

No-Scalpel Vasectomy

“The ABCs of Vasectomy”



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Disclosures

Nothing to disclose.

No financial gain.

We do this because it's important.



Elizabeth and Peter

- The couple comes to you for their 2 week old's well child visit. E, a 28 year old G3P3, asks about pain at her c-section incision site. Healing well.
- You ask what they use or plan to use for birth control. They are at a loss.
- Pregnancy was unintended, and occurred after copper IUD expulsion. They want no more children. E has migraine headaches with visual aura.
- Peter is worried about Elizabeth- says they can't have another child. What are Elizabeth's options?

Elizabeth and Peter

○ Why do we ask first about Elizabeth?

Elizabeth and Peter

- Why do we ask first about Elizabeth?
- Is this gender bias?

Elizabeth and Peter

- Why do we ask first about Elizabeth?
- Is this gender bias?
- What are the options for the **couple**?

Organization of Presentation

- definition
- background
- how to do a vasectomy
- how to counsel

Vasectomy

- What do you know about vasectomy?
- Is this taught in your school?
- Do you know someone who does vasectomy?
- Do you know someone who had a vasectomy?

Vasectomy

Definition:

A vasectomy is a surgical procedure that cuts and/or blocks the vasa for the purpose of permanent contraception.

Why Vasectomy?

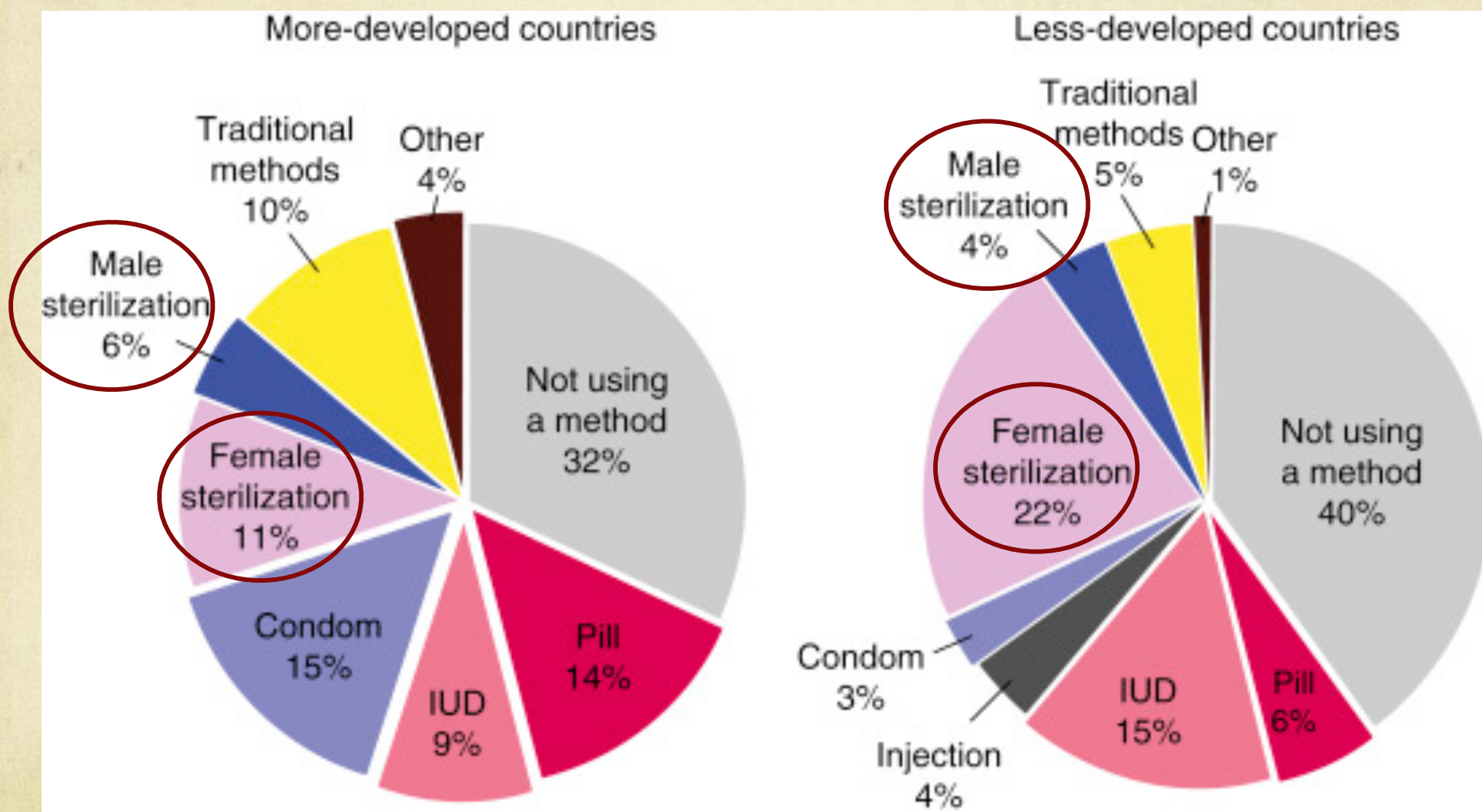


- Permanent
- Convenient
- Reliable
- Safe
- Cost effective

Use of Vasectomy

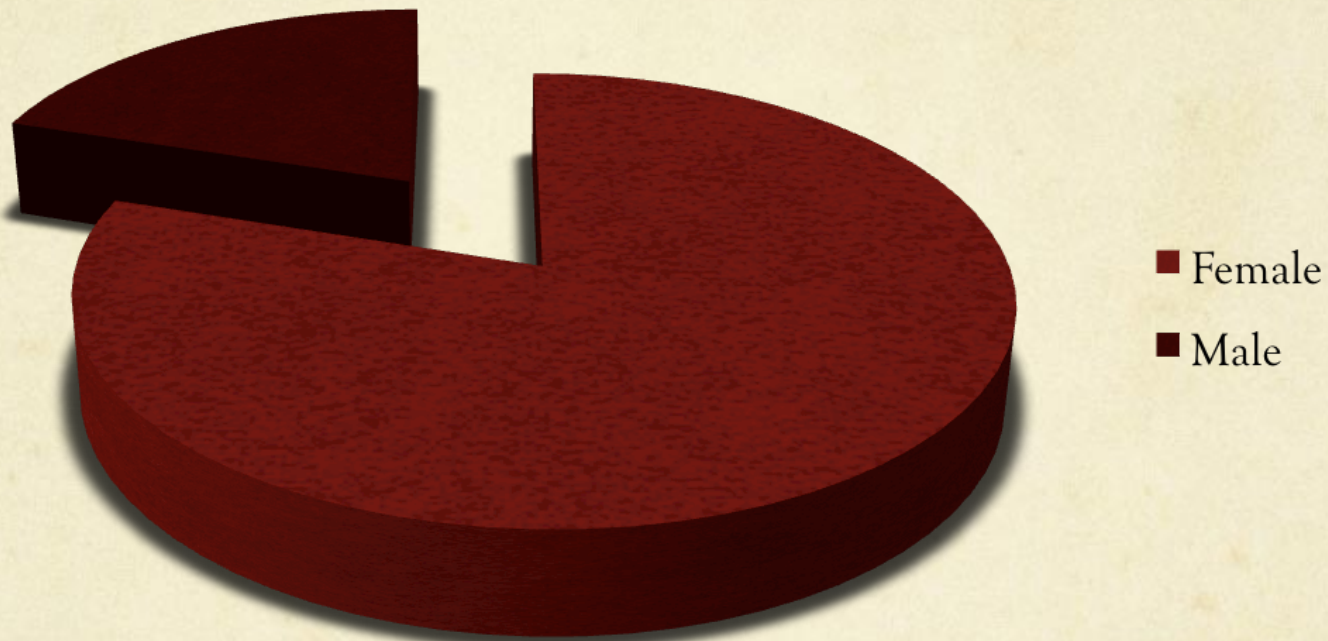
- Vasectomies are performed all over the world
 - 500,000 vasectomies per year in US
 - 60,000 vasectomies per year in Canada

Use of Vasectomy Worldwide



Use of Vasectomy Worldwide

Female to Male sterilization



- Vasectomy > Tubal Ligation
 - New Zealand, Canada, UK, Bhutan, Denmark, Netherlands

Vasectomy Background

- You too can do vasectomies!
 - Urologists
 - Family Physicians/General Practitioners
 - General surgeons
 - Gynecologists
 - Midwives / Nurse Practitioners

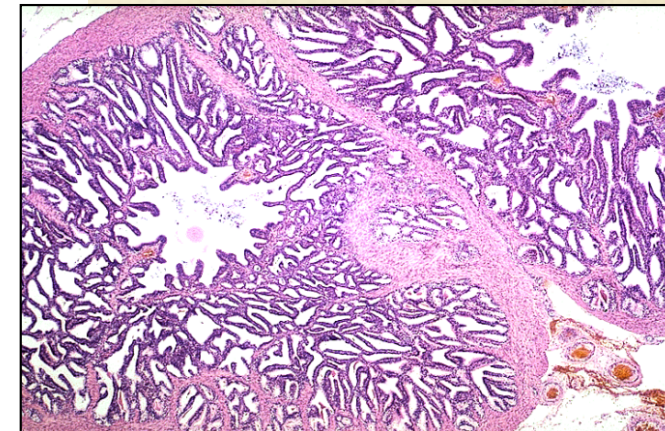
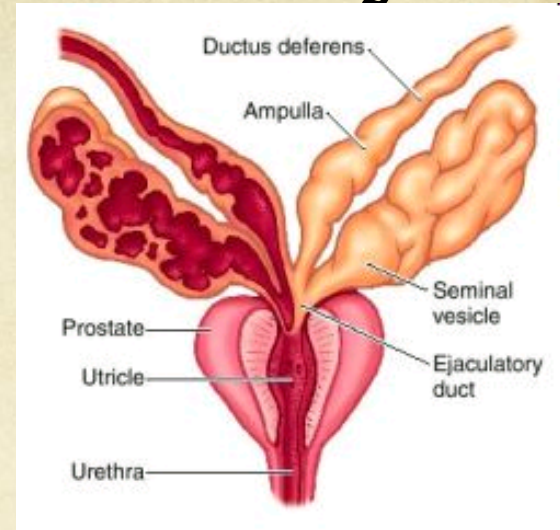
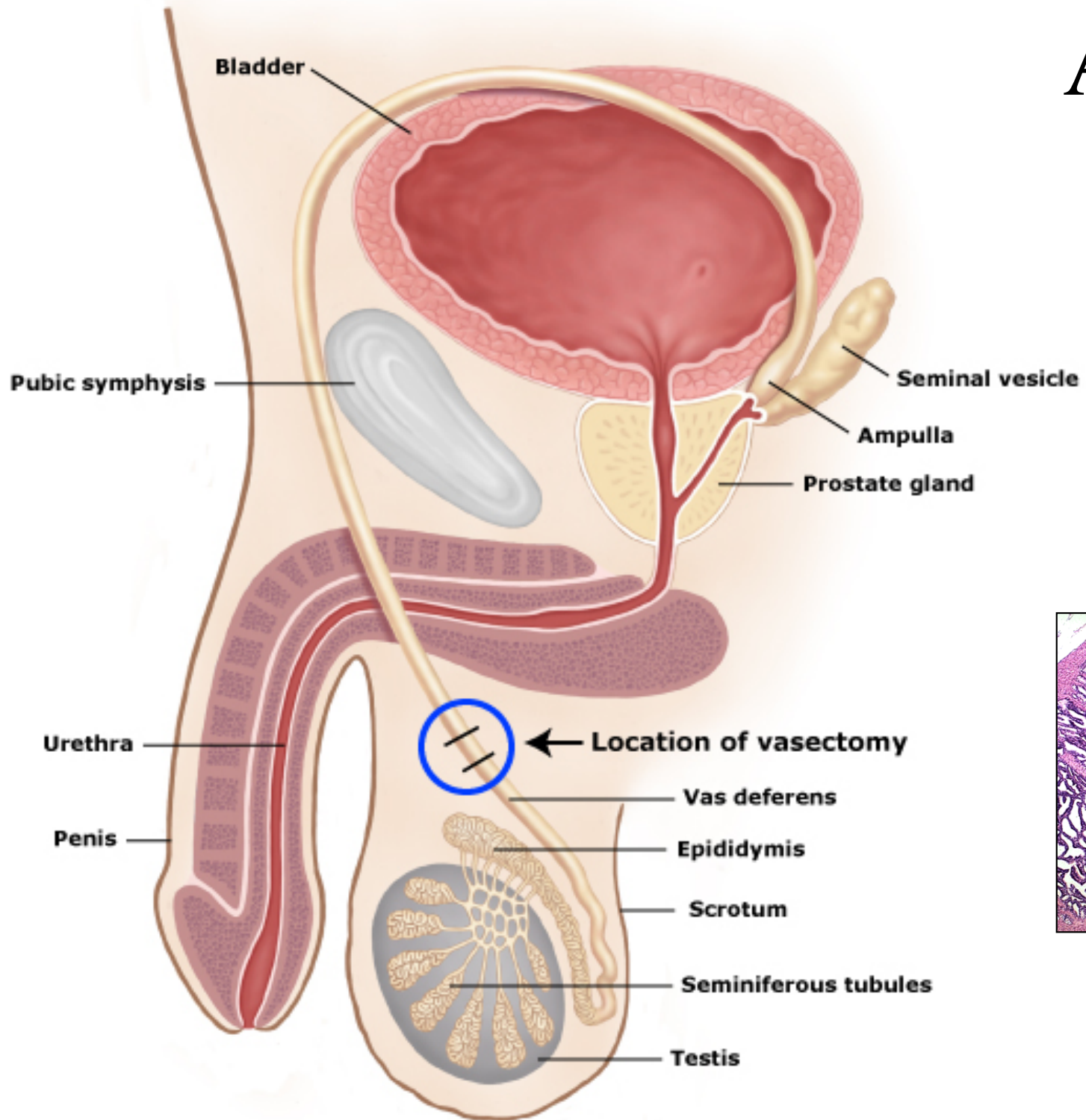
Vasectomy Background

- Vasectomy safer than tubal ligation
- Much more risk of major complications with tubal ligation

Anatomy

- What is the difference between sperm and semen?
- Where is sperm made?
- Where is semen made?
- How does the sperm get to the semen?

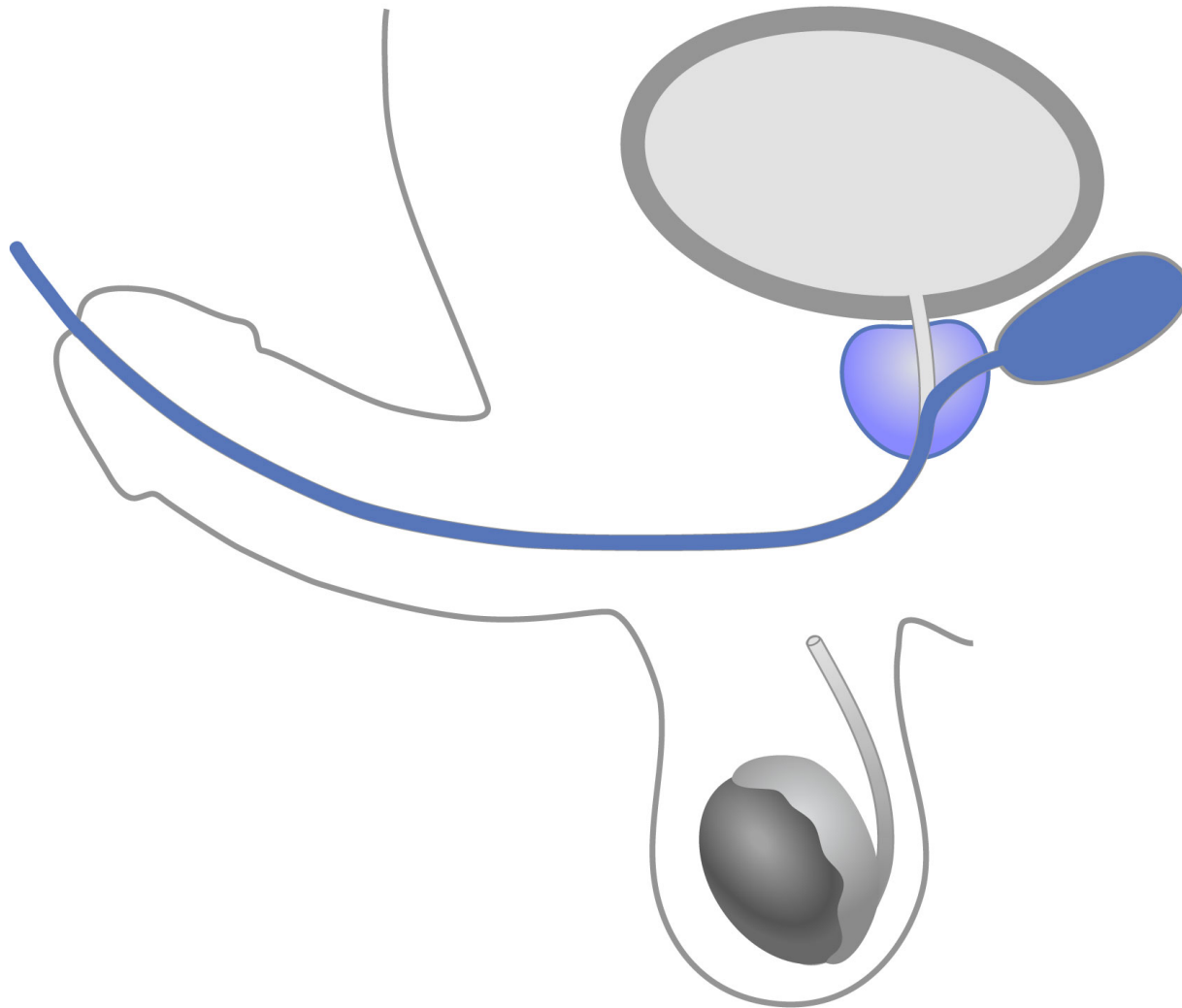
Anatomy



Anatomy

- Which organs push semen out during ejaculation?
- Does semen change after vasectomy?

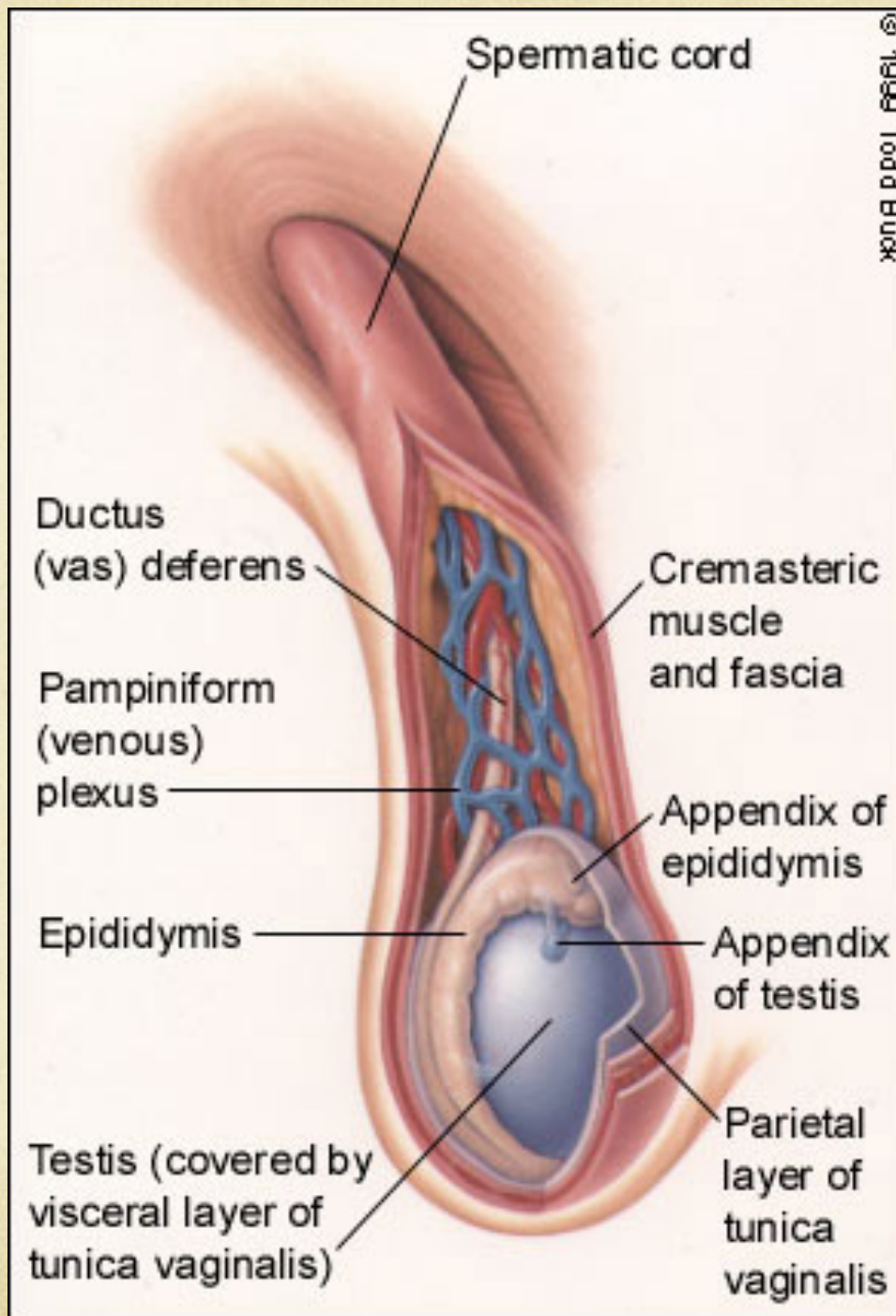
Anatomy



Anatomy

- Where is testosterone made?
- How is testosterone sent to the body, muscles, etc?
- Where is the main organ of sex drive?
- Why does a vasectomy not affect sex drive?

Anatomy



Vasectomy Components

- Anesthesia
- Delivery of Vas
- Occlusion of the Vas

Vasectomy Components

○ Anesthesia

mini-needle, 30 gauge, very gentle

minimal volume needed

very effective

pain during vasectomy very little

Vasectomy Components

- Anesthesia
- Delivery of Vas
- Occlusion of the Vas

Delivery of vas

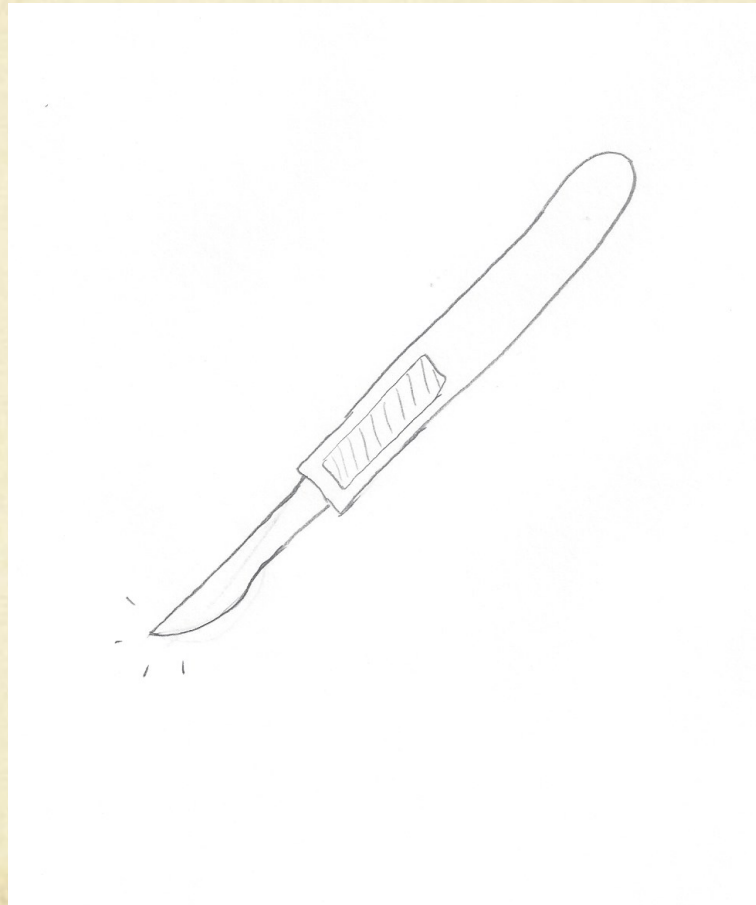
- There are two main techniques:
 - traditional open technique
 - no-scalpel technique

Traditional Vas Delivery

- a scalpel incision is made in the scrotum
- the vasa are exposed and cut, tied, or otherwise blocked
- the scrotum is sutured closed



Why not use a scalpel?



Minimally Invasive Procedures

- Usually lower risk
- Less chance of hurting other structures
- Quicker recovery
- Preferred by patients

No-Scalpel Vasectomy

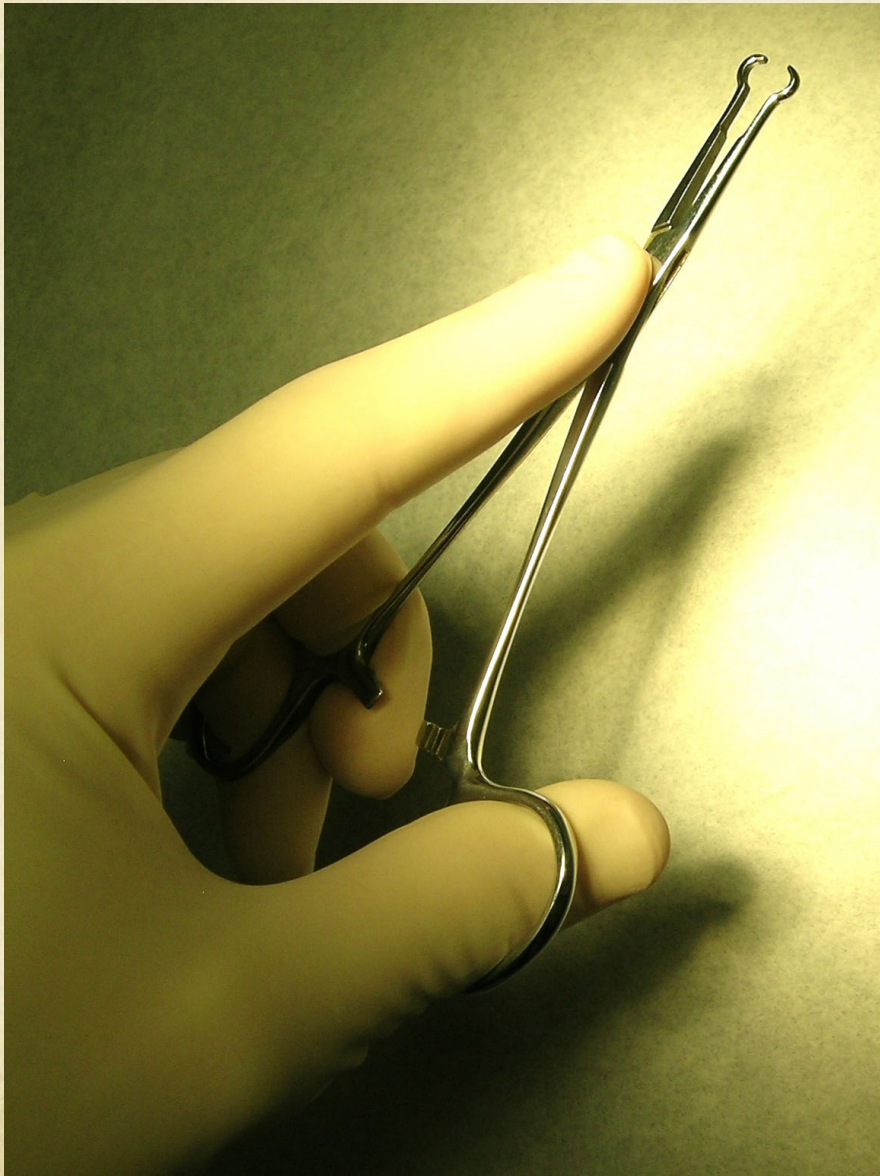


No-Scalpel vs. Traditional

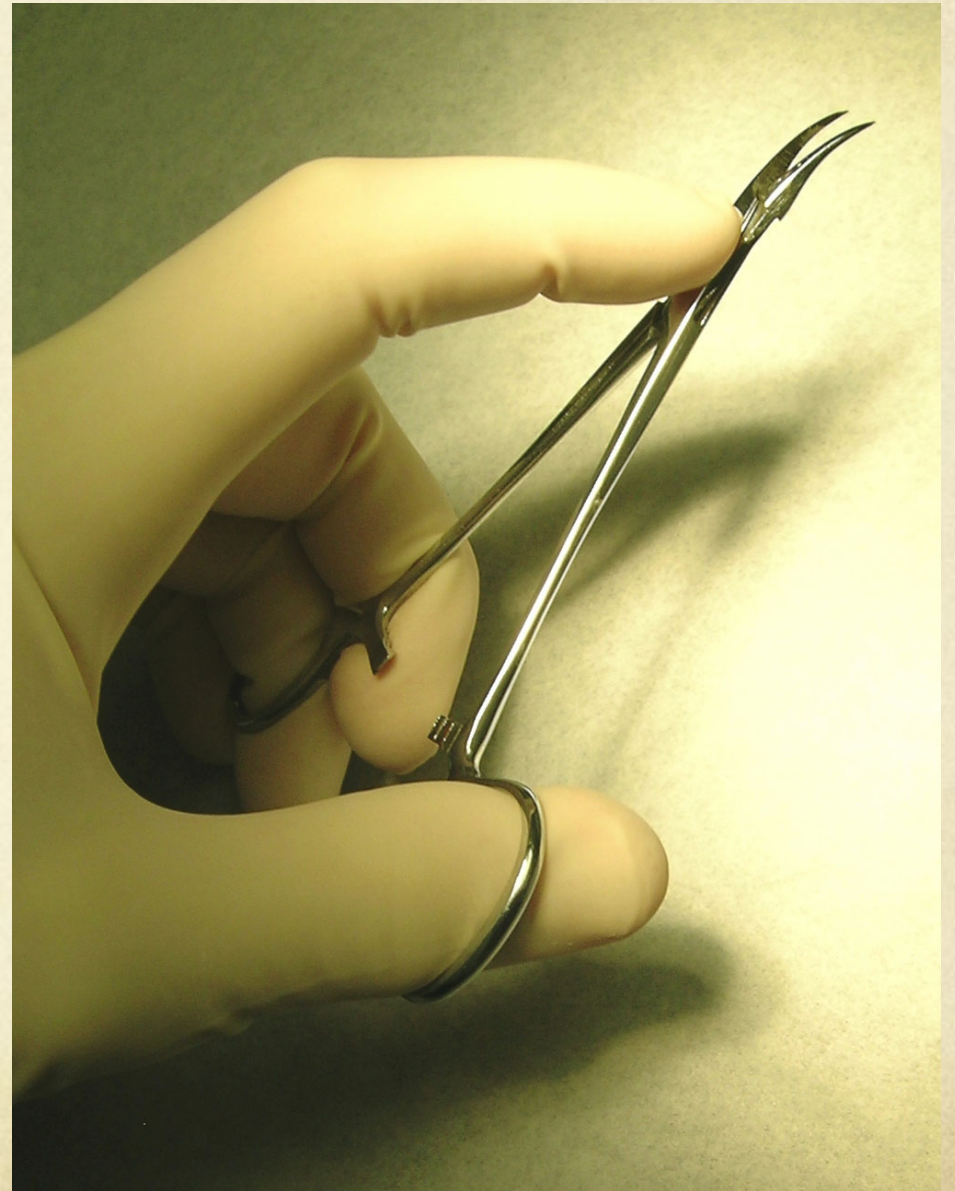
Complication	No-Scalpel	Traditional
Hematoma		
small superficial	1 (0.2%)	4 (0.7%)
small deep	1 (0.2%)	18 (3.3%)
large deep	0 (0.0%)	4 (0.7%)
unspecified	8 (1.5%)	41 (7.5%)
Scrotal pain		
mild	215 (39.5%)	251 (45.8%)
moderate	28 (5.1%)	51 (9.3%)
severe	4 (0.7%)	9 (1.6%)
Infection		
yes	1 (0.2%)	8 (1.5%)

Sokal et al. 1999

Instruments



Ring forceps

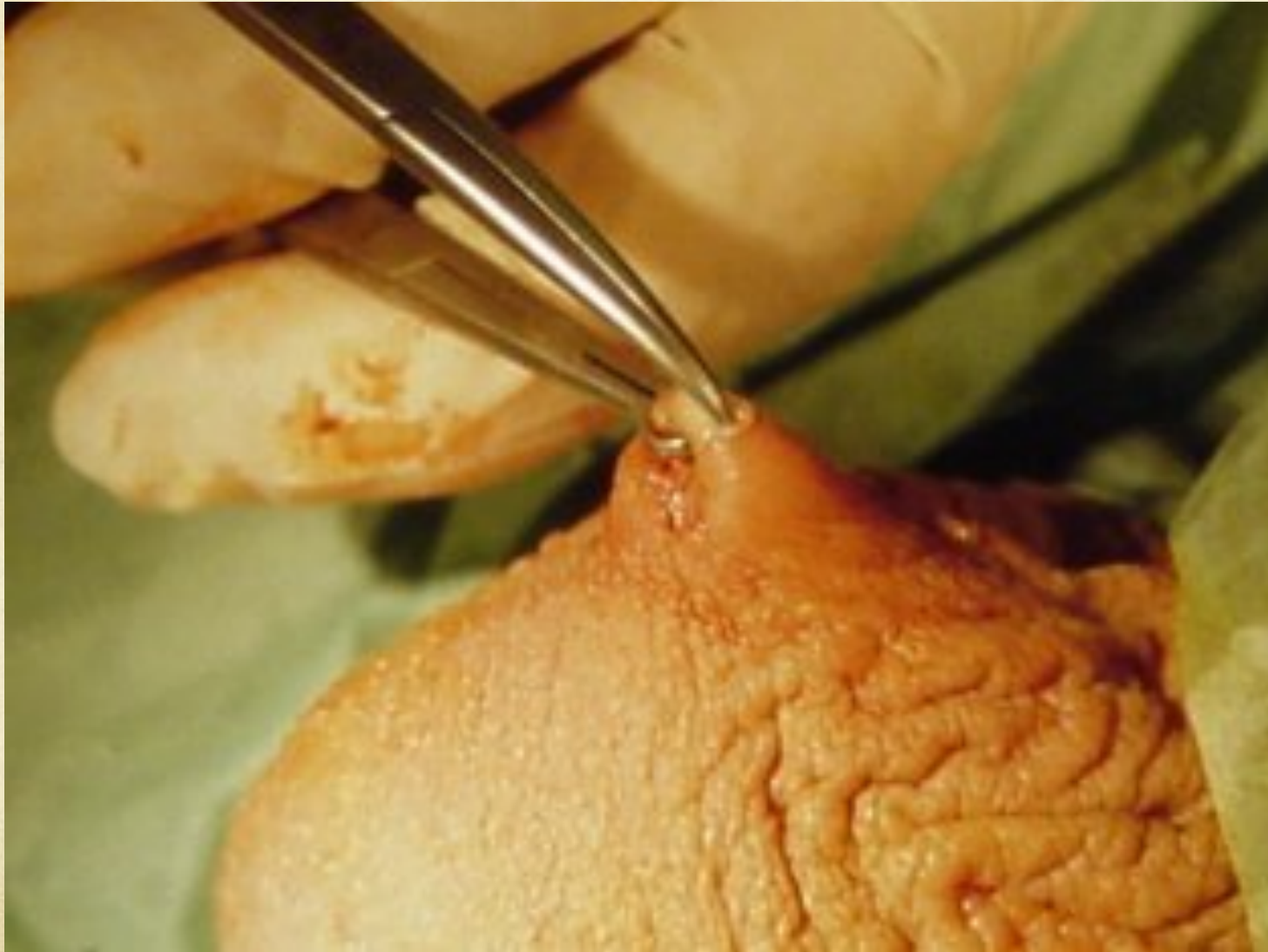


Dissecting forceps

Holding the vas



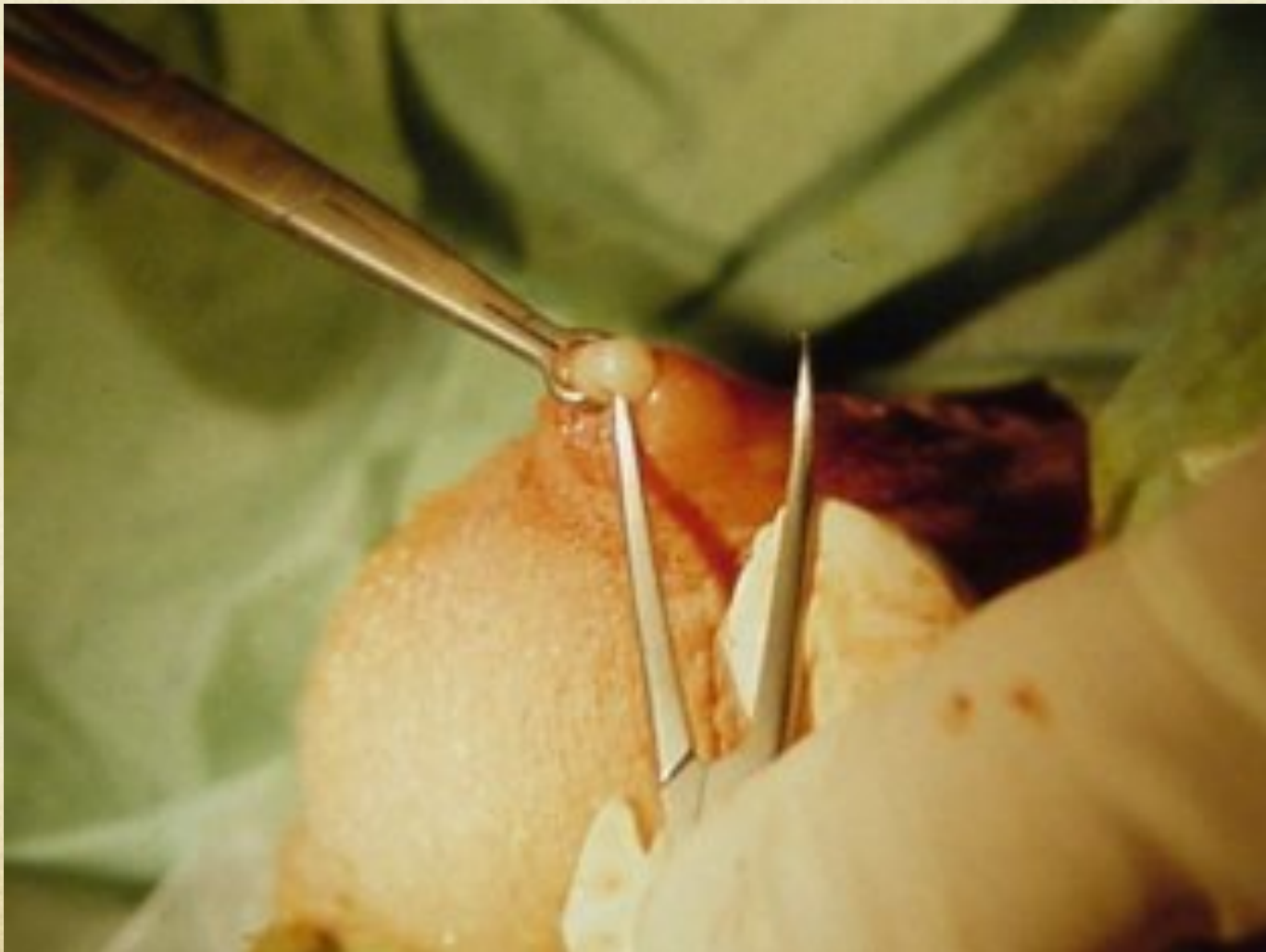
Puncturing the skin



Stretching the opening



Hooking the vas



Cleaning the vas



Vasectomy Components

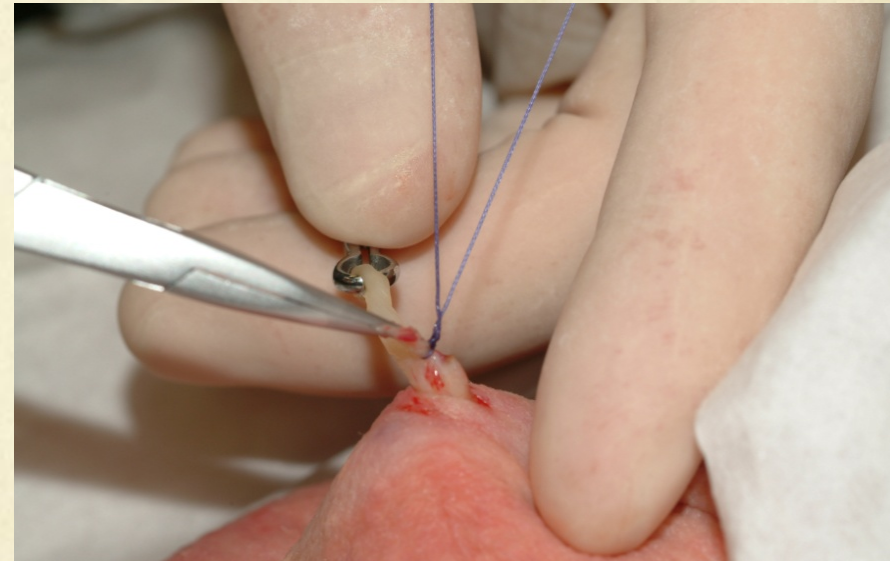
- Anesthesia
- Delivery of Vas
- Occlusion of the Vas

Occlusion techniques

- Divide
- Cauterize
- Interpose fascia

Effective Occlusion Technique to Minimize Recanalisation

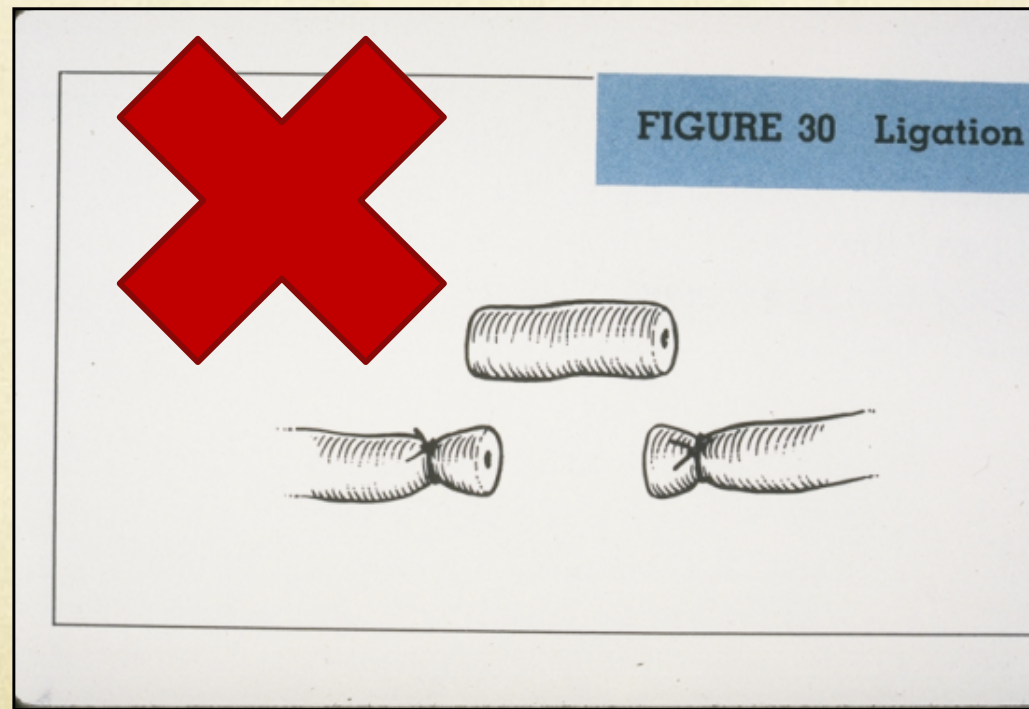
○ Cautery + fascial interposition



○ < 1% occlusion failure rate

Avoid Classic Occlusion Technique (Ligation and Excision)

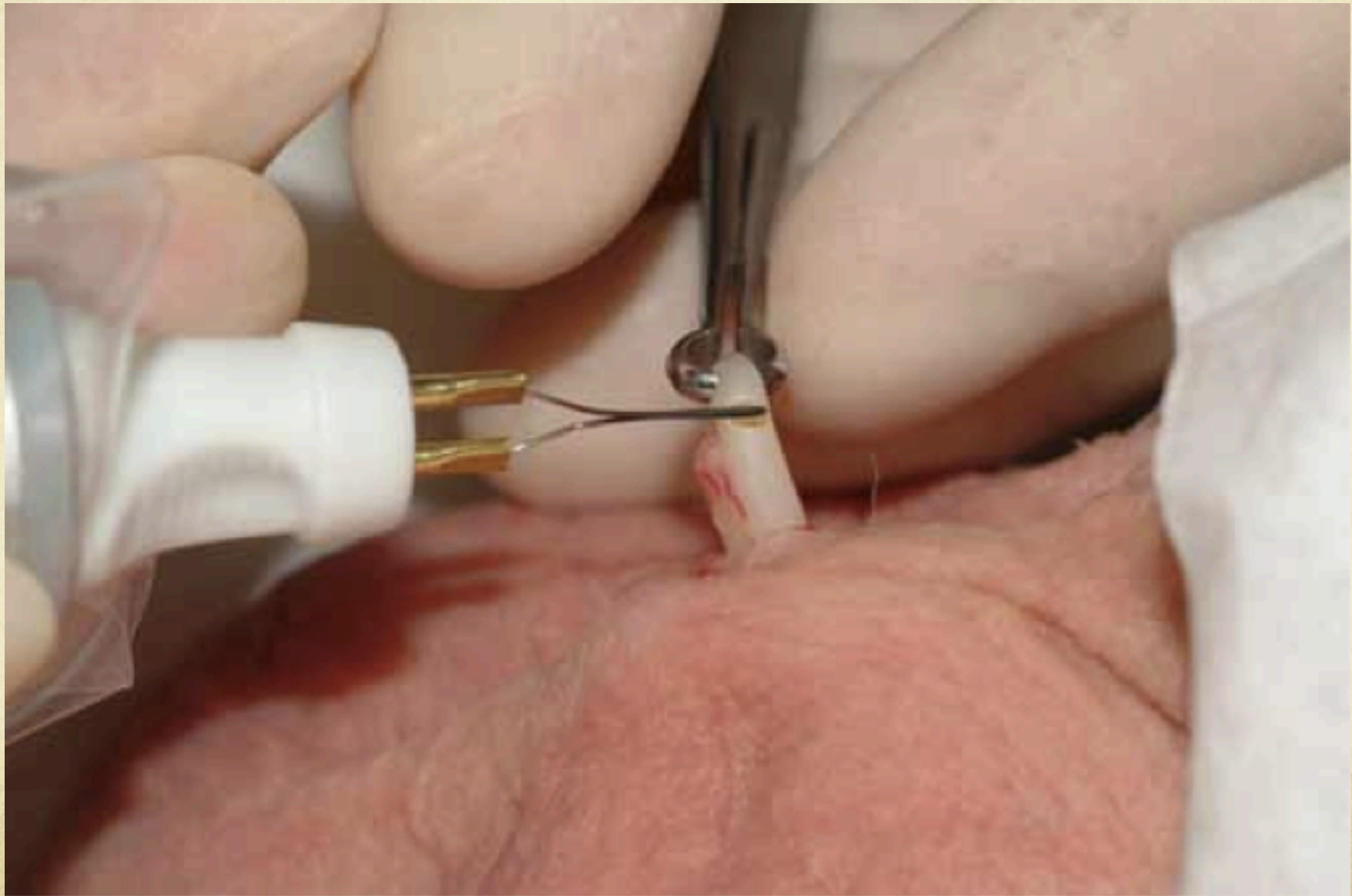
○ 8% to 13% failure rate



Hemi-transecting the vas



Hemi-transecting the vas



Intraluminal cautery



Finishing the transection



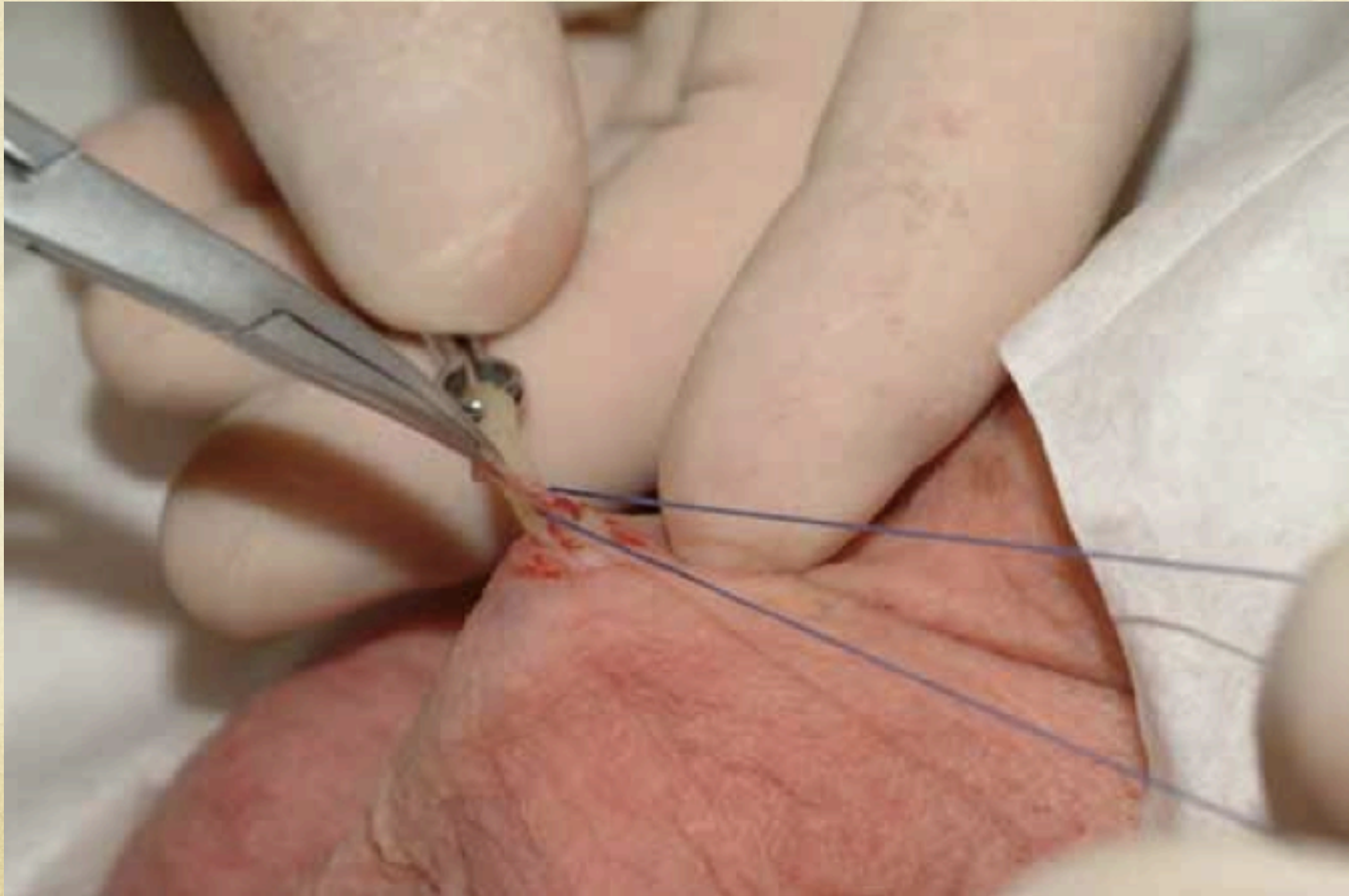
Pulling fascia over the vas



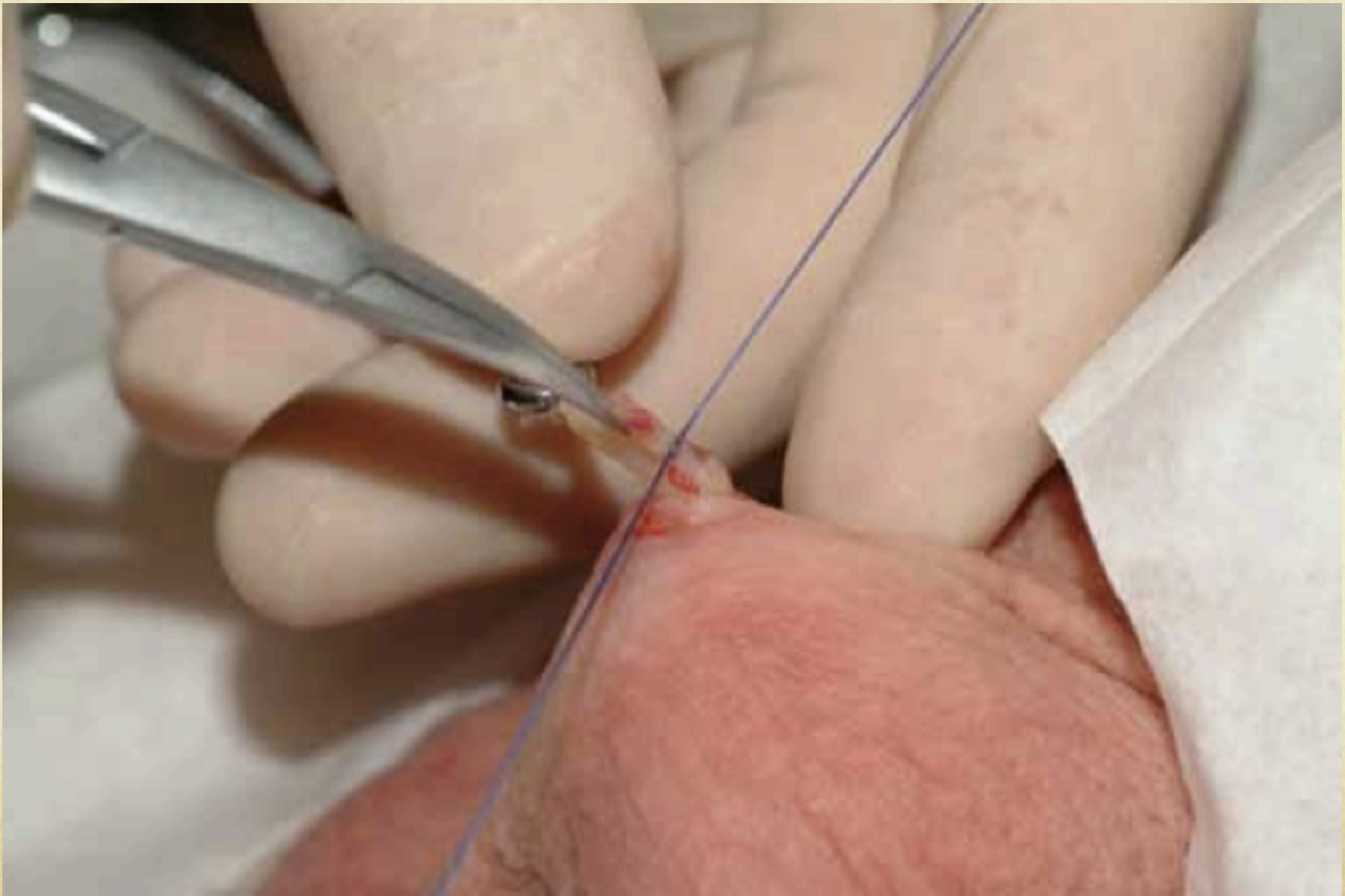
Exposing fascia to tie



Preparing to tie the fascia



Tying the fascia



Finishing the other side

- Of course, the procedure is repeated on the other side so that both tubes are cut.

Questions?

Let's see this in film

https://youtu.be/UI8Y6W2_8j8

- John Curington

<https://youtu.be/fqZJk3tWhZE>

- Michel Labrecque

Summary of Technique

- Find vasa
- Numb vasa
- Grasp vas
- Deliver vas
- Clean vas
- Divide, Cauterize, Perform Fascial Interposition
- Repeat on other side

Counseling for Vasectomies

- pre-vasectomy
- post-vasectomy

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist

Pre-Vasectomy Counseling

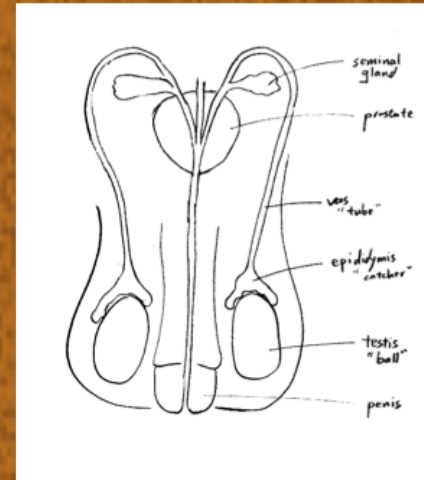
- discuss patient's reason for procedure
- use a checklist

Vasectomy Counseling Checklist

simplifies your life

Vasectomy Patient Information Worksheet

Anatomy



- testis – produces sperm
- epididymis – catches sperm
- vas – tube that carries sperm
- seminal gland – produces semen
- prostate – adds to semen

Procedure

- Exam
A few people may be referred out if not appropriate candidates for “No-Scalpel” technique
- Numbing with lidocaine
- Clamp around vas
- Insert special forceps
- Cut vas on both sides
- Cauterize and tie

Potential Complications

- Pain
- Bleeding
- Hematoma “grapefruit scrotum”
- Infection
- Granuloma “scar lump”
- Long-term ache
- Continuing fertility

Before your surgery

- Sign Consent
- No aspirin for 10 days
- Clip hair and shower at home before surgery
-

After your surgery

- Day of surgery – home, rest, feet up, Ice, wear jockstrap, Tylenol.
- Day 2 – walk, shower, wear jockstrap, Take it easy, Tylenol.
- Day 3 – gentle activity, no vigorous activity, Wear jockstrap.
- Day 4 – return to work.

Sex After Vasectomy

- Week 1: 1 time at end of week.
- Week 2: 2 times
- Week 3: as desired,
But be sure to use contraception until semen checks are OK.

Follow-up checks:

- Take semen in labeled container to Clinic as on the list.
- Results
 - no sperm
(all finished, this is good)
 - rare non-motile sperm
(future pregnancy very unlikely)
 - many sperm
(may need to repeat vasectomy)

Conclusion:

- After successful semen check, you are free to enjoy one of the most effective contraceptive methods known!
- Remember, though, condoms are still useful for protection against sexually transmitted diseases.

I have reviewed this worksheet, I have had my questions answered, and I understand the surgical procedure that I have requested.

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist
- know local consent laws

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist
- know local consent laws
- discuss that it is permanent and alternatives

Vasectomy is Essentially **Permanent** !

- Reversals
 - often not available
 - very costly
 - more difficult than vasectomy (2-5 hours)
 - often do not work (only 50% pregnancy rate)

Vasectomy reversal

- A man should not have a vasectomy if he is planning on having a vasectomy reversal later on.

Alternatives to Vasectomy

- condoms
- women's contraception
- abstinence

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist
- know local consent laws
- discuss that it's permanent and alternatives
- discuss benefits

Benefits of Vasectomy

- very effective method of contraception
- permanent
- does not affect sexual feeling or drive
- sharing of contraceptive responsibility

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist
- know local consent laws
- discuss that it's permanent and alternatives
- discuss benefits
- discuss risks
 - not immediately effective

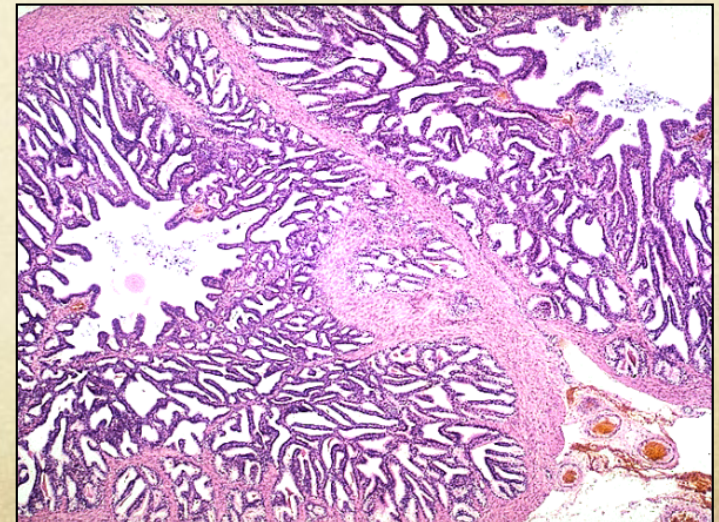
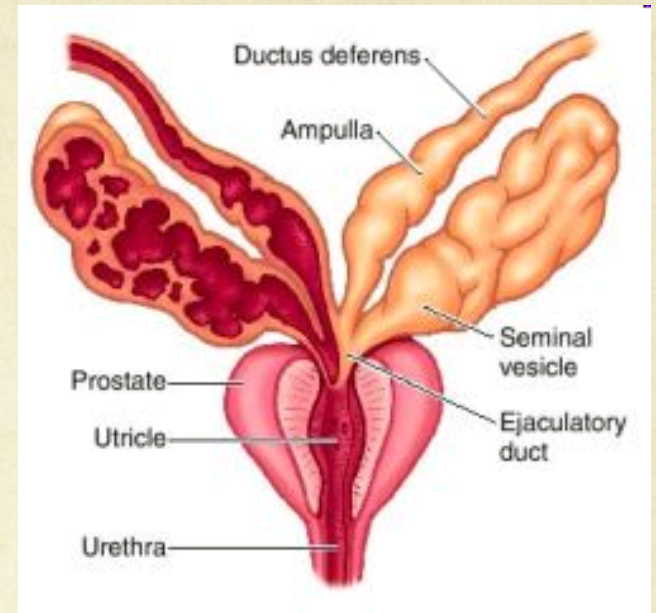
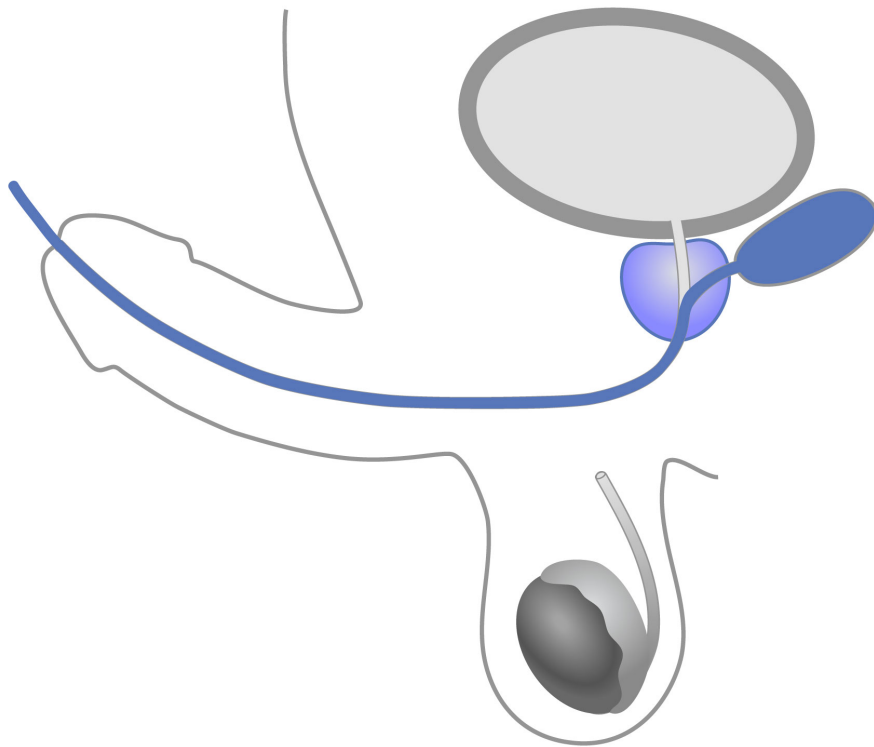
Why continuing sperm?

Residual sperm

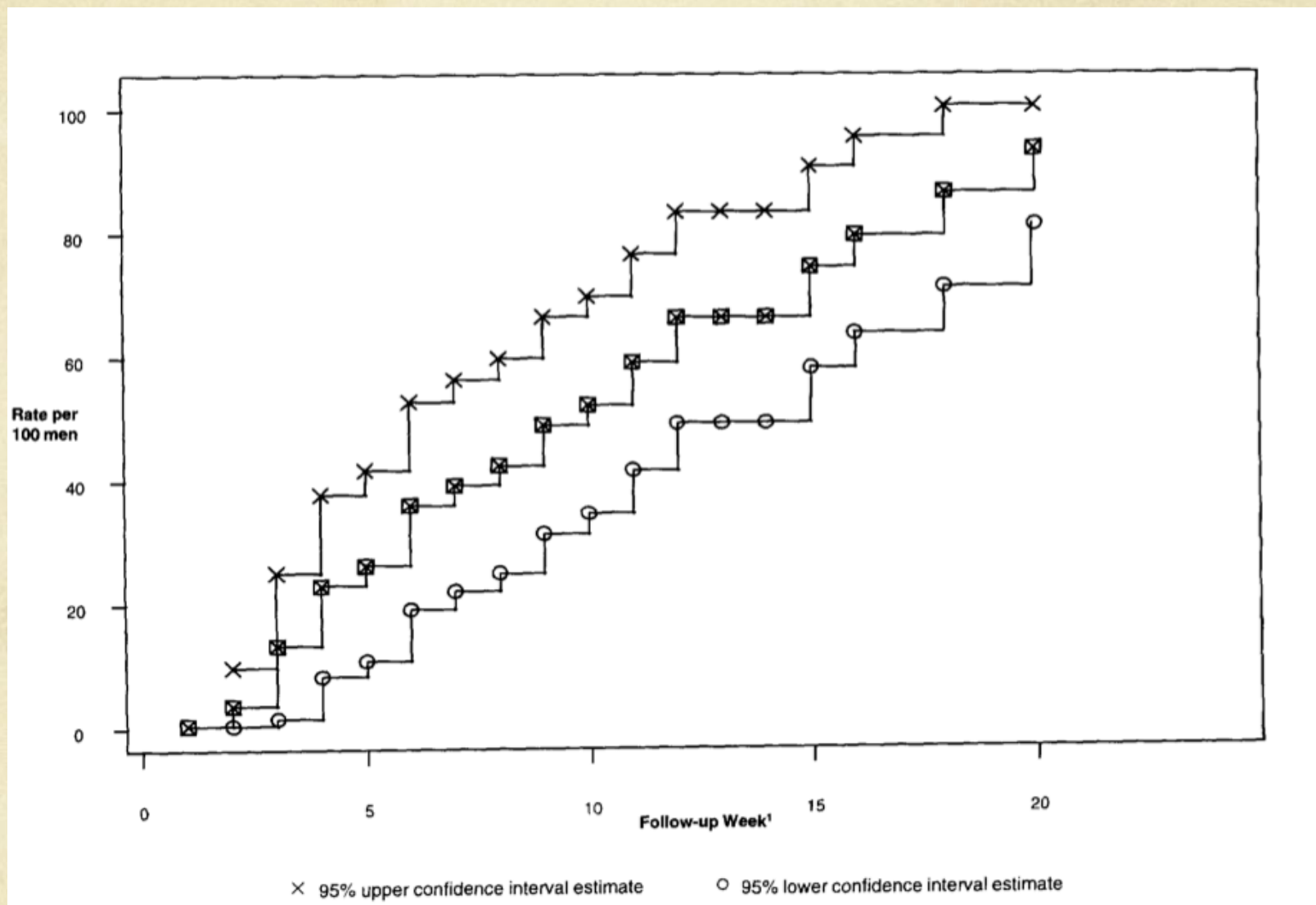
Recanalization

you missed a tube (rare)

Anatomy



Time to Zero Sperm



percentage of men with azoospermia as the weeks pass

Continuing sperm in semen

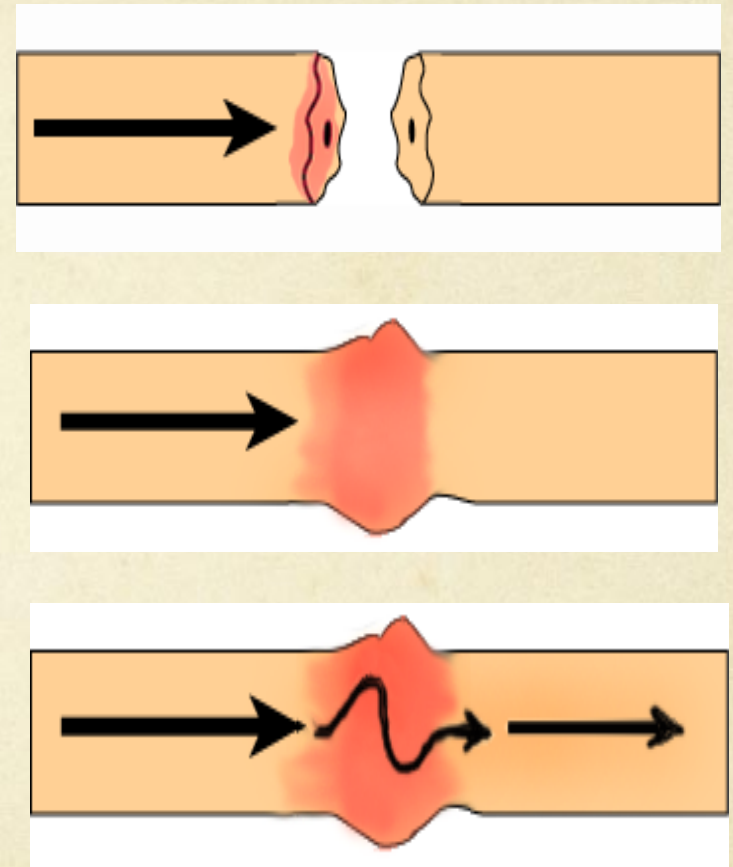
- Usually because sample too early
 - wait three to four months
- rare sperm usually cause no pregnancy
- copious sperm require
 - retesting
 - repeat vasectomy if still copious

Pregnancy after Vasectomy

- Important to counsel patients about this
- 1 pregnancy per 1000 vasectomies with cautery and fascial interposition (<1% occlusion failure)
- Up to 40 per 1000 classical technique without cautery and fascial interposition (8-13% occlusion failure)
- About 1/2 from sex soon after vasectomy
- Remainder mostly recanalization

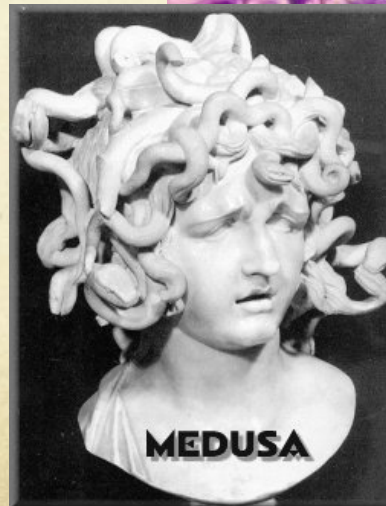
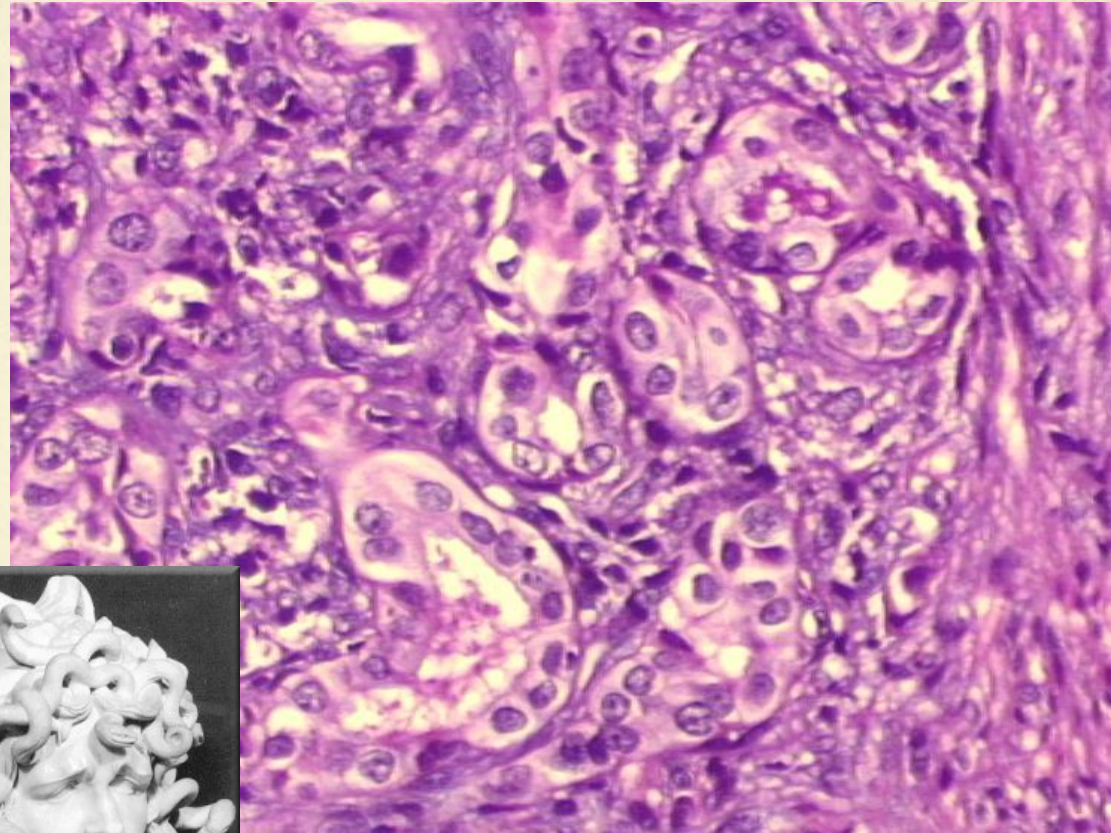
Recanalization

- a “bridge” of scar
- fibroblasts
- white blood cells
- epithelial cells
- micro-canalization

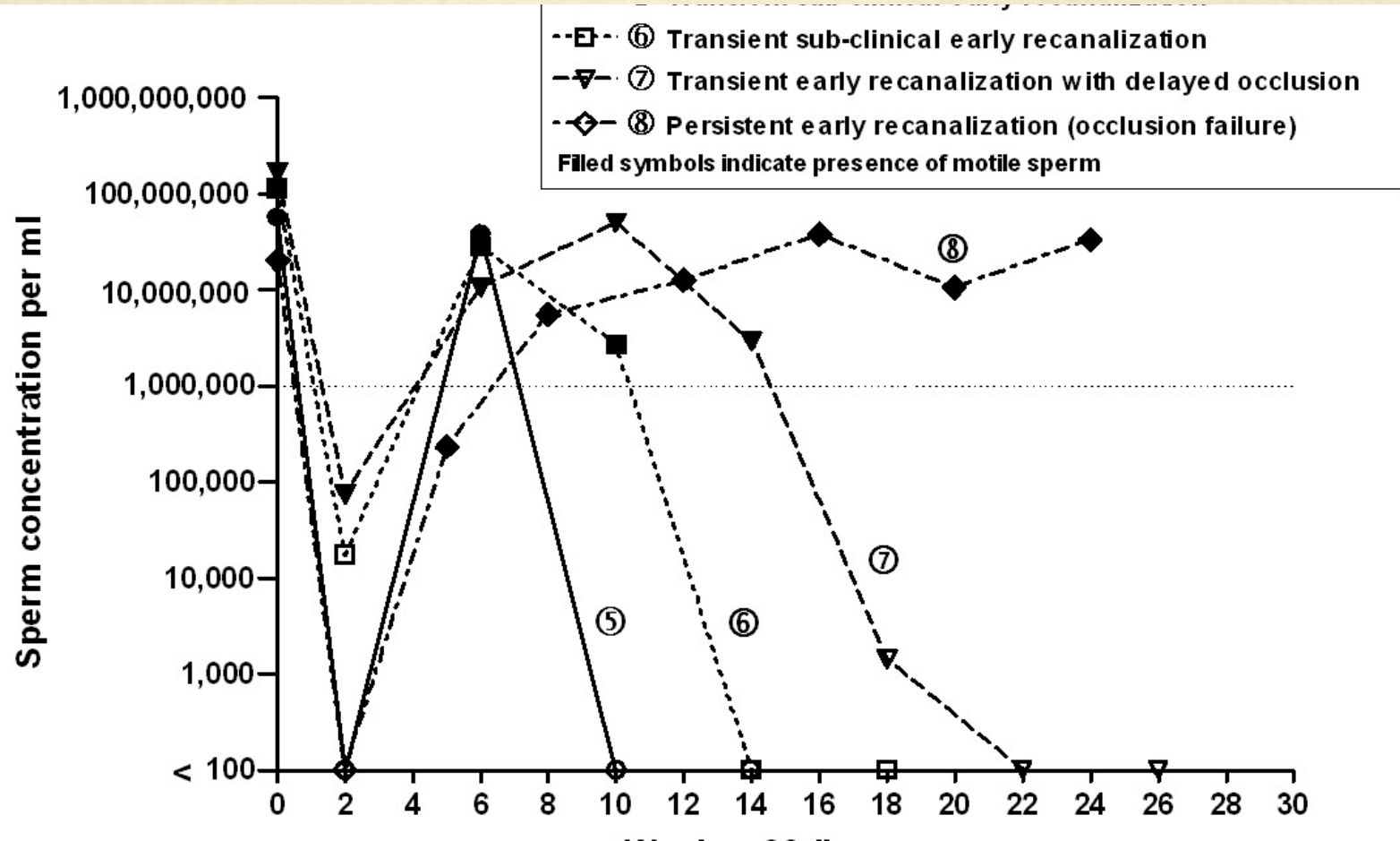


Recanalization

Proliferation of
“microtubules”
forms a
“medusa head”



Recanalization



Recanalization

- counsel your patients about this
- rare, but life-changing
- post-vasectomy semen check

very important!

Pre-Vasectomy Counseling

- discuss patient's reason for procedure
- use a checklist
- know local consent laws
- discuss that it's permanent and alternatives
- discuss benefits
- discuss risks
 - not immediately effective
 - possible complications

Normal changes after a vas

- most men have no visible changes
- Some bruising possible
- Some slight swelling

Normal changes after a vas

- Most men are quite comfortable
- Some men are sore
 - “like I got kicked in the nuts”
- soreness is common with movement for a few days

Vasectomy Possible Complications

- Bleeding (1%)
- Infection (1%)
- Hematoma (1%)
- granuloma
- testicular atrophy
- continuing fertility (recanalisation) (0.1%)
- post-vasectomy chronic pain (1%)
- regret

Counseling After a Vasectomy

- Very important!
- Prevents complications
- Can save you many phone calls

Post-Vas Instructions

- support for the scrotum
- rest 2 to 7 days
- sex 5-7 days
- shower, next day
- pain medications if needed
(paracetamol or NSAID)
- Contraception for 3 to 4 months
- semen sample after 3 to 4 months
and 20 to 30 ejaculations

Case Presentation

- Back to Elizabeth and Peter
- What might you recommend for them?
- Remember they want no more children, she didn't like her IUD, and she has migraines with aura...

Summary

- A vasectomy is a simple procedure
- Many techniques exist
- No-Scalpel technique has advantages
- Complications are rare, but do occur
- Most treatments are common sense
- Do integrate this into your practice

Free Copy of Presentation



For More Information

Join Google Group

<https://groups.google.com/g/vasectomy-network/about?pli=1>

World Vasectomy Day

www.wvd.org/zambia

John Curington

www.realmanvas.com

Michel Labrecque

www.vasectomie.net