Multidisciplinary approaches to supporting whole person gender affirming perioperative health and care

Fenway Health

March, 2020

Maddie Deutsch, MD, MPH

Associate Professor of Clinical Family & Community Medicine
Medical Director, UCSF Transgender Care
University of California – San Francisco

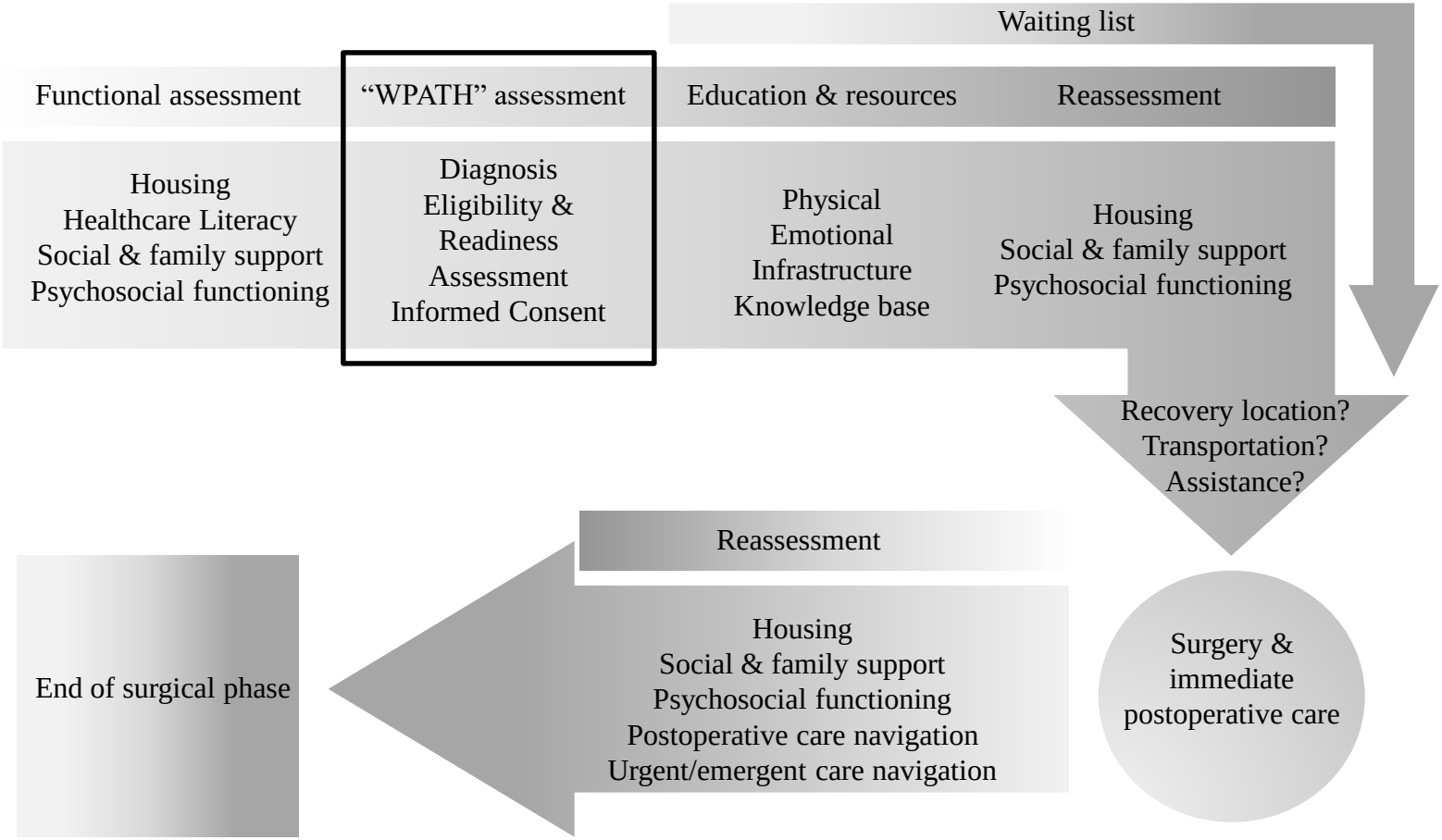
Outline

- Background on WPATH surgery clearance
- Holistic perioperative approaches
- Vaginoplasty
- Masculinizing chest surgery
- Phalloplasty
- Sexual Health
- Perioperative hormones
- Cases

WPATH Criteria – Are There Limitations?

- How to handle patients who lack access to appropriate mental health services?
- Does the process encourage patients to “game the system”?
  - While at the same time appearing to serve as a “gatekeeper”
- Does not include any explicit assessment of health literacy and psychosocial functioning
  - This becomes very important as MediCaid and safety net populations now also have access to such surgeries

Perioperative Care Navigation - Workflow



Deutsch MB. Gender- affirming Surgeries in the Era of Insurance Coverage: Developing a Framework for Psychosocial Support and Care Navigation in the Perioperative Period. J Healthcare Poor Underserved. 2016 In Press

Oucomes

- Studies seem to show 3 factors that place pts at risk of regret:
  - Major coexisting psychiatric conditions
  - Limited life-experience in the new gender role prior to surgery
  - Unsatisfactory surgical results
- Reduction in suicidality postop
- One of best predictors of postop QOL is quality of surgical results

J Urol. 2018 Mar;199(3):760-765. doi: 10.1016/j.juro.2017.10.013. Epub 2017 Oct 12.

Postoperative Complications following Primary Penile Inversion Vaginoplasty among 330 Male-to-Female Transgender Patients.

Gaither TW[1], Awad MA[2], Osterberg EC[3], Murphy GP[1], Romero A[4], Bowers ML[4], Breyer BN[5].

Supplementary Table. Post-surgical complications and median time to complication in MTF-SRS (n=330)

Follow-up visit due to any complication	N (%)	Months from surgery, median (IQR)
Yes	95 (28.7)	4.4 (1-11.5)
No	236 (71.5)	
Complication		
Granulation tissue	24 (7.3)	4 (1-9)
Vaginal pain	17 (5.2)	6 (2-12)
Wound separation	17 (5.2)	0.6 (0.4-1)
Poor cosmetic appearance	16 (4.9)	11 (4-13)
Vaginal stenosis	10 (3.0)	19 (6-22)
Rectoneovaginal fistula	3 (0.9)	10.5 (2.4-18.6)
Vesiconeovaginal fistula	3 (0.9)	7.0 (3.9-10.7)
Deflecting urinary stream/dribbling	6 (1.8)	9 (4-19)
Infection	5 (1.5)	27 (5-50)
Vaginal fissure	2 (0.6)	23 (10-36)
Vaginal bleeding	2 (0.6)	3 (0.3-5)
Difficulty with dilation	3 (0.9)	8 (3-13)
Deep vein thrombosis/pulmonary embolism	0	

J Urol. 2018 Mar;199(3):760-765. doi: 10.1016/j.juro.2017.10.013. Epub 2017 Oct 12.

Postoperative Complications following Primary Penile Inversion Vaginoplasty among 330 Male-to-Female Transgender Patients.

Gaither TW[1], Awad MA[2], Osterberg EC[3], Murphy GP[1], Romero A[4], Bowers ML[4], Breyer BN[5].

- 9% reoperation rate

Type of reoperation

Labioplasty	19 (5.6)
Clitoroplasty	3 (1.0)
Urethroplasty	5 (1.5)
Debridement of granulation tissue	3 (1.0)
Vaginal bleeding	1 (0.3)
Vaginal repair**	4 (1.2)
Fistula repair	6 (1.8)

* Other includes follow-up for difficulty with dilation and constipation
** Vaginal fissure/stenosis

Clin Anat. 2018 Mar;31(2):191-199. doi: 10.1002/ca.23001. Epub 2017 Nov 10.

Complications of the neovagina in male-to-female transgender surgery: A systematic review and meta-analysis with discussion of management.

Dreher PC[1], Edwards D[1], Hager S[1], Dennis M[2], Belkoff A[3], Mora J[4], Tarry S[1], Rumer KL[4].

- Overall complication rate 32.5% (N=1687)
- Meato-urethral stricture 14.4%
- Neovaginal stenosis 9.8%
- Wound infection 3.2%
- Less common:
  - Prolapse
  - Necrosis
  - RV fistula

Obstet Gynecol. 2019 May;133(5):1003-1011. doi: 10.1097/AOG.0000000000003236.

Implementation of a Pelvic Floor Physical Therapy Program for Transgender Women Undergoing Gender-Affirming Vaginoplasty.

Jiang DD[1], Gallagher S, Burchill L, Berli J, Dugi D 3rd.

- 72 of 77 pt attended at least 1 PT session
  - 42% had pelvic floor dysfxn
  - 37% had bowel dysfxn
- 69% of pelvic floor and 73% of bowel dysfxn resolved by first postop PT visit
- Postop pelvic floor dysfunction much lower in PT group (28% vs 86%m $p<0.06$)
- Hx of abuse strong predictor of floor dysfxn
  - 91% vs 31%, $P<0.001$

Ann Plast Surg. 2019 Jun;82(6):661-666. doi: 10.1097/SAP.0000000000001680.

Assessment of Pelvic Floor Anatomy for Male-to-Female Vaginoplasty and the Role of Physical Therapy on Functional and Patient-Reported Outcomes.

Manrique OJ[1], Adabi K, Huang TC, Jorge-Martinez J, Meihofer LE, Brassard P, Galan R.

- 77% (31/40) had preop pelvic floor dysfunction
- 30 of 31 went to preop PT and 29 went to postop PT
- Surgery was not associated with development of pelvic flood dysfxn in those without it preop
- Statistically (clinically?) significant improvement in scores postop at 4 months.

Sex Transm Dis. 2016 Aug;43(8):503-5. doi: 10.1097/OLQ.0000000000000476.

Prevalence of Neovaginal High-Risk Human Papillomavirus Among Transgender Women in The Netherlands.

van der Sluis WB[1], Buncamper ME, Bouman MB, Elfering L, Özer M, Bogaarts M, Steenbergen RD, Heideman DA, Mullender MG.

- 20% of 54 trans women with neovaginas, median age 40, found to be positive for a high-risk HPV strain.

- No lesions found.

Sex Transm Infect. 2016 Feb;92(1):67-9. doi: 10.1136/sextrans-2014-051987. Epub 2015 Jul 22.

Prevalence of human papillomavirus infection in a clinic sample of transsexuals in Italy.

Loverro G[1], Di Naro E[1], Caringella AM[1], De Robertis AL[2], Loconsole D[2], Chironna M[2].

- 36% had at least 1 of 6,11,16,18
- What does having types 6 or 11 mean with respect to vaginal lesion risk?
- Tissue used in vaginoplasty:
  - Penile
  - Scrotal
  - Urethral

Penile/Urethral Cancer

- Incidence in range of 1/100:000 for penile, 4/1,000,000 for urethral
- Risk factors include
  - HPV (including type 6 for penile)
  - Trauma
  - Chronic inflammation
  - Lichen sclerosis, smegma? (penile)

Obstet Gynecol. 2016 Jun;127(6):1118-26. doi: 10.1097/AOG.0000000000001421.

Clinical Characteristics and Management of Neovaginal Fistulas After Vaginoplasty in Transgender Women.

van der Sluis WB[1], Bouman MB, Buncamper ME, Pigot GL, Mullender MG, Meijerink WJ.

- 2.3% rate in N=1082 collected over 25 years

Table 1. Incidence of Neovaginal Fistulas in Transgender Women Who Required Surgical Treatment Between 1990 and 2015

Fistula Type	Total Patients (n=1,082)	Penile Inversion Vaginoplasty (n=997)	Primary Bowel Vaginoplasty (n=40)	Revision Vaginoplasty (n=80)
Total fistulas	25 (2.3, 1.5–3.4)	19 (1.9, 1.1–3.0)	0 (0.0, 0.0–9.2)	6 (7.5, 2.8–16.3)
Rectoneovaginal	13 (1.2, 0.6–2.1)	8 (0.8, 0.3–1.6)	0 (0.0, 0.0–9.2)	5 (6.3, 2.0–14.6)
Urethroneovaginal	11 (1.0, 0.5–1.8)	10 (1.0, 0.5–1.8)	0 (0.0, 0.0–9.2)	1 (1.3, 0.0–7.0)
Pouch-neovaginal	1 (0.1, 0.0–0.5)	1 (0.1, 0.0–0.6)	0 (0.0, 0.0–9.2)	0 (0.0, 0.0–4.6)

Data are n (%, 95% confidence interval).

Clinical Characteristics and Management of Neovaginal Fistulas After Vaginoplasty in Transgender Women

Wouter B. van der Sluis, MD, Mark-Bram Bouman, MD, Marlon E. Buncamper, MD, Garry L.S. Pigot, MD, Margriet G. Mullender, PhD, and Wilhelmus J.H.J. Meijerink, MD, PhD

(Obstet Gynecol 2016;127:1118–26)

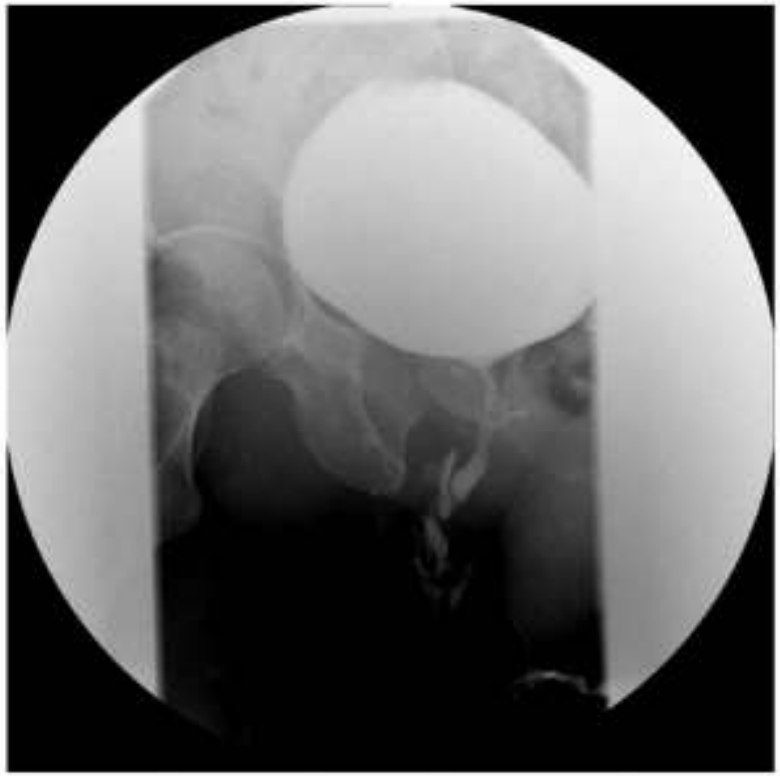


Fig. 3. Voiding cystourethrogram showing a urethroneovaginal fistula of the penile skin–lined neovagina in a 36-year-old transgender woman.

van der Sluis. Neovaginal Fistulas After Vaginoplasty. Obstet Gynecol 2016.

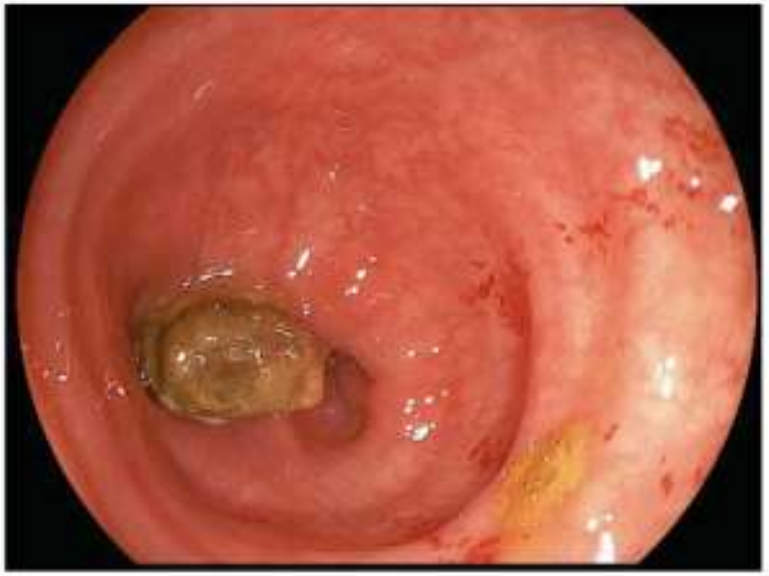


Fig. 2. Endoscopic examination of the sigmoid-derived neovagina in a 28-year-old transgender woman showing fecal matter around the rectoneovaginal fistula entrance.

van der Sluis. Neovaginal Fistulas After Vaginoplasty. Obstet Gynecol 2016.

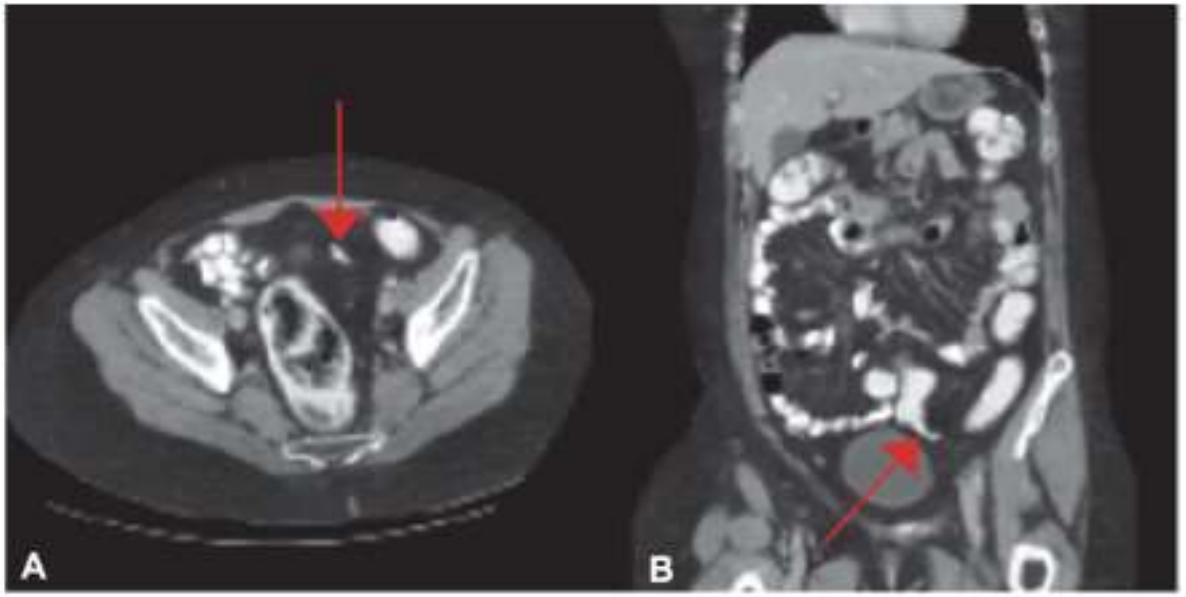


Fig. 1. Computed tomography scan using rectal contrast showing a rectoneovaginal fistula (*arrow*) of the penile skin–lined neovagina in a 26-year-old transgender woman. Depicted are transverse (**A**) and coronal (**B**) planes.

van der Sluis. Neovaginal Fistulas After Vaginoplasty. Obstet Gynecol 2016.

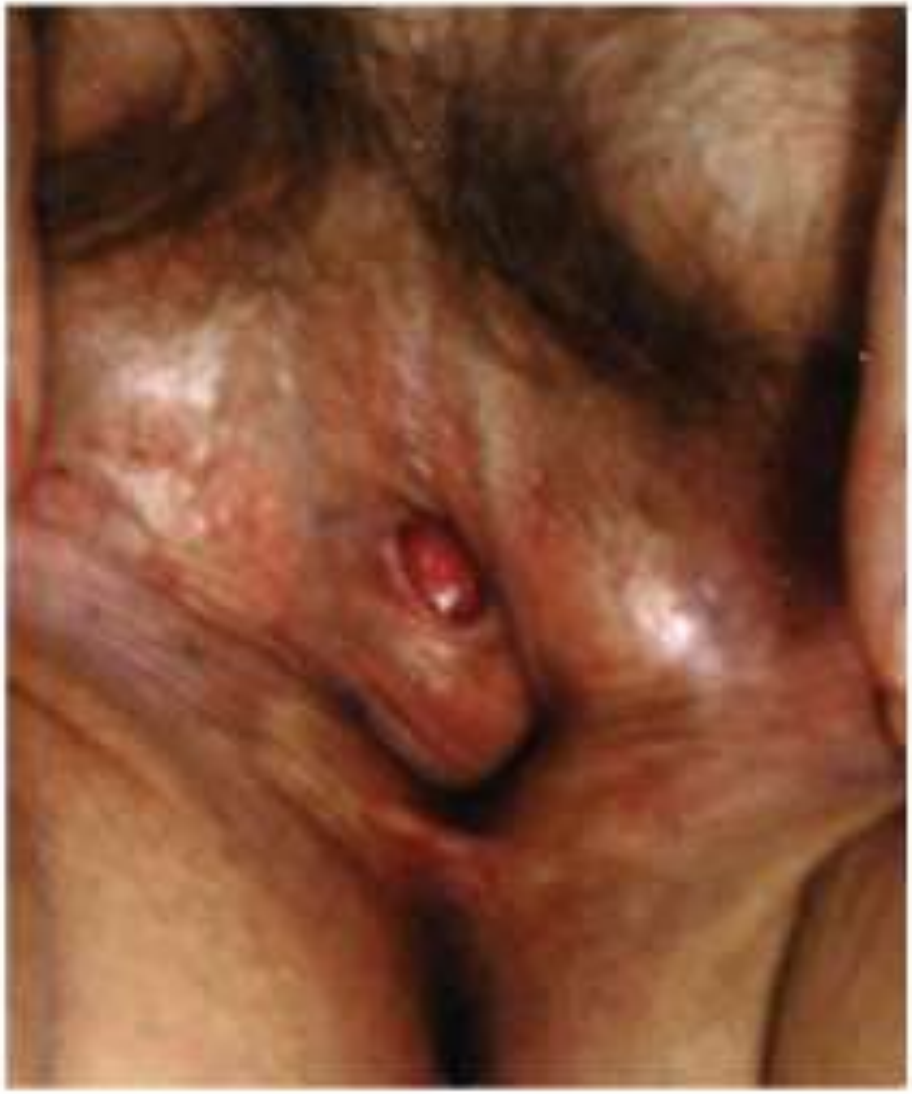


Figure 2 Example of a urethral meatus pointing forwards, with a bulky corpus spongiosum remnant.

Urinary stream problems

- Weak or deflecting stream
- Consider urethral stenosis, assymetric labia, adhesion band
- Often requires revision surgery

Neovaginal hair

- Remove with a forcep
- Hair removal cream – patch test first

STI screening after vaginoplasty?

- Penile inversion technique – skin lined vagina
  - ? Urethral mucosa used
- Sigmoid colon vaginoplasty
  - Less common
  - Mucosa

Neovaginal Flora

- 50 trans women evaluated by a variety of microbiological techniques
- 1/50 showed lactobacilli
- Mean pH 5.8
- No candida
- Mix of skin, colonic, vaginal / BV flora
- No association between sx and any species

Microflora of the penile skin-lined neovagina of transsexual women

Steven Weyers*[1], Hans Verstraelen[1], Jan Gerris[1], Stan Monstrey[2], Guido dos Santos Lopes Santiago[3], Bart Saerens[3], Ellen De Backer[3], Geert Claeys[3], Mario Vaneechoutte[4] and Rita Verhelst[4]

BMC Microbiology 2009, **9**:102 doi:10.1186/1471-2180-9-102

Approach to neovaginal discharge

- Skin-lined cavity
- pH = neutral
- Does not self-clean
  - sebum, dead skin, lubricant, ejaculate
- “Normal” flora?
- Skin infection vs vaginal infection
- Fistula?
- Use an anoscope for exam

Granulation Tissue

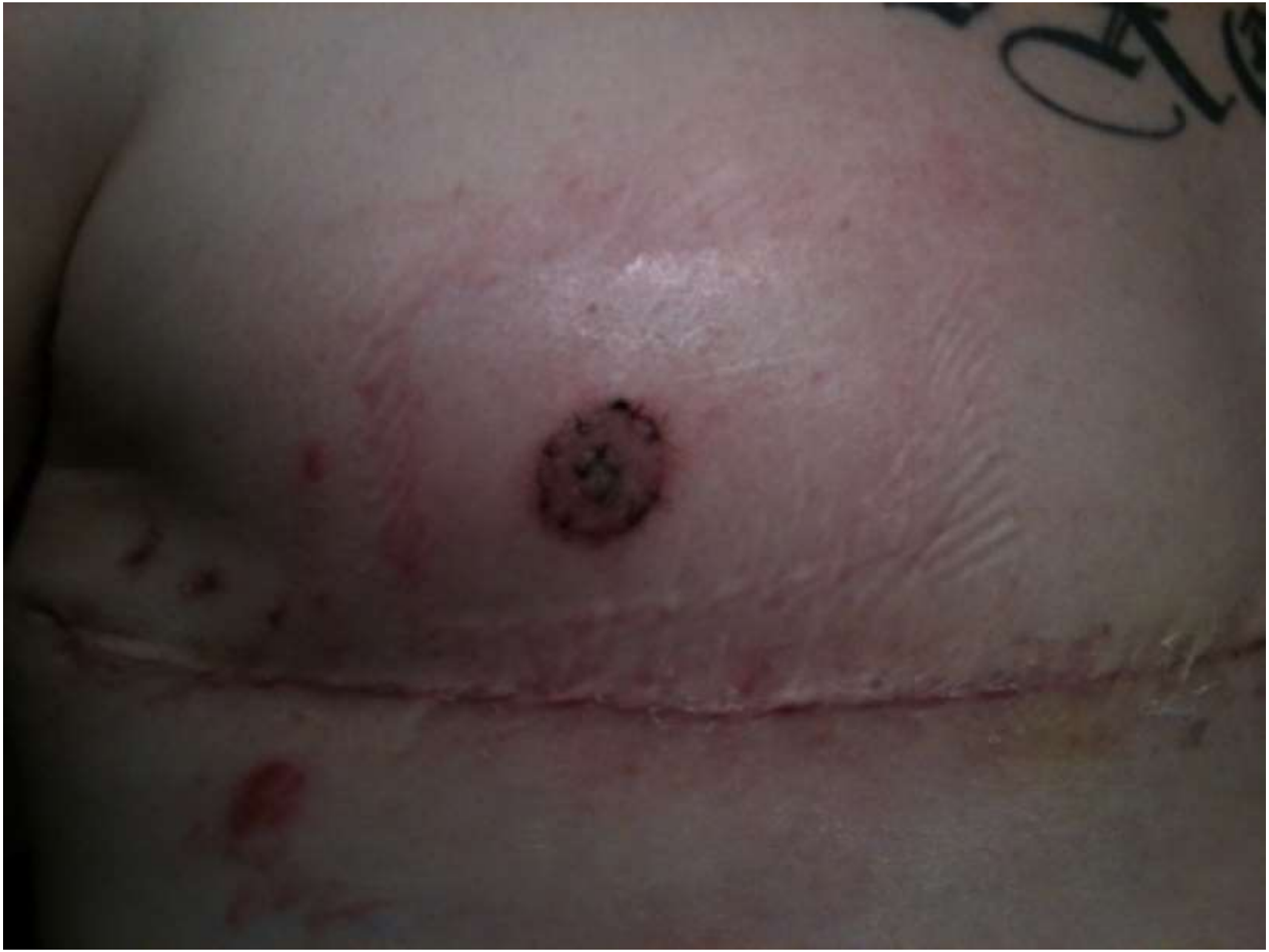
- Fibroblastic connective tissue laying down new connective (scar) tissue matrix
- Inflammatory but not infected (usually)
- Silver nitrate
- Moderate potency topical steroid

Other Post-Vaginoplasty Issues

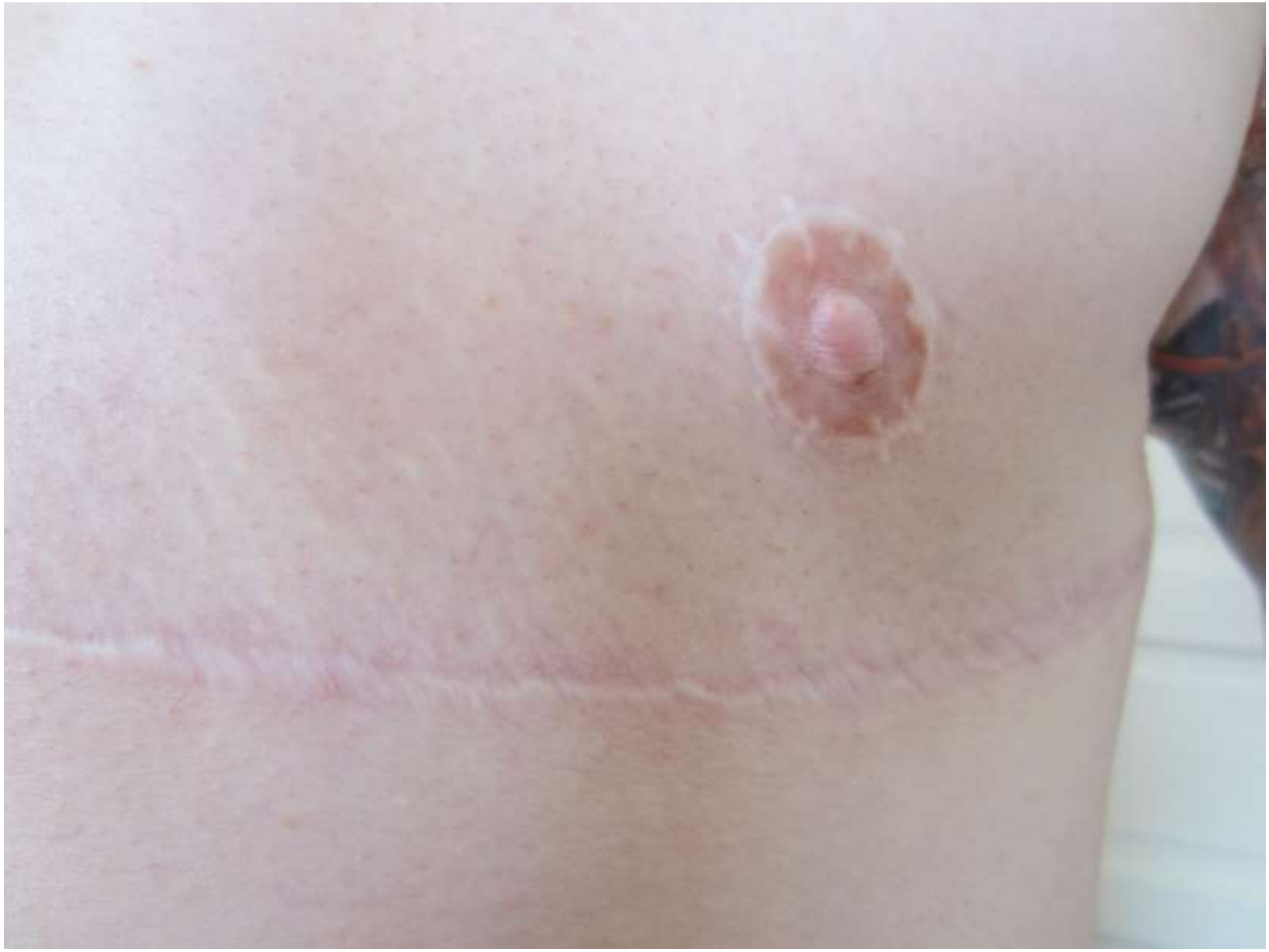
- Persistent/excess erectile tissue
- Urinary stress/urge incontenence
  - Prostatic changes?
- UTI
- Hematoma
- Colonic vaginoplasty considerations

Clin Plast Surg. 2018 Jul;45(3):361-368. doi: 10.1016/j.cps.2018.03.007. Epub 2018 Mar 31.

Vaginoplasty Complications.



QUIXOTIC



22. Berry MG, Curtis R, Davies D. Female-to-male transgender chest reconstruction: a large consecutive, single-surgeon experience. *J Plast Reconstr Aesthet Surg*. 2012;65(6):711-719. doi:10.1016/j.bjps.2011.11.053

- Case series (N=100)
- Single surgeon
- No statistical association between hematoma and T use

Top Surgery Postoperative Care

- Dressings
- Binder for 4-6 weeks
- Scars
  - Hypertrophic -> kenalog?

Seroma/Hematoma Office Management

- Simple percutaneous drainage
- Can consult with surgeon

Phalloplasty Complications – Contributing Factors

- • Flap design that includes tubularization of tissue (1–2 times) with an associated increased risk for ischemia
- • Dependent, unstable position
- • Colonized, moist recipient site
- • Area of major friction during ambulation
- • Acting as urinary conduit

Clin Plast Surg. 2018 Jul;45(3):415-424. doi: 10.1016/j.cps.2018.03.017.

Phalloplasty Flap-Related Complication.

Esmonde N[1], Bluebond-Langner R[2], Berli JU[3].

Possible Postop Complication Syndromes – Phalloplasty

- • Full phallic loss
- • Partial flap loss
- • Urethral loss
- • Infection
- • Hematoma
- • Wound dehiscence
- • Miscellaneous

Phalloplasty – Urologic Complications

- Strictures (25%-58%)
- Urinary pooling 2/2 urethral irregularities and non-laminar flow
- Lifelong urologic follow-up recommended

Clin Plast Surg. 2018 Jul;45(3):425-435. doi: 10.1016/j.cps.2018.03.013.

Urologic Complications After Phalloplasty or Metoidioplasty.

Nikolavsky D[1], Hughes M[2], Zhao LC[3].

PubMed ▼ (estrogen or estradiol or hormone) perioperative thromboembolism

Create RSS Create alert Advanced

Format: Summary **Sort by**: Most Recent **Per page**: 20 **Send to**

Best matches for (estrogen or estradiol or hormone) perioperative thromboembolism:

Perioperative Management of Female **Hormone** Medications.
Seim LA et al. Curr Clin Pharmacol. (2017)

European guidelines on **perioperative** venous **thromboembolism** prophylaxis: Surgery in the elderly.
Kozek-Langenecker S et al. Eur J Anaesthesiol. (2018)

Anesthesia in adults with congenital heart disease.
Baehner T et al. Curr Opin Anaesthesiol. (2017)

Switch to our new best match sort order

Search results

Items: 21 to 40 of 43 Selected: 3

<< First < Prev Page 2 of 3 Next > Last >>

European Guidelines on perioperative venous thromboembolism prophylaxis

Executive summary

Afshari, Arash; Ageno, Walter; Ahmed, Aamer; Duranteau, Jacques; Faraoni, David; Kozek-Langenecker, Sibylle; Llau, Juan; Nizard, Jacky; Solca, Maurizio; Stensballe, Jakob; Thienpont, Emmanuel; Tsiridis, Eleftherios; Venclauskas, Linas; Samama, Charles Marc for the ESA VTE Guidelines Task Force

European Journal of Anaesthesiology (EJA): February 2018 - Volume 35 - Issue 2 - p 77–83
doi: 10.1097/EJA.0000000000000729
Executive summary

- Only single mention of estrogen

- Over age 70, “consider addressing” (Grade 2C)

JAMA Surg. 2019 Feb 1;154(2):159-169. doi: 10.1001/jamasurg.2018.4598.

Association of Surgical Risk With Exogenous Hormone Use in Transgender Patients: A Systematic Review.

Boskey ER[1], Taghinia AH[1], Ganor O[1].

- Systematic review identified 18 studies
- Quality of studies was mixed

"There is insufficient evidence to support routine discontinuation of testosterone or spironolactone in transgender patients undergoing scheduled surgical procedures. Given inconsistent risk data about the risks associated with estrogen, decisions about whether or not to discontinue estrogen treatment should keep individual risk factors and concerns in mind"

Curr Clin Pharmacol. 2017;12(3):188-193. doi: 10.2174/1574884712666170927115947.

Perioperative Management of Female Hormone Medications.

Seim LA[1], Irizarry-Alvarado JM[1].

- Review of literature

Conclusion: “Until additional studies are performed, the risks and benefits must be weighed on an individual basis with consideration of prophylaxis when a decision is made to continue these medications in the perioperative period. Part of this decision making includes the risk of fetal harm in an unwanted pregnancy in preparation for nonobstetric surgery versus an increased risk of venous thromboembolism.”

Thromb Haemost. 2004 Aug;92(2):337-43.

Postmenopausal hormone replacement and venous thromboembolism following hip and knee arthroplasty.

Hurbanek JG[1], Jaffer AK, Morra N, Karafa M, Brotman DJ.

- 108 cases matched to 210 controls
- No association between menopausal HRT and clot risk.

Conclusion: “We found no association between perioperative hormone replacement and post-operative thrombosis in patients undergoing major orthopaedic surgery. Routine discontinuation of these medications preoperatively--and possibly in other situations predisposing to thrombosis, such as acute medical illness--may be unnecessary in patients receiving appropriate pharmacologic antithrombotic prophylaxis.”

Plast Reconstr Surg. 2015 Feb;135(2):413-23. doi: 10.1097/PRS.0000000000000908.

Practical guidelines for venous thromboembolism chemoprophylaxis in elective plastic surgery.

Iorio ML[1], Venturi ML, Davison SP.

- Review article
- Discusses several studies that failed to find a difference, and one with odds ratio 3.3
- They then conclude (how?): “Ultimately, it should be advocated that combined or single-medication oral contraceptive therapy and hormone-replacement therapy be held for 4 to 6 weeks before surgery and restarted at least 2 weeks after surgery or once the patient is fully ambulatory.”

Care abroad

- Thailand
- Europe
- Mexico

Sexual Health

- What is a clitoris?
- How does orgasm work without penetration/ejaculation?
- What parts of my neophallus are erogenously sensitive?

Sexual Function Post Vaginoplasty

- Poor sexual function before surgery is a reliable predictor of poor sexual function after surgery.
- Patients with difficulty or lack of experience achieving erogenous genital sensation should be encouraged to self-stimulate before their surgery.
- • Depression, performance anxiety, and chronic pain interfere with recovery of erogenous sensation and/or orgasm after vaginoplasty.
- • Neuroplasticity, gray-matter changes and synapses strengthen in response to new stimuli and repetition.

Clin Plast Surg. 2018 Jul;45(3):437-446. doi: 10.1016/j.cps.2018.04.002.

Sexual Function After Shallow and Full-Depth Vaginoplasty: Challenges, Clinical Findings, and Treatment Strategies- Urologic Perspectives.

Garcia MM[1].

Clinics Review Articles

Clinics in Plastic Surgery

GENDER CONFIRMATION SURGERY

EDITORS
LOREN S. SCHECHTER
BAUBACK SAFA

July 2018

ELSEVIER

Case 1

- 28 y/o trans woman with clitoral pain on arousal.
- Severe pain limiting daily function
- Pt has significant behavioral health comorbidities
- Exam shows point tenderness in clitoral area, otherwise normal

Case 2

- 33 y/o transgender woman with introitus pain, especially with arousal
- Exam shows excess tissue in area of introitus
- Referred back to surgeon -> excess erectile tissue

Case 3

- 39 y/o transgender man for preop for phalloplasty with outside private office

- Pt has PPO and has worked directly with surgeon office up to this point, now here for me to “sign the papers”

Case 3

- Pt has long hx recurrent dysuria with negative u/a but has had various cultures come back over the years with <10,000cfu of several organisms

- Has not discussed this or disclosed this to the urologist

Case 4

- 22 y/o trans man has top surgery in another state

- Now 2 weeks postop and has developed a hematoma. He is worried about cosmesis. What do you do?

Case 5

- 66 year old transgender woman with TBI, moderate cognitive impairment, anxiety, depression, and PTSD
- Often is confused, sometimes confabulates, and very limited memory
- Lives alone in SRO, no reliable social support. “Has friends” but does not know their names
- Wants vaginoplasty and FFS
- Going for oral surgery and thinks that surgeon told her to stop her hormones for 6 weeks before surgery.

Case 6

- Transgender man, 28 y/o, going for oopherectomy.

- “Should I leave one of my ovaries? The Ob-Gyn said I should because it will lower my risk of osteoporosis and heart disease”.

Case 7

- Transfeminine person 55 y/o never on hormones, does not want to take them
- Wants orchiectomy only

Case 7

- Transfeminine person 55 y/o never on hormones, does not want to take them
- Wants orchiectomy only

- What if this person was 35?

Case 7

- Transfeminine person 55 y/o never on hormones, does not want to take them
- Wants orchiectomy only

- What if this person was 35?

- What if on hormones but T level is 330 pre-op?

Case 8

- “My (surgeon/friend/someone on Reddit) told me I can (lower/stop/cut in half) my hormone dose after (orchiectomy/ vaginoplasty/ oopherectomy) – is this true?