

Vasectomy Reversal

Techniques and Outcomes

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Introduction

- 500 000 vasectomies/yr in the USA
- 7200 vasectomies/yr in Belgium

Changing social circumstances

- 6% request for reversal in USA
- 7% request for reversal in Germany
- 290 vasectomy-reversals in Belgium

Introduction

Parenting a child after vasectomy:

- Vasectomy reversal
- ICSI after sperm retrieval (SR)
- Donor insemination
- Adoption

Indications

- New relationship with renewed child wish.
- New child wish during the same relationship
- *Post vasectomy pain*
- *Psychological issues*

Contra indications

- Common surgical CI
- Scrotal skin infection
- UTI
- Vasectomy ass. to fallopian tube obstruction

Kolettis and Thomas, 1997

- Testicular Atrophy
- Psychological issues

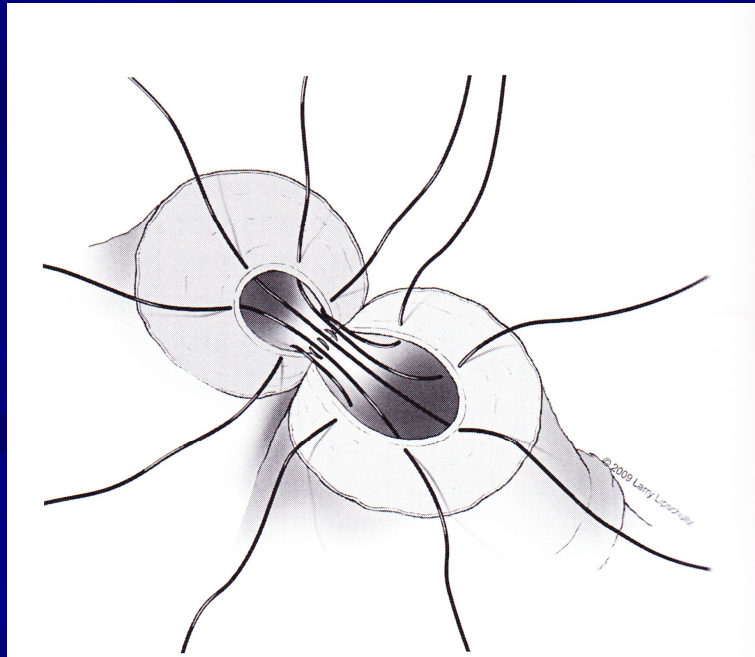
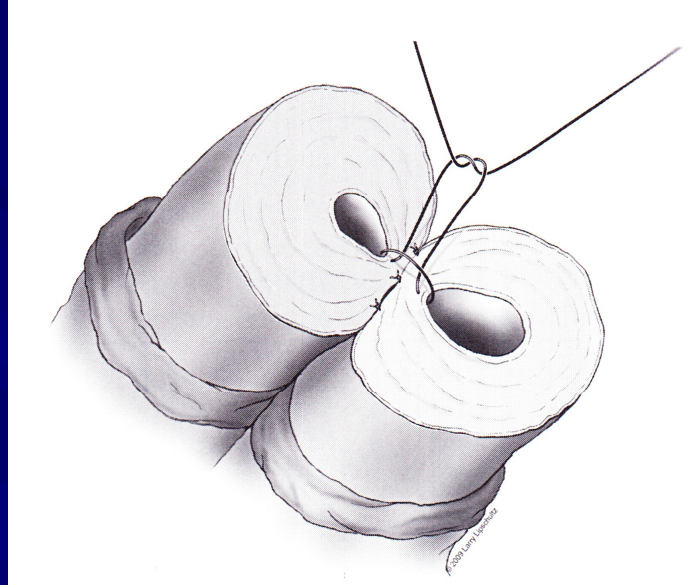
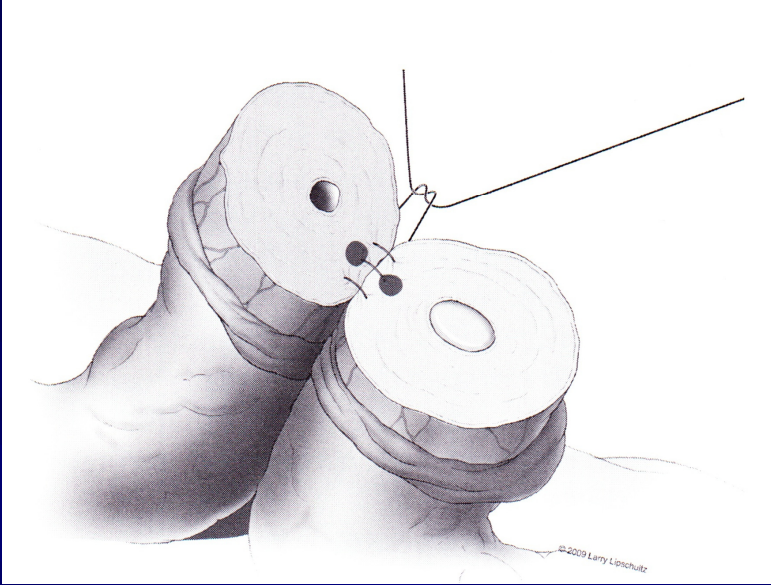
Vasovasostomy

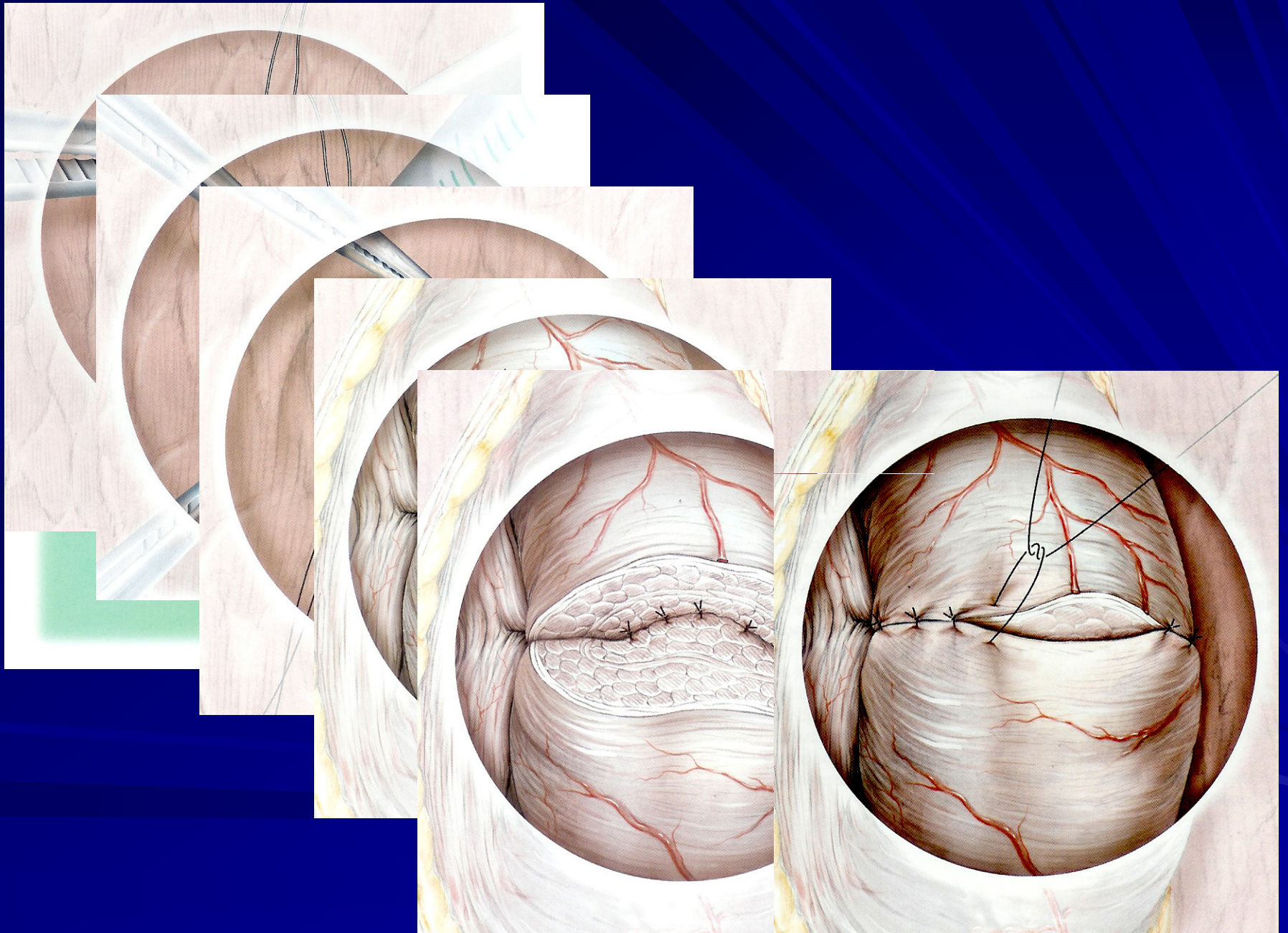
- **Macrosurgery and low magnification.**
 - 6/0 – 7/0 sutures
 - Transluminal stitches
 - Only one layer techniques
- **Microsurgery i.e. high magnification**

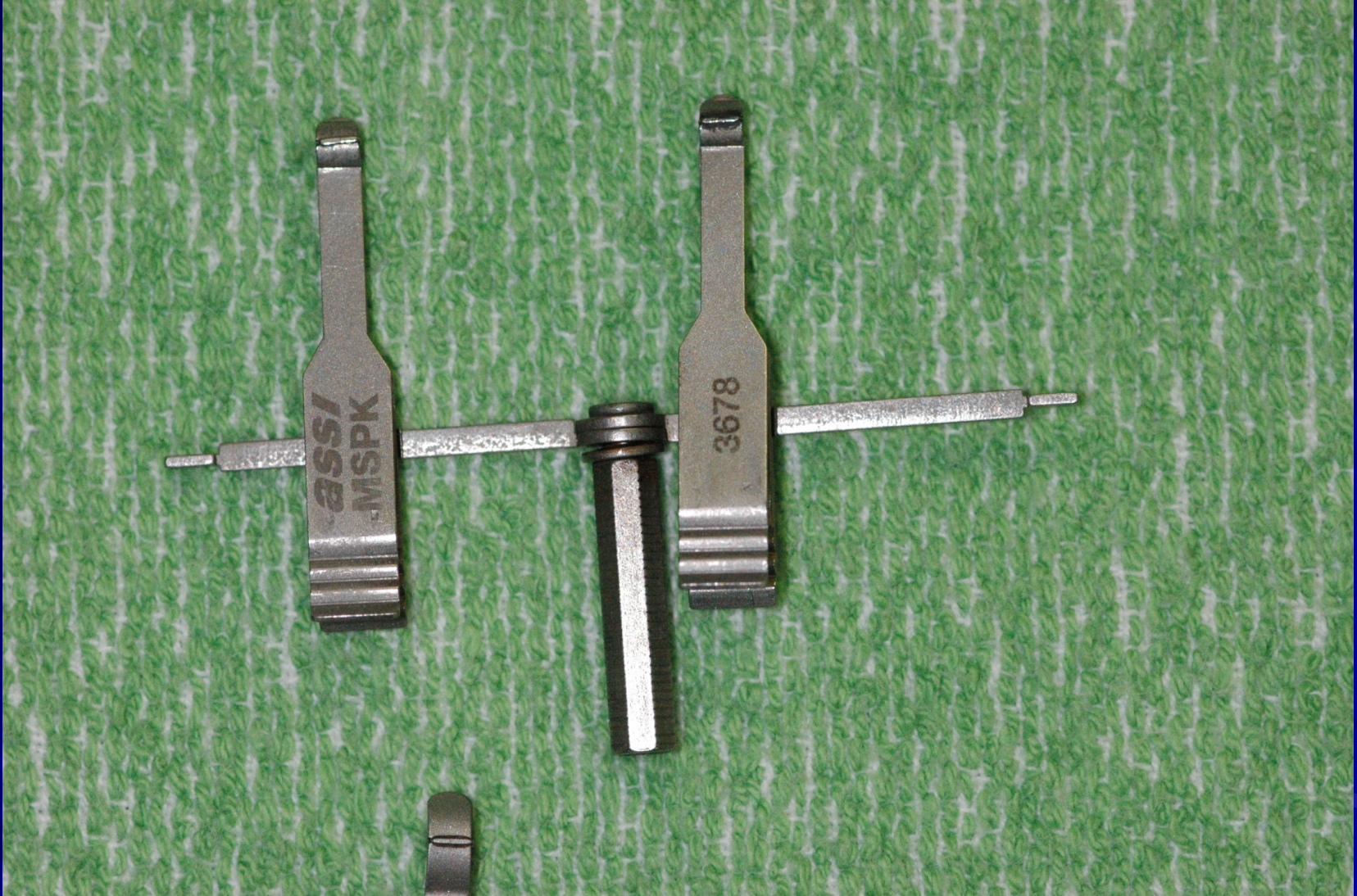
The Golden Standard:
the two layer technique

Key points of the procedure

- Good approximation of the *mucosal layer*
 - Avoiding invagination
 - Avoiding collaps
 - Providing good patency
- Good approximation of the *adventitia*
 - Avoiding leakage









Results

Numerous factors determine the success of vasectomy reversal.

Mean results:

Initial	86% patency	52% pregnancy
Repeat	75% patency	43% pregnancy
VE	60-85% patency	22-44% pregnancy

Matthews, Thomas, Kolettis, Belker.

If sperm cells do not return in the ejaculate after 2-4 months, the procedure may be assumed as failed.

Schoysman, 1990

Results

- 90% patency, 50% pregnancy
- Average interval to pregnancy 1 yr

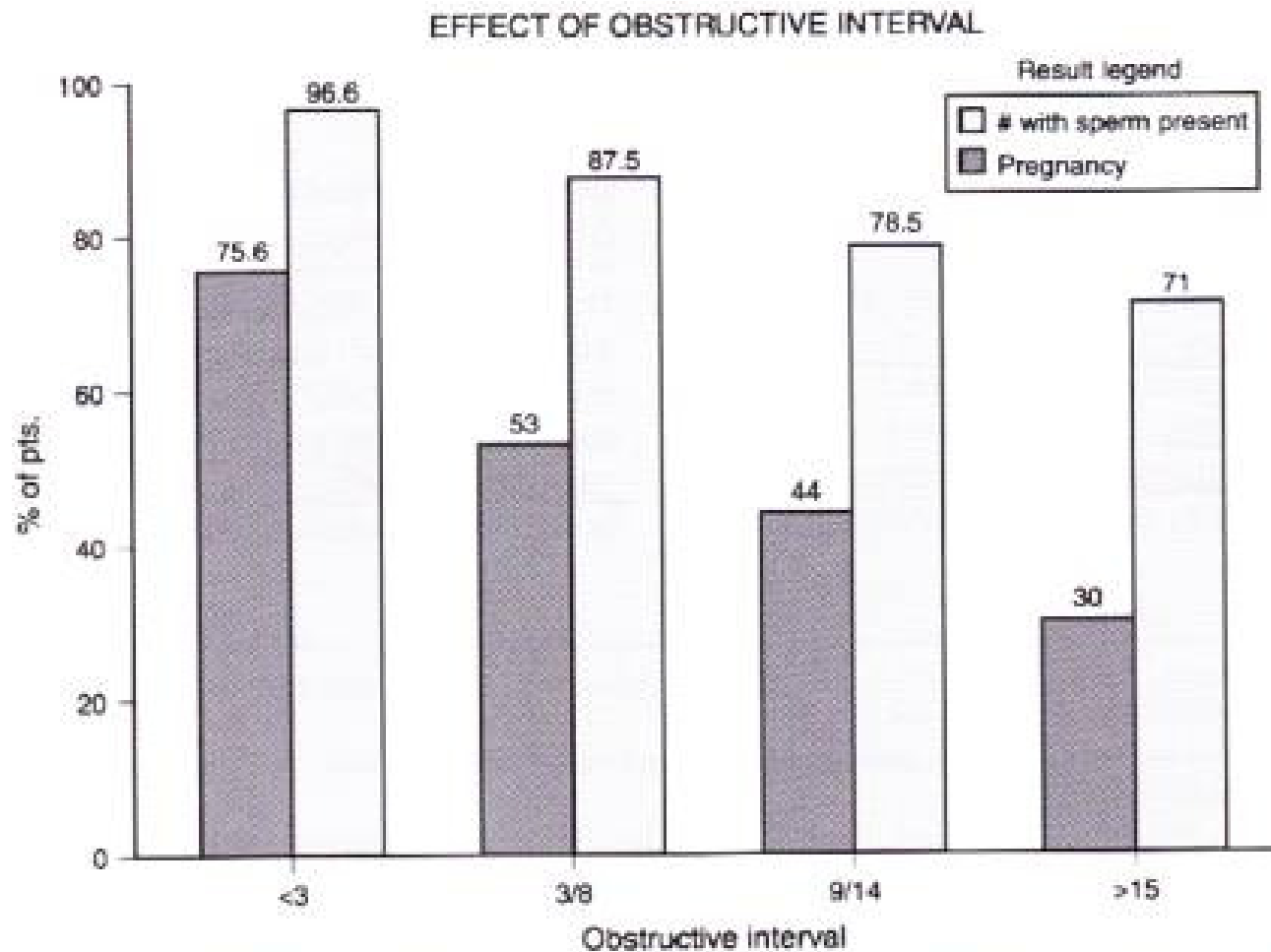
Belker, J. Urol 1991

Factors influencing the succes rate

Pre-operative

- Obstructive interval
- Prior fertility
- Prior inguinal surgery
- Prior vasectomy reversal
- Same partner
- Partner age (>36yr)

Factors influencing the succes rate



Vasovasostomy study group
Belker et al.
J. Urol. 1991

Factors influencing the succes rate

Per-operative

- Surgeon skill
- Intravasal fluid (aspect-presence of sperm)
- Testicular remnant length
- Sperm granuloma (epididymis-vasal end)
- Vasectomy location and gap

Factors influencing the succes rate

Anti Sperm Antibodies

The presence of ASA's after vasectomy reversal is considered as a major factor diminishing pregnancy rates, however it is very infrequently tested in advance.

Present in 88% of pts, early after vasectomy

Pure IgG respons: 85,6% also IgA repons 42,9%
100% coverage IgA: 21,7%

Meinertz, Fertil Steril 1990;64: 315

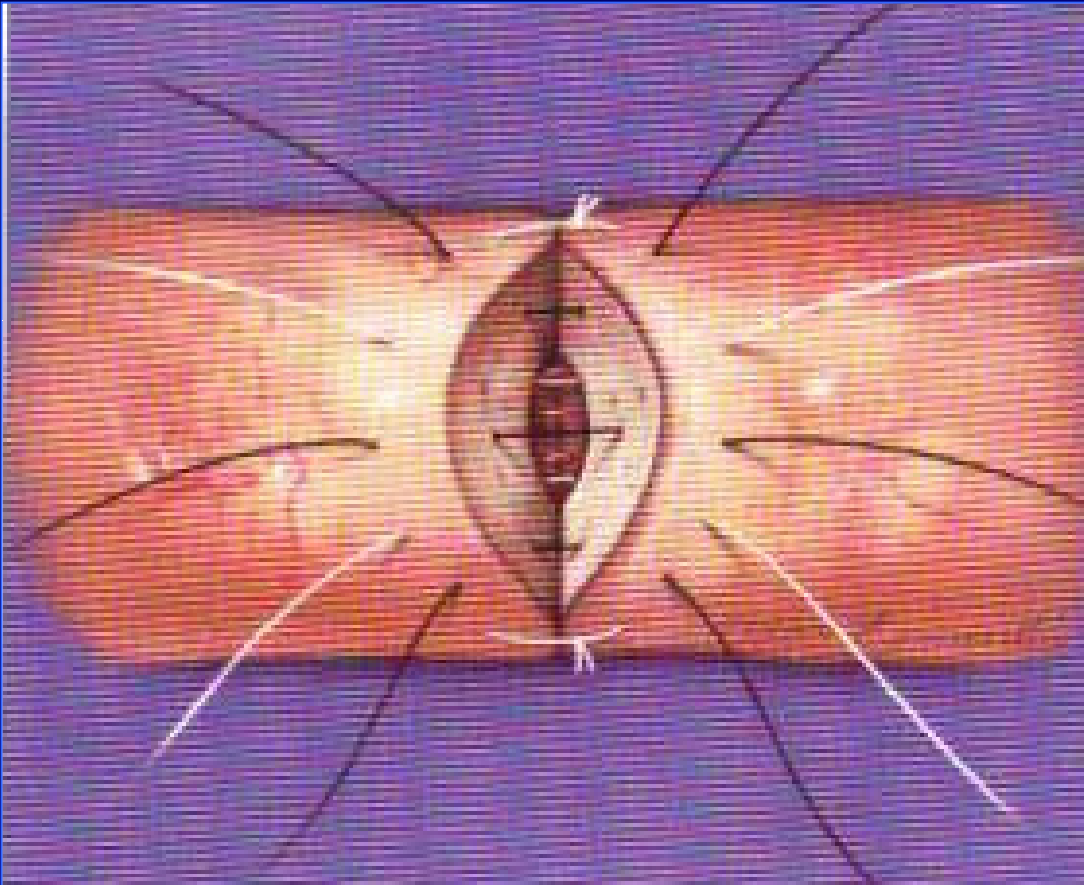
Determination of the ASA status before Vx reversal not of clinical importance

Modification of the procedure

Why modifying the procedure ?

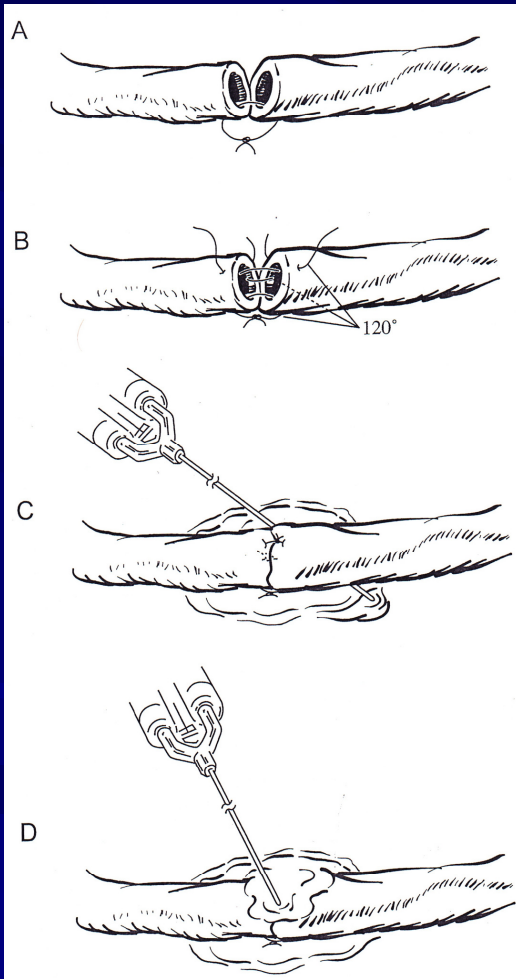
- Need for microsurgical skills
- Operating time is money
- Restricting suture material

Two layer modified



Schmitt et al.
From Andrology for the clinician
Schill W. , ed. Springer verl.

Glue assisted vasovasostomy



Overall patency rate: 85%
(96%-55%)

Pregnancy rate: 43%

Only 42 pts, short follow up

Khai-Linh J. Urol. 174, 1360. 2005



Robot assisted vasovasotomy

- Good magnification
- 3D image
- Start up € 2000

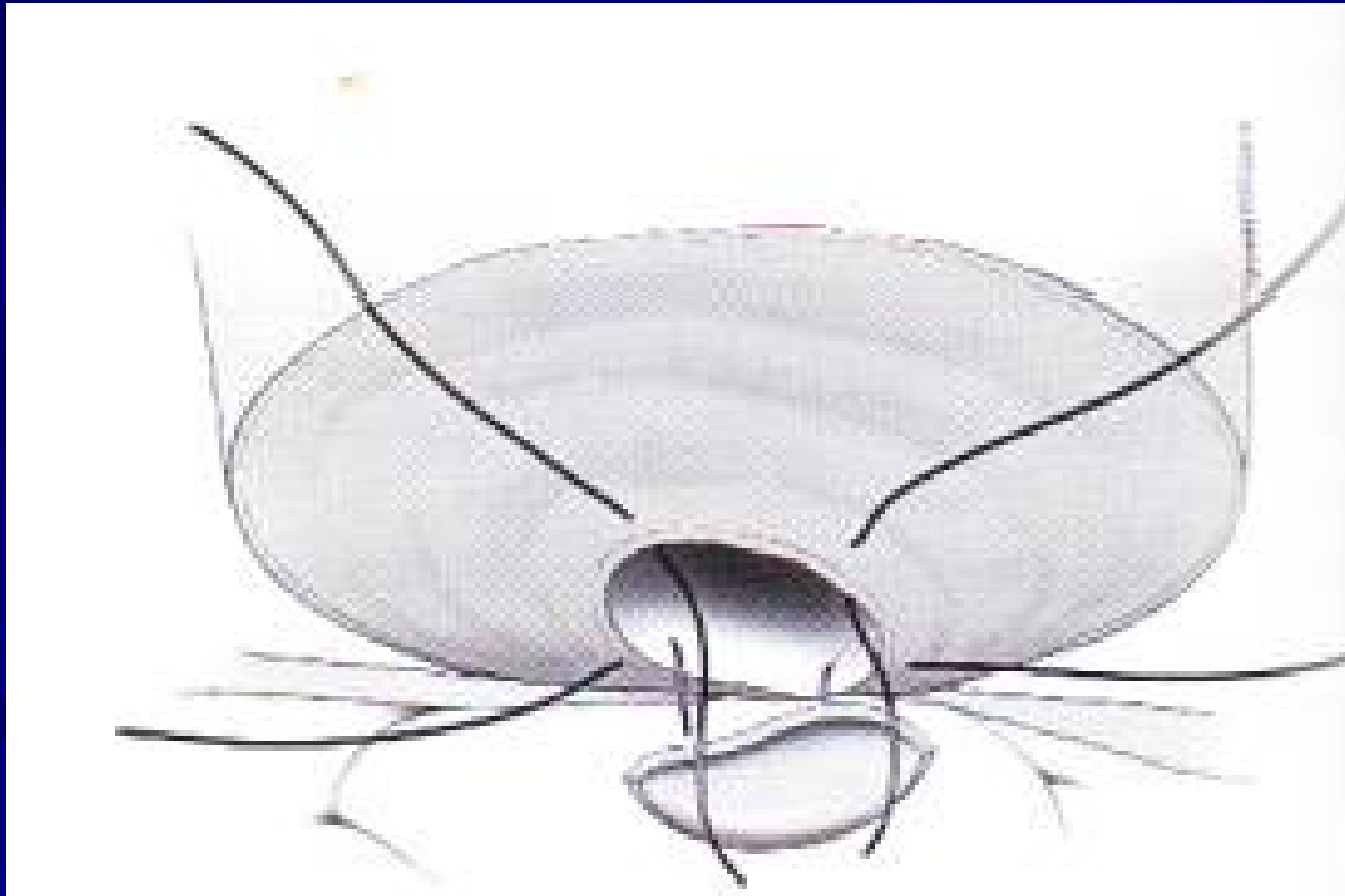


Vaso-epididystomy

- vaso-vasostomy may be unsuccessful or not feasible.
- Vasectomy site lower part vas(convoluted part)
- Epididymal occlusion or damage

Vasectomy reversal

Vaso-epididymostomy



Post-operative care

- Work leave 7 days
- Scrotal support
- Avoid heavy physical activity 4 weeks
- Avoid sexual intercourse 2 weeks
- Semen controls every 3 mo
- Acetylcystine, anti-oxidants, carnitine,...

Complications

Complications are very uncommon

■ Scrotal hematoma:

- meticulous hemostasis
- evacuation (fragile anastomosis)

■ Infection:

- prophylactic antibiotics

■ Devascularisation:

- bipolar cauterisation

Complications

Late anastomotic scarring

- Vaso-vasostomy
 - 3% to 12%
- Vaso-epididymosty
 - 21%
- Leading to
 - azoospermia
 - complete astheno- or necrozoospermia.

Key Messages

- Microsurgical procedures obtain results that are markedly better than the results of non-magnified procedures

Key Messages

- Either vaso-vasostomy or vaso-epididymostomy may be required to reverse a vasectomy

Key Messages

- Sperm retrieval for ICSI is an alternative to vasectomy reversal that always should be discussed with the couple.

Key Messages

- The success rate of a vasectomy reversal decreases as the duration of the obstructive interval increases

Think twice before getting vasectomised



