions / EVAR

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
JANUARY 19-21 2017
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER
PARIS, FRANCE

Arterial Insufficiency of corpora cavernosa

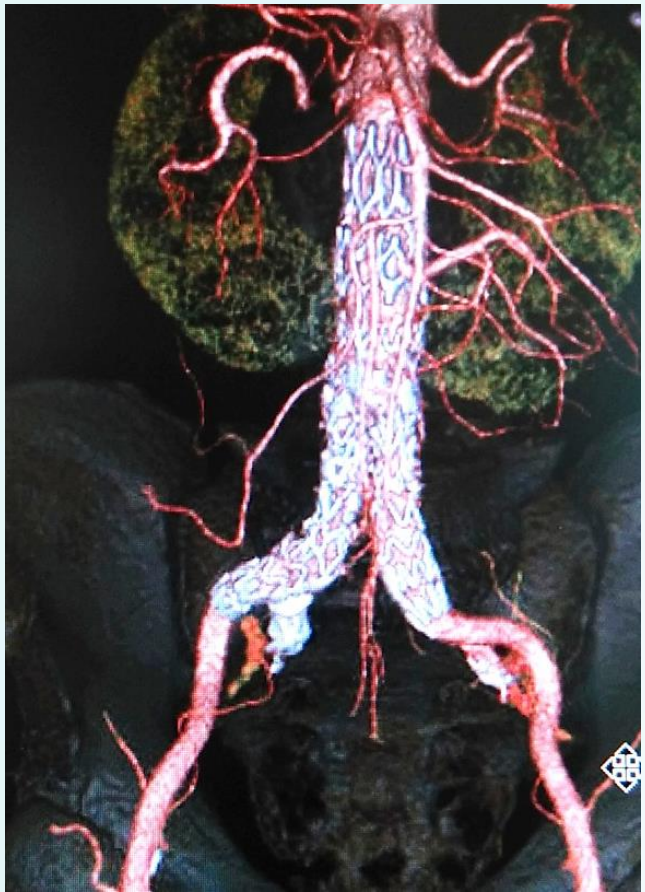
disruption of blood flow

intentional

- embolization of the internal iliac a.

inadvertent

- over-stenting
- dissection
- atheromatous emboli



Jimenez, Vascular, 2014

Prospective assessment of sexual dysfunction in patients requiring surgical treatment of an aorto-iliac disease. Comparison of endovascular and open surgery

- elective surgery (OR and EVAR)
- Sexual Health Inventory for Men questionnaire (SHIM/IIEF)
- questionnaire preoperatively and 3 month

- Erectile dysfonction
- Ejaculations dysfonction
- Overall sexual satisfaction

Open aortoiliac surgery
N=20

EVAR
N=26

Patients' (n=36) Baseline characteristics

Mean age (years)	63.4
Tobacco use	33.9

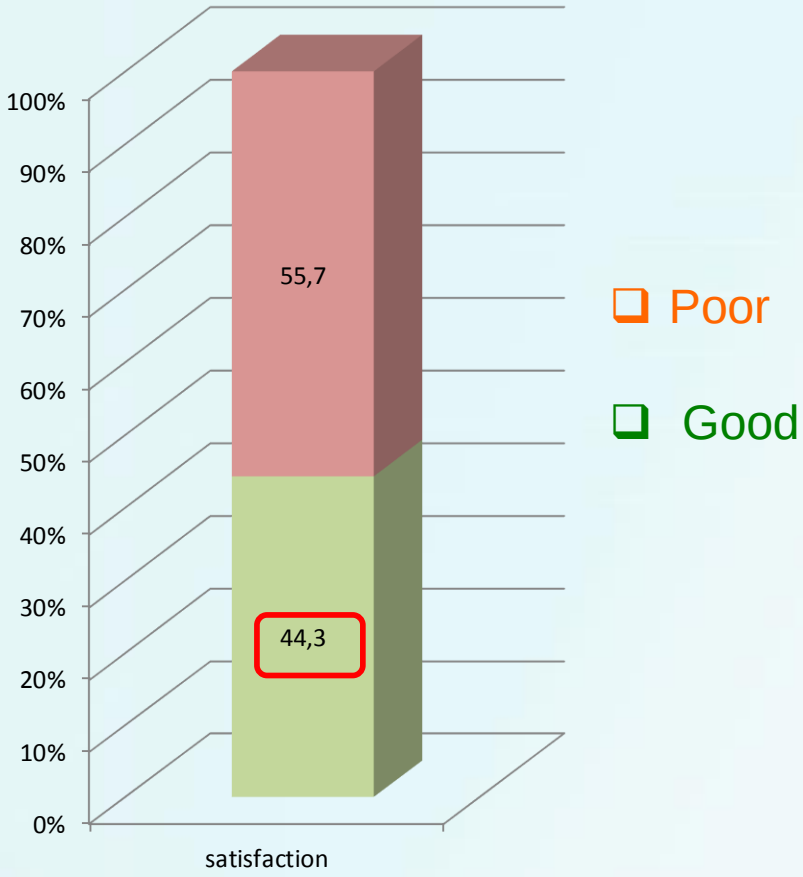
Patients' characteristics	%
Tobacco use	39
Hypertension	75
Hyperlipidaemia	58
Diabetes	6
Insulin controlled	3
Cardiopathi	50
Coronary artery disease	39
Chronic obstructive lung disease	19
Renal disease (GFR less than 60 ml/min)	33
Prostat operated	6
Drug addiction	0
Chronic Ethylism	14
Peripheral vascular disease	31
Aortic and / or iliac aneurysm	78

iatrogenic drugs	%
Anti-androgen	6
Beta-blocker	50
Alpha-blockers	8
Corticosteroids	6
At least 1 of 4	58

preoperative sexual function

Overall Satisfaction with Sexual Intercourse

	Impaired Erectile Function	Correct erectile function	
Poor satisfaction	94.7 %	0 %	P<0.0001
Good Satisfaction	5.3 %	100 %	

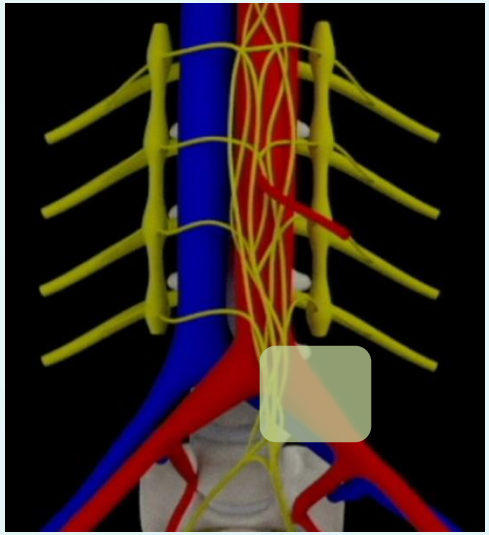


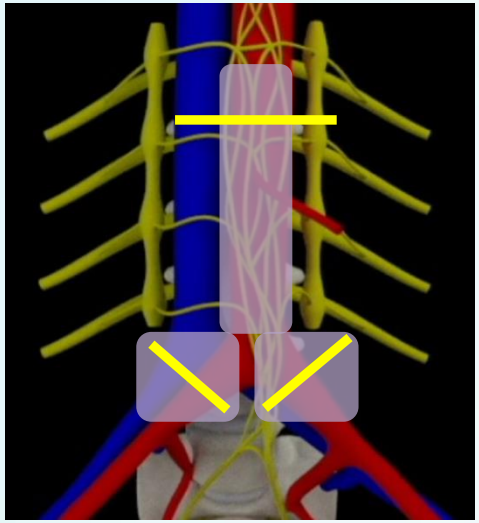
Study of surgical factors

		Erectile dysfunction p	Ejaculations dysfunction p
Dissection	aorta	0.09	0.0007
	Right Primary iliac artery	0.08	0.002
	Right iliac bifurcation	0.49	0.14
	Right internal iliac artery	1.00	0.51
	Left primary iliac artery	0.02	0.001
	Left iliac bifurcation	0.40	0.12

The effect of dissection of the efferent sympathetic pathway and **upper hypogastric plexus**

Koenig J, Prog Urol. 2014





Post-operative sexual function

%	OR	EVAR
↘Erections	42.8	7.7
↘ Ejaculation	45	0
↘ Satisfaction	38,4	7,7
↘ Frequency	31.3	35.7

HIGH RISK

LOW RISK

- n=0 embolization of the internal iliac artery (IIA)
- n=0 modification treatment

involving the autonomic nerve !

Quality of Life Before and After Endovascular and Open Repair of Asymptomatic AAAs: A Prospective Study

Martin Malina, MD, PhD; Marie Nilsson, RN; Jan Brunkwall, MD, PhD; Krasnodar Ivancev, MD, PhD*; Timothy Resch, MD, PhD*; and Bengt Lindblad, MD, PhD

Departments of Vascular Surgery and *Radiology, Lund University, Malmö University Hospital, Malmö, Sweden

Purpose: To assess how patients perceive health-related quality of life (HRQOL) after endovascular and open abdominal aortic aneurysm (AAA) repair.
Methods: Forty-two consecutive patients (33 men; mean age 74 years, range 46–81) were assessed prospectively before and after elective endovascular (n = 21) and open (n = 21) AAA repair. Aneurysm morphology dictated the type of repair. The two patient groups

(Table 3). The results were similar for both groups, and the only significant differences between the groups appeared at 1 month for housework and sex (both p = 0.04).

ardiopulmonary function. Data
am Health Profile (NHP) score
obility, sleep, emotion, energy,
toperatively. Specific treatment

J Endovas Ther 2000

Prospective follow-up of sexual function after elective repair of abdominal aortic aneurysms using open and endovascular techniques

Monica Pettersson, RN, MSc,[a,b] Erney Mattsson, MD, PhD,[a] and **Ingegerd Bergbom, RN, RNT, PhD,[b]** *Gothenburg, Sweden*

Methods: **Seventy-six patients participated in the study (40 OR and 36 EVAR). A questionnaire was used to measure the sexual function preoperatively, and then after one month and one year following surgical interventions. Four aspects related to sexual function were studied: interest in sex, quality of erection, ability to achieve orgasm, and ejaculation. Two questions about the preoperative information covering the sexual function and another two questions about the patients concern for their sexual activities were also added. Fisher's exact test was used to test for significant relative changes within each group of treatment for the variables studied.**

Patients who preoperatively had reported some form of sexual interest had experienced a significant impairment in sex ($P < .039$) one year after the interventions. Patients treated with EVAR reported a significant impairment in the quality of erection ($P < .033$) and their ability to achieve ejaculation ($P < .047$) one year after the operation. A similar tendency was seen in the OR group, but did not achieve statistical significance.

Conclusion: **Few patients were given or understood any preoperative information concerning the risk and possibility of a negative impact on their sexual function following surgical interventions. This was especially reported by patients in the EVAR group. Following the operation, the reported sexual interest and ability was decreased among patients in both groups. When only those patients who had reported some form of interest in sexual activity before the intervention were analyzed, a small significant impairment in quality of erection and achieving ejaculation could be found during the one year follow-up in the EVAR group. (J Vasc Surg 2009;50:492-9.)**

Impairment of erectile function after elective repair of abdominal aortic aneurysm

P Majd, W Ahmad, Th Luebke, M Gawenda and J Brunkwall

The purpose of the present study was to compare the functional change of erectile dysfunction after endovascular repair (EVAR) and open repair (OR) of abdominal aortic aneurysm.

Between April 2009 and December 2011, male patients admitted for elective treatment of an asymptomatic infrarenal abdominal aortic aneurysm were included. The erectile function was evaluated by using a validated KEED questionnaire. All patients filled out the questionnaire preoperatively and postoperatively after one year.

The number of patients with an increase of erectile dysfunction was 8 (26.6%) to 16 (53.3%) in open repair group vs. 30 (42.6%) to 40 (58.8%) in endovascular aneurysm repair. There was no statistically significant difference between open repair and endovascular aneurysm repair groups in order of new incidence of erectile dysfunction ($p = 0.412$). The study showed an increase in the mean value of Erectile Dysfunction -Score postoperatively in both the groups as well.

The present study showed an increase of erectile dysfunction postoperatively, but the difference between the two groups was not statistically significant.

Vascular 2015

Prospective studys of Sexual Dysfunction After Conventional and Endovascular AAA Repair

Authors	Years	Patiens OR/EVAR	Questionnaire	follow-up	erectile dysfunction	Ejaculation dysfunction
Malina M	J Endovas Ther 2000	21/21	NHP HRQOL	1,3m	OR>EVAR	P=0.04
Prinssen M	J Endovas Ther 2000	76/77	MOSGSF	3,6,12m	NP	OR=EVAR
Pettersson	JVS 2009	40/36	IIEF	1m,12m	OR<EVAR P< .O33	OR<EVAR P< .047
Majd P	Vasc 2015	30/70	KEED	12m	OR=EVAR	NP
Koenig J	Prog Urol 2014	20/16	SHIM/IIEF	3m	OR>EVAR p=NS	OR>EVAR p=NS

Disscution

- The data from the studies are heterogeneous and discordant
- Many questions remain unresolved
- Further studies are needed


thank you for your attention

CONTROVERSES ET ACTUALITES EN CHIRURGIE VASCULAIRE

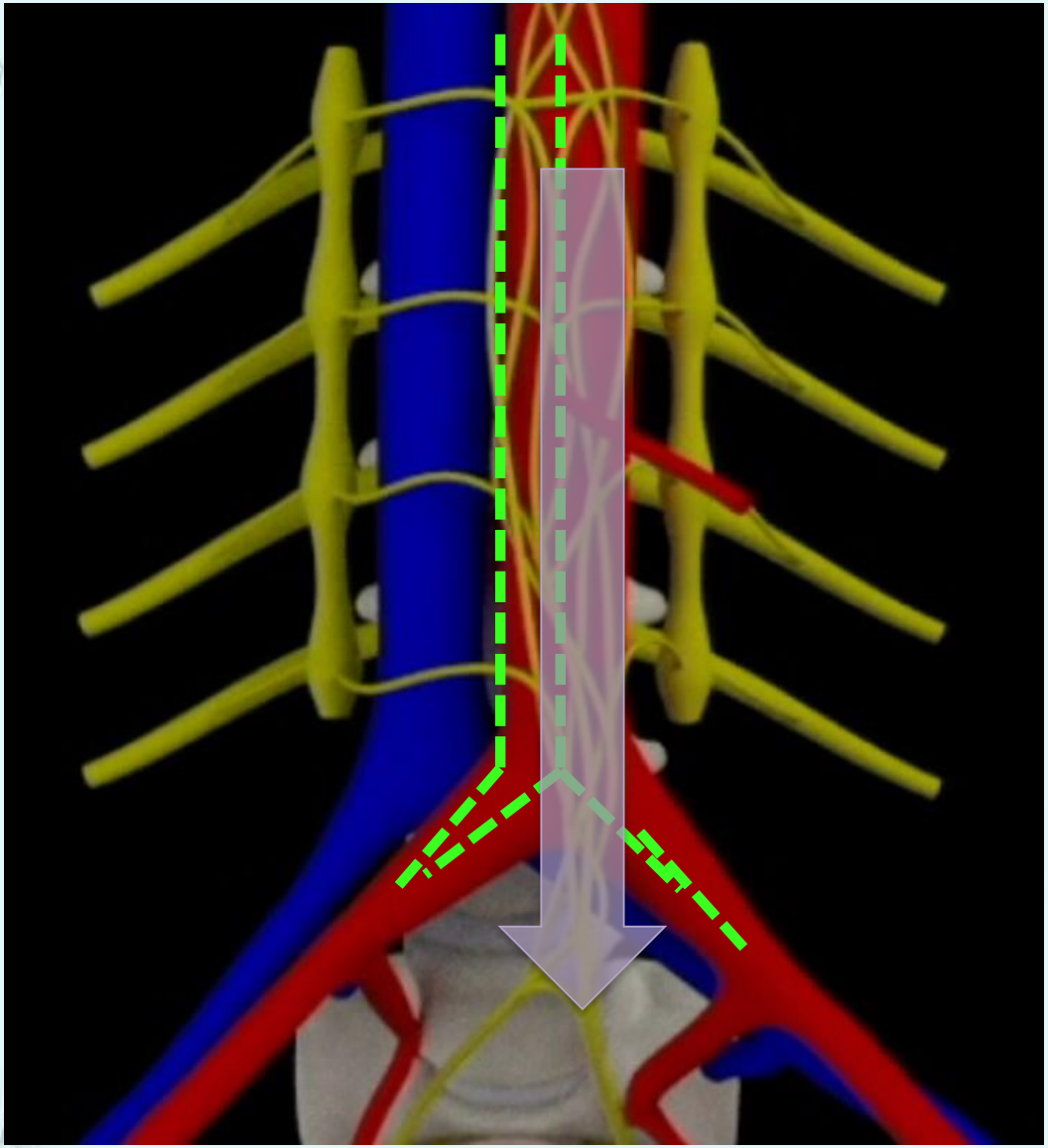
CONTROVERSIES & UPDATES IN VASCULAR SURGERY

JANUARY 19-21 2017

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER

PARIS, FRANCE

www.cacvs.org



« nerve sparing dissection »

Sexual function can be maintained in 90% of cases.

Sabri, Lancet, 1971