Adolecent Male Health Issues: A hot Issue for 2022

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No conflicts to report

Thanks to Martin Anderson, MD for sharing his slides

Faculty Disclosure & Disclaimer

I do not have any relevant financial relationships with any commercial interests.

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Educational Objectives

- Learning Objective 1: **Discuss medical issues related to hair loss**
- Learning Objective 2: **Describe how to recognize and evaluate gynecomastia**
- Learning Objective 3: **Review disorders of the male genitals**
- Learning Objective 4. **Male Body Image**

Planned Methods for Presentation

Utilize photos to highlight cases that young males may present to the clinician

Use question and answer format to discuss the treatment of male health problems

Rational for the Presentation

- **The literature frequently points out the emphasis on health care needs of Adolescent girls while ignoring boys. "*Emerging Issues in Male Adolescent Sexual and Reproductive Health Care, AAP Committee on Adolescence, Pediatrics; 145 (5) May 2020 pp77-90"***
- **Health issues for boys are often trivialized by adults.**

This is a from of health care disparity

- **Addressing boys health care needs and desires will improve their physical and mental health.**

I think I am going bald

- A common sense approach to hair loss

Anatomy and Life Cycle of Hair Follicle

HAIR FOLLICLE

- Hair shaft
- Hair sheath
- Germinative bulb
- Matrix – where cells become hair shaft
  - Mitotic turnover fastest of any organ system

Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

- **Hair Types**
  - **Lanugo/vellus hairs**
  - **Thick/terminal hairs**
- **Scalp has over 100,000 hairs**
- **Growth 0.3-0.4 mm/day = 6 inches/year**

Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

Life Cycle of Hair Growth

ANAGEN

- **Growing 85-90% of hairs; lasts 3 years**

CATAGEN PHASE

- **Transition; 2-3% of hairs**

TELOGEN

- **Resting; 10-15% of hairs; lasts 3 months**

Approximately 100 hairs are shed per day

Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

Common Causes of Alopecia

- **Androgenic – Male Pattern**
  - **↓ anagen phase**
  - **Terminal hairs → Vellus hairs**

Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

Common Causes of Alopecia

- **Telogen Effluvium**
  - ↑ number of hairs anagen → telogen
  - Diffuse hair loss
  - Causes:
    - Injury or stress
    - Infection
    - Hypothyroidism
    - Anticonvulsants
    - Heavy metals
    - Fever
    - Surgery
    - Weight loss
    - Hormones

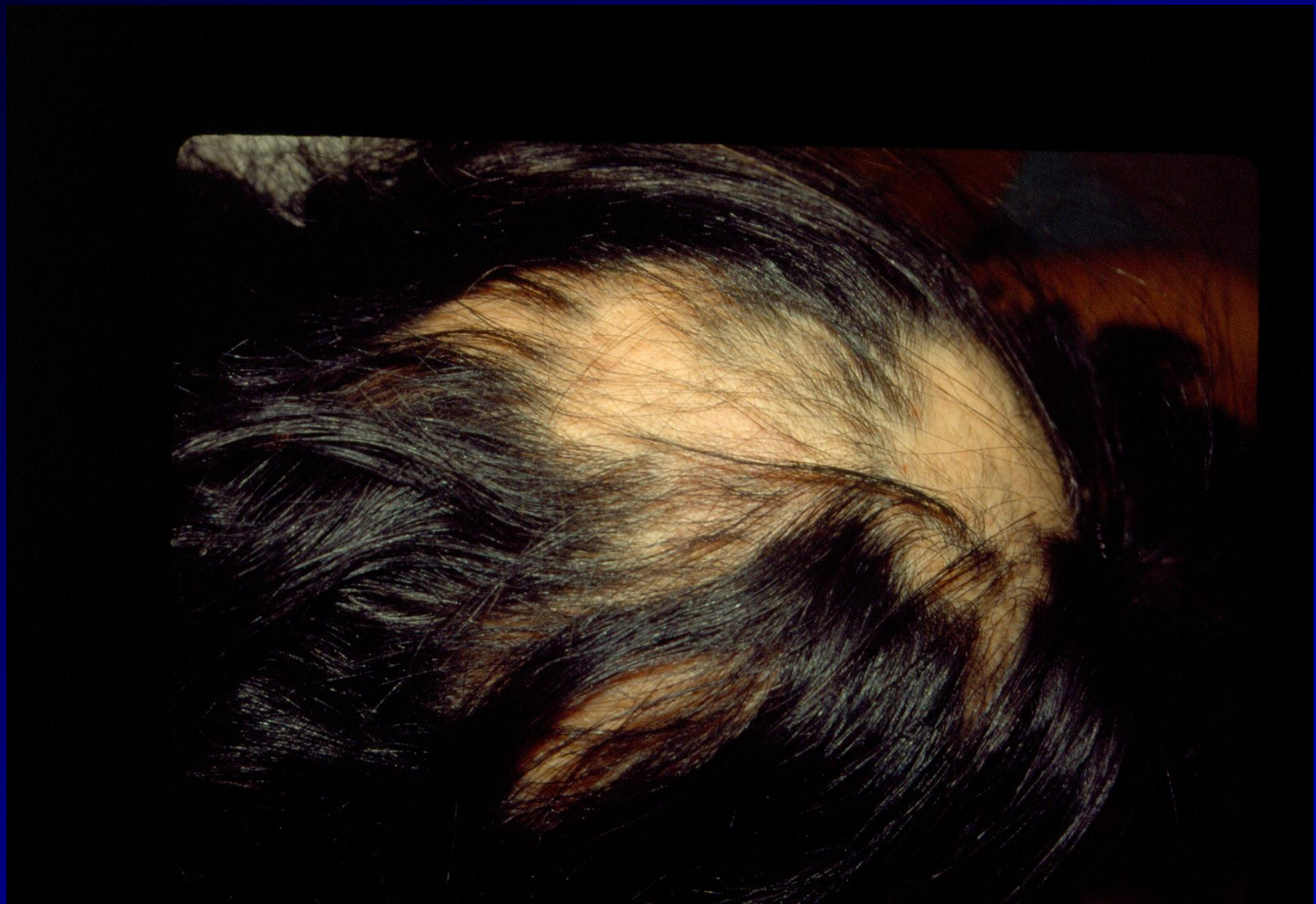
Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

Common Causes of Alopecia

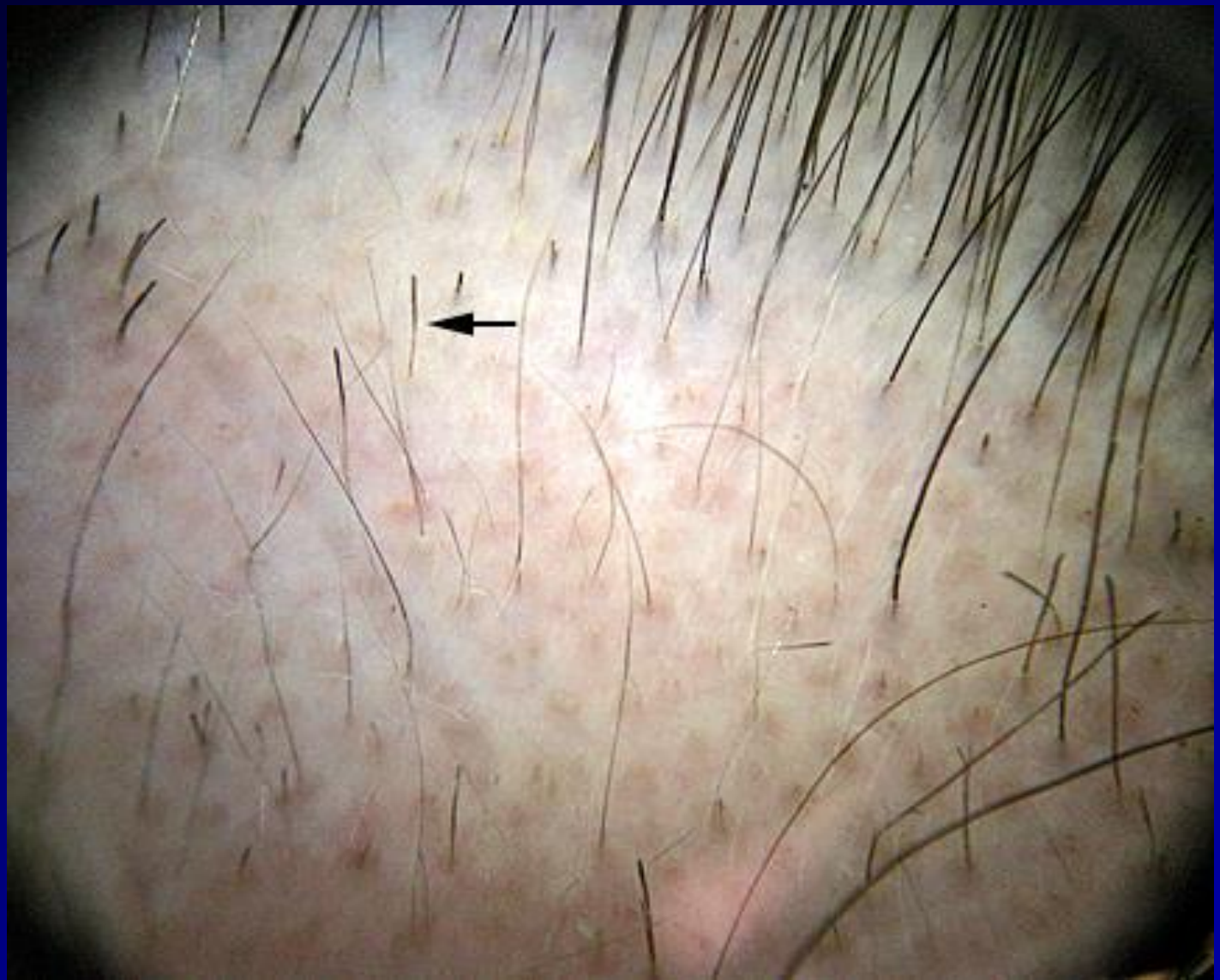
- Alopecia areata
- Trichotillomania: compulsive hair pulling
- Traction alopecia-tight braides
- Tinea capitis: Treat with oral antifungal meds
  - Microsporum sp. – woods lamp=green fluoresce
  - Trichophyton – most common do not fluoresce
- Anagen arrest
  - Mitotic activity of matrix suppressed

Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.

Alopecia Areata a autoimmune disorder has exclamation point hairs (0.1-0.2% kids)

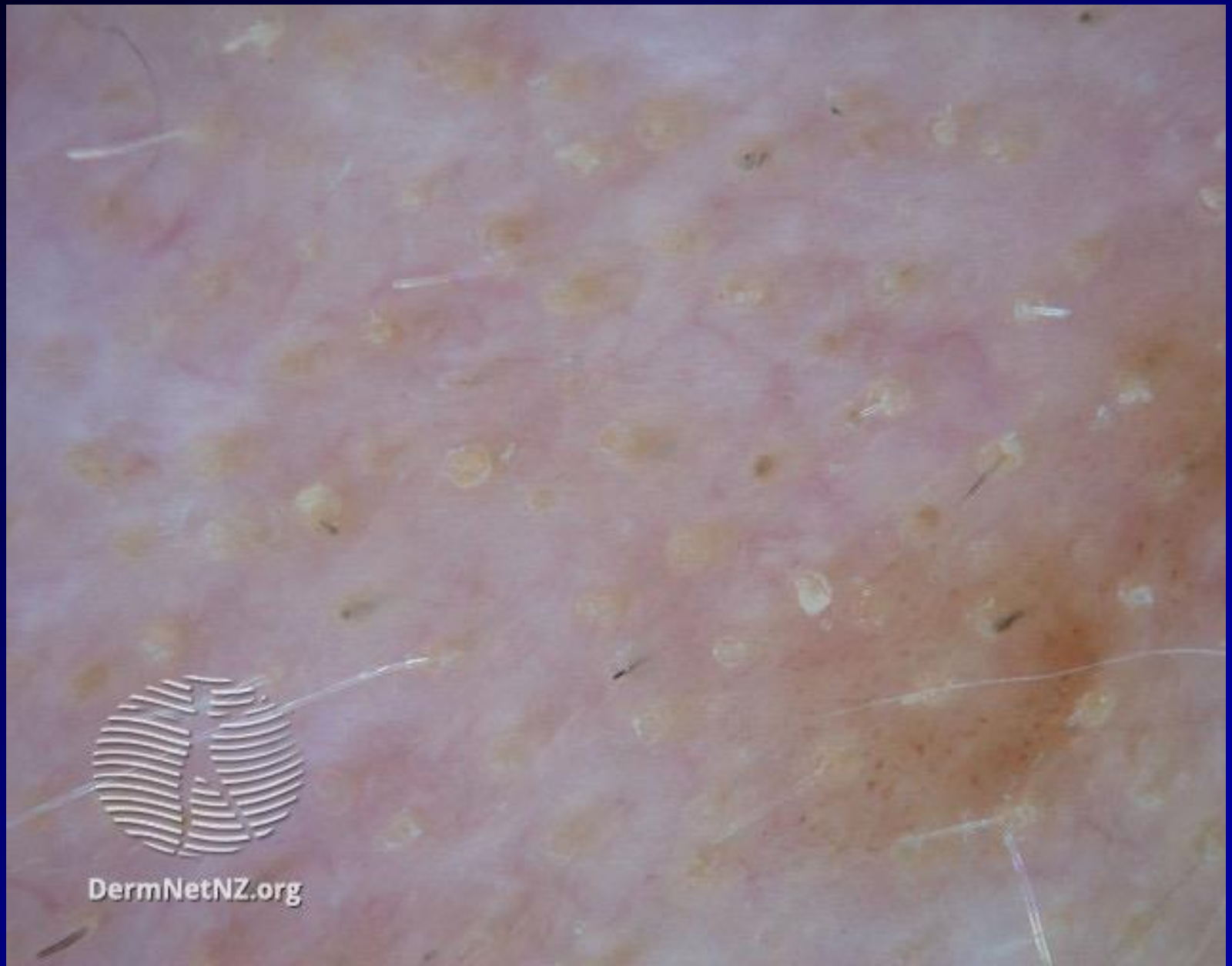


Exclamation point hairs are short, broken hairs that can be extracted with minimal traction and where the proximal end of the hair is narrower than the distal end.



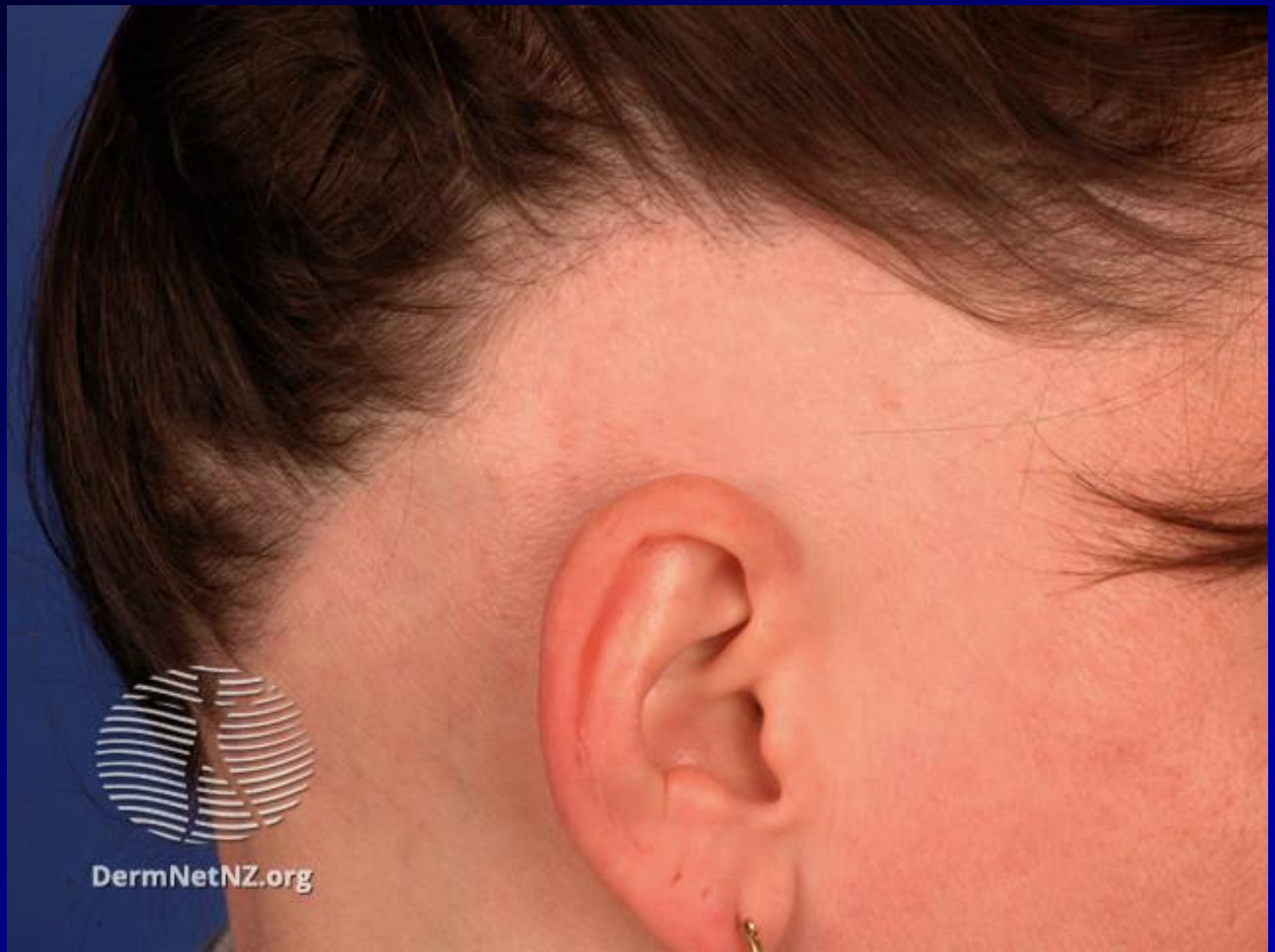
Exclamation point hairs

Yellow dots, Black dots, Short hairs



Ophiasis pattern of Alopecia areata

(localized to the sides and lower back of the scalp)



Eyebrow loss in Alopecia areata

Totalis-total scalp or Universalis-whole body

Trachyonychia: rough accentuated linear ridges (longitudinal striations) on the nails of the fingers and toes

Approach to Management

- Complete HX including family X and PE.
- There is an association with other autoimmune diseases
  - Thyroid disease
  - Vitiligo
  - Lupus
  - Atopic dermatitis
  - Inflammatory Bowel disease esp. Ul. colitis Dermatology DOI: 10.1159/000512747
- In the absence of HX and PE findings, a family history of autoimmune diseases and Down syndrome routine testing is not necessary. 1. DOI: 10.1111/ddg.14689; 2. Lepe K, Zito PM. Alopecia Areata. [Updated 2021 Nov 15]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-.

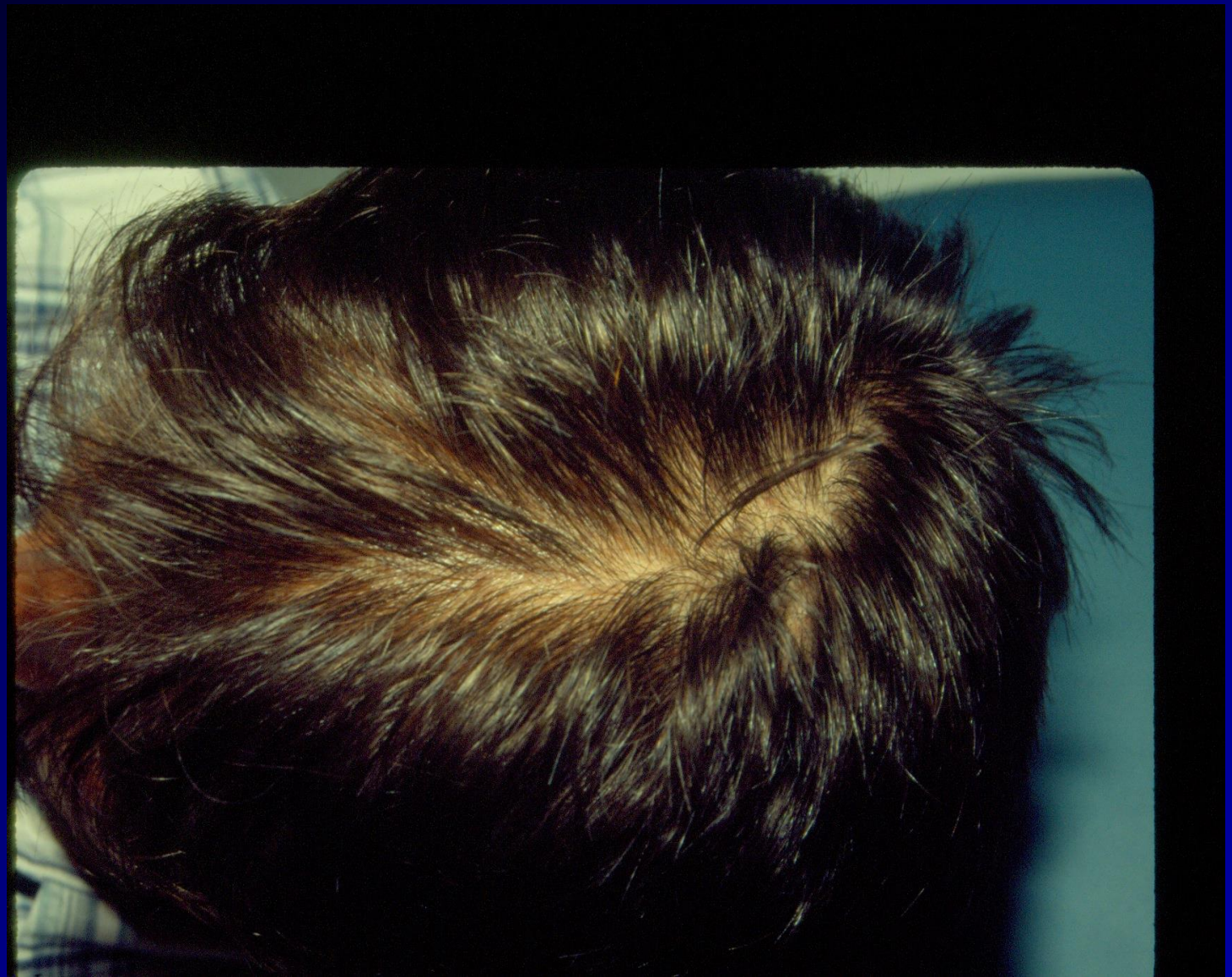
- Bottom line illustrated by this case. A seemingly unimportant physical finding (hair loss) that could easily be ignored could herald a significant medical problem that required treatment.
- Depending on HX and PE the boy may need an immune workup.
- Luckily most don’t but some will and should not be missed.

Alopecia Areata Treatment

- For severe Alopecia areata > 50% of scalp, topical immunotherapy with diphenylcyclopropenone or squaric acid dibutylester is treatment of choice
- Prescribed by a dermatologist

Sutherland L. et. Al. Treatment of alopecia areata with topical sensitizers. Dermatitis 2015 Jan-Feb;26(1):26-31

Male Pattern Baldness: Adol. incidence15%



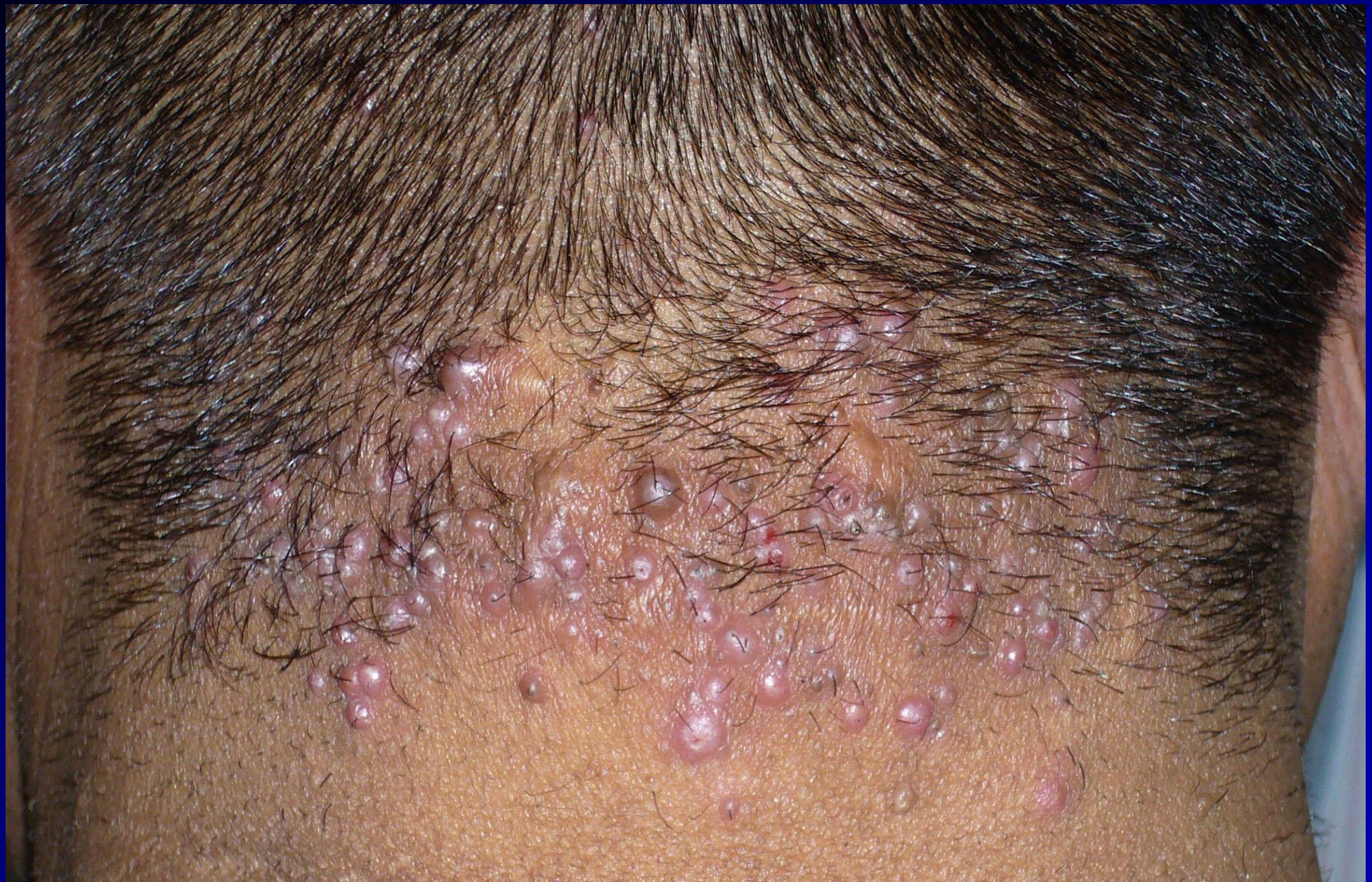
Androgenetic Alopecia - Treatments

- **Minoxidil**
  - **Unknown mechanism of action**
- **Finasteride**
  - **5 alpha Redactase inhibitor**
  - **Dose = 1 mg/day**
  - **26-30% of men do not respond**
- **Spironolactone**
  - **Aldosterone antagonist**
  - **Weak anti-androgen**
- **Cimetidine**
  - **Anti-androgen**

Sawaya ME and Shapiro J. Androgenetic Alopecia. New Approved and Unapproved Treatments. Dermatologic Clinics, 18(1); 47-61. 2002

A case of bumps on the neck

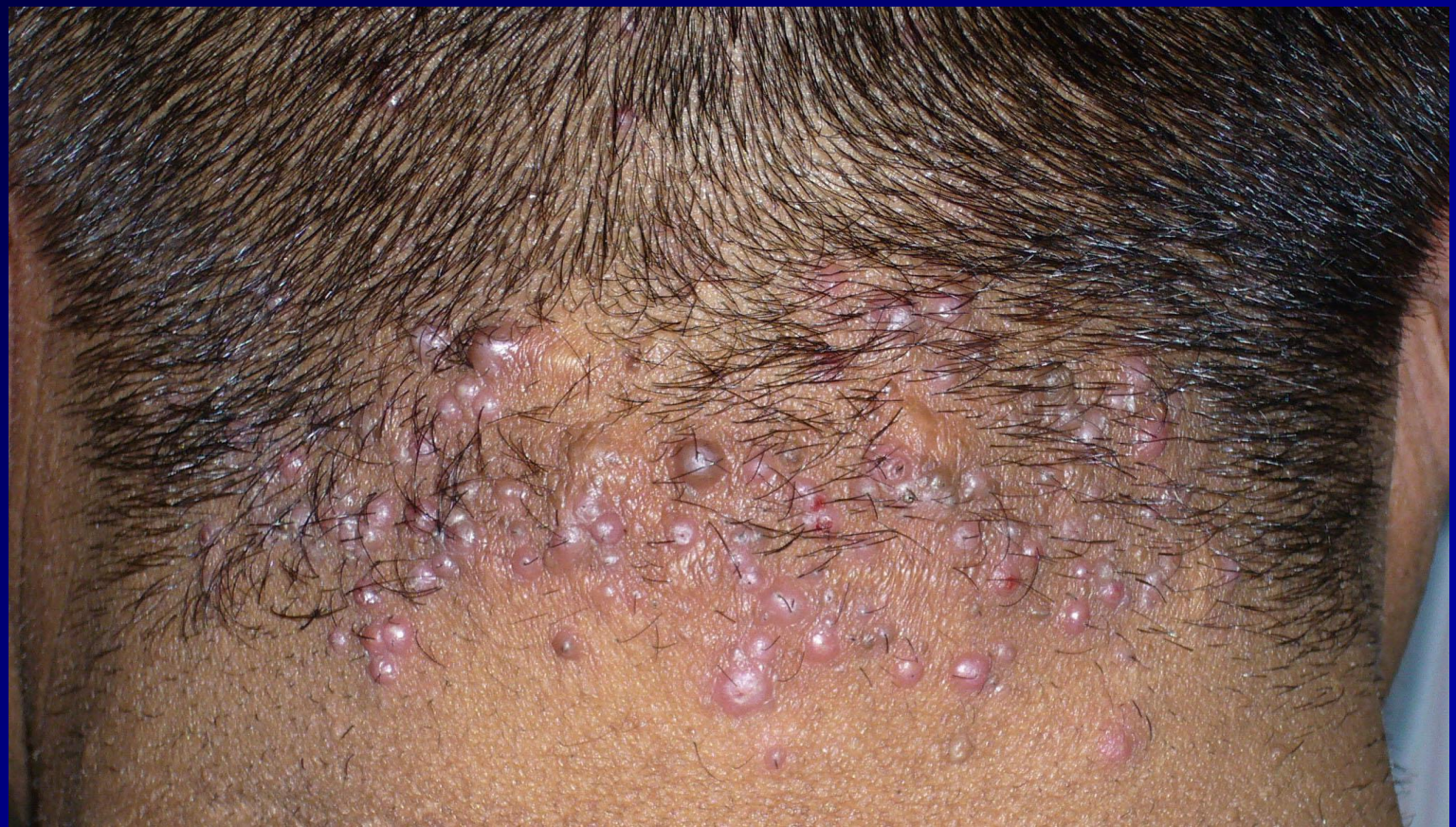
18 year old c/o bumps on the back of his neck after receiving a hair cut. His barber told him to see his doctor.



- What is it?
- How do you treat it?

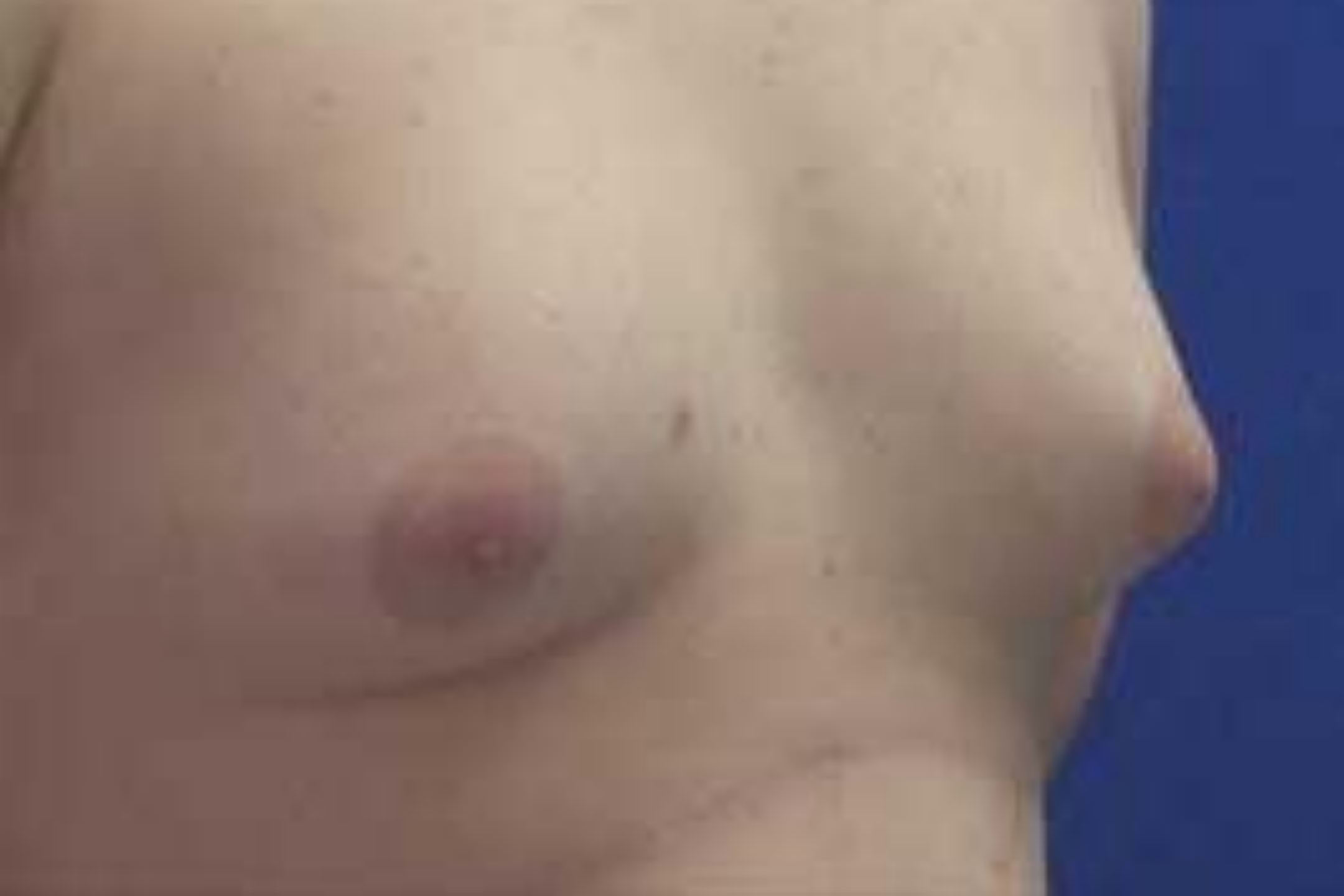
Acne Keloidalis Nuchae RX: Topical/systemic steroids, plus topical antibiotic, if inflammatory add a topical retinoid, (severe Doxycycline) Scaring interlesional triamcinalone or surgery

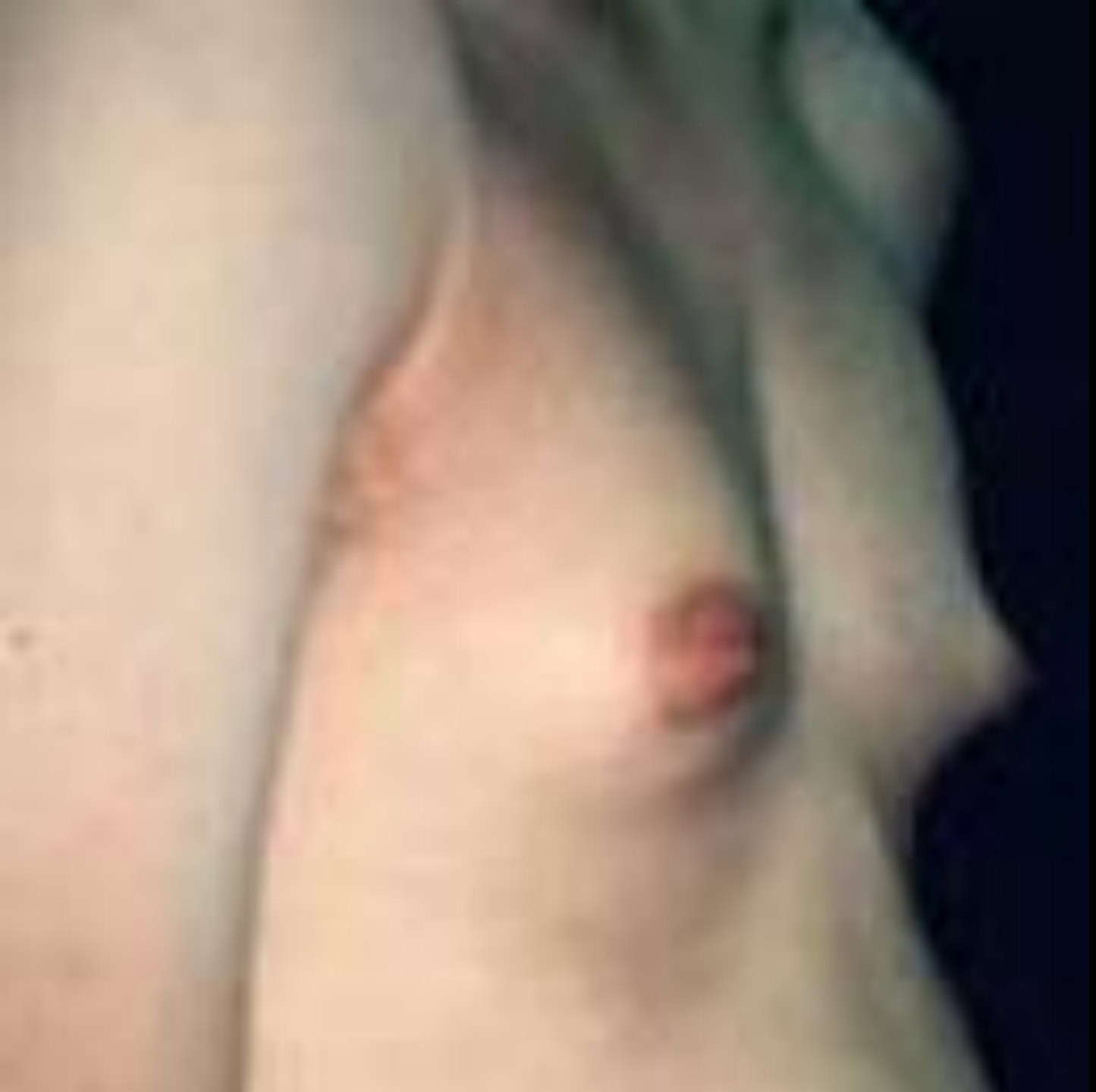
DON'T PICK THEM AVOID SHAVING NECK & TIGHT HATS



Male Health Issues

- My son has a cyst under his nipple
  Gynecomastia





Gynecomastia

EPIDEMIOLOGY

- 19.6% present at 10 ½ year olds
- 64% present at 14 year olds
- Mean age of presentation: 13 years 2 months
- 4% develop ≥ Tanner 3 female breast

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th Ed

Gynecomastia

RELATIONSHIP TO PUBERTY ONSET

- During Genital Stage 1 20%
- During Genital Stage 2 50%
- During Genital Stage 3 20%
- During Genital Stage 4 10%

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th Ed

Clinical Manifestations

- Type I: one or more subareolar nodules, freely movable
- Type II: Breast nodules beneath areola but also extending beyond the areolar perimeter
- Type III: Resembles breast development of sexual maturity rating 3 (SMR 3) in girls.
- Occurs bilaterally in 77% to 95%
- Type I and II are usually tender

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th

Gynecomastia

DIFFERENTIAL DIAGNOSIS

- Physiological: Imbalance of estradiol and testosterone during early puberty
- Drugs
  - Hormones
  - Anti-androgens
  - Antibiotics
  - H2 blockers
  - Psychiatric medicines
  - Cardiac medications
  - Drugs of abuse

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th Ed

Gynecomastia

DIFFERENTIAL DIAGNOSIS

- Pathological
  - Renal failure
  - Hyperthyroidism
  - Testicular/Gonadal failure
  - Liver disease
- Labs to order if there is suspicion of a pathological cause:
  - TSH, hCG, serum testosterone, estradiol, LH

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th Ed

Gynecomastia THERAPY

Only consider medical therapy for those with more than mild to moderate gynecomastia. Most cases resolve in 6 to 12 months without therapy.

- Tamoxifen 10-20 mg BID x 3 months

  This should decrease tenderness and pain followed by ↓ in breast size

Joffe A. Ch. 11, Gynecomastia. In: Neinstein LS(ed). Adolescent Health Care. 5th Ed

19 year old male seen for routine PE

Obese (BMI 40) He doesn't have a donut hole

New onset bilateral glandular gynecomastia

GU exam normal including testis (if small testis peanut size- consider Klinefelter syndrome and karyotype XXY)

Tanner 5 pubic hair

testis volume 25cc Tanner stage 4 to 5

What tests to do?

Laboratory tests Results

- HCG (-),
- Prolactin 5: normal
- Estradiol normal male
- Testosterone 54 ng/dl very low for Tanner stage 5
- FSH 2 Low: function sustains sperm growth
- LH 1 Low: function stimulates testosterone

Diagnosis?

Gonadotropin Releasing Hormone Deficiency

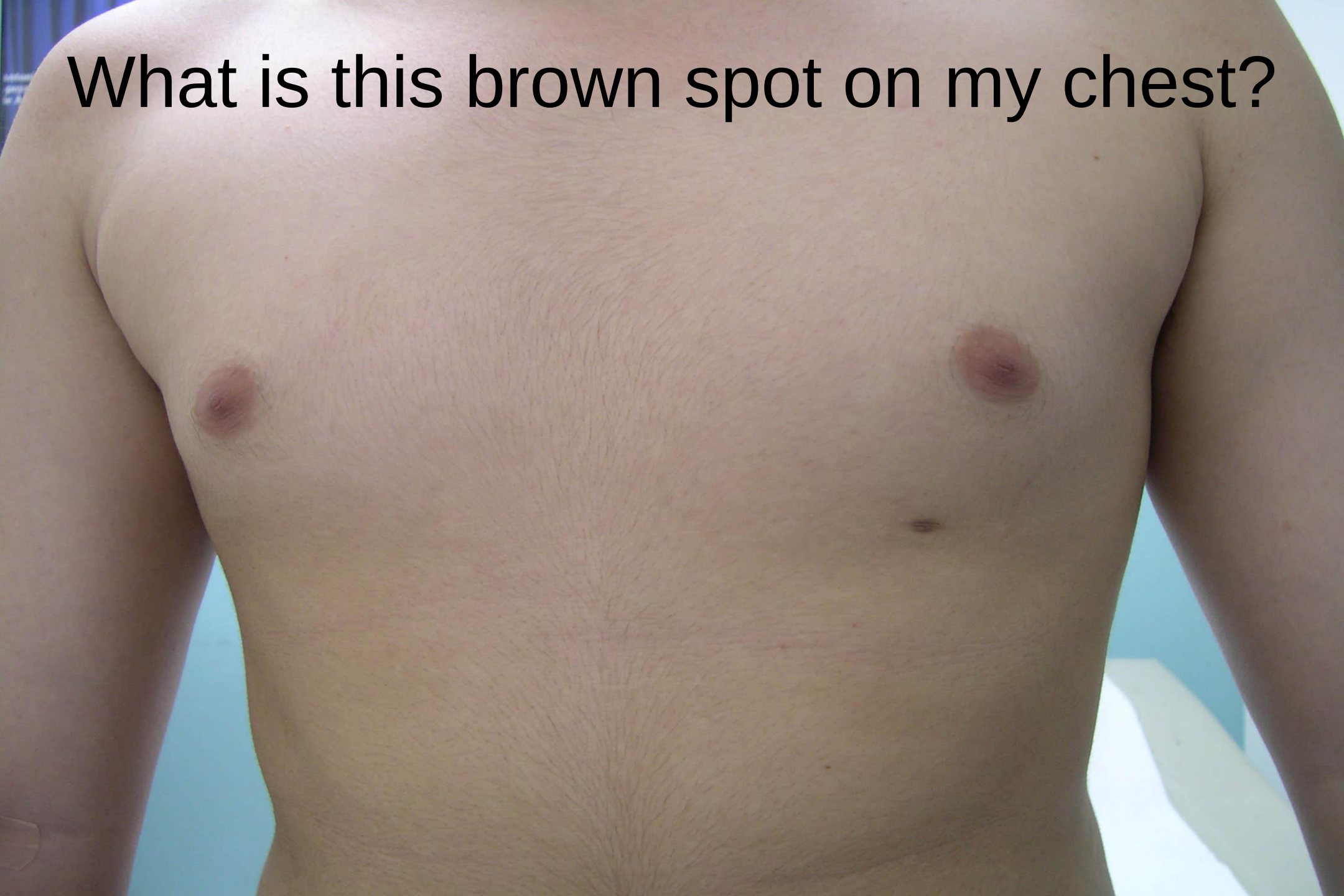
- New onset glandular gynecomastia is abnormal at 19 because gynecomastia outside of puberty needs to be evaluated.
- He had GNRH deficiency, his LH FSH were low as was his testosterone so he had hypogonadotropic hypogonadism.
- A brain MRI is best imaging study for pituitary
- Testosterone of 54 is low, on GNRH stim. test his LH went up as did his testosterone,
- He is now on testosterone supplementation

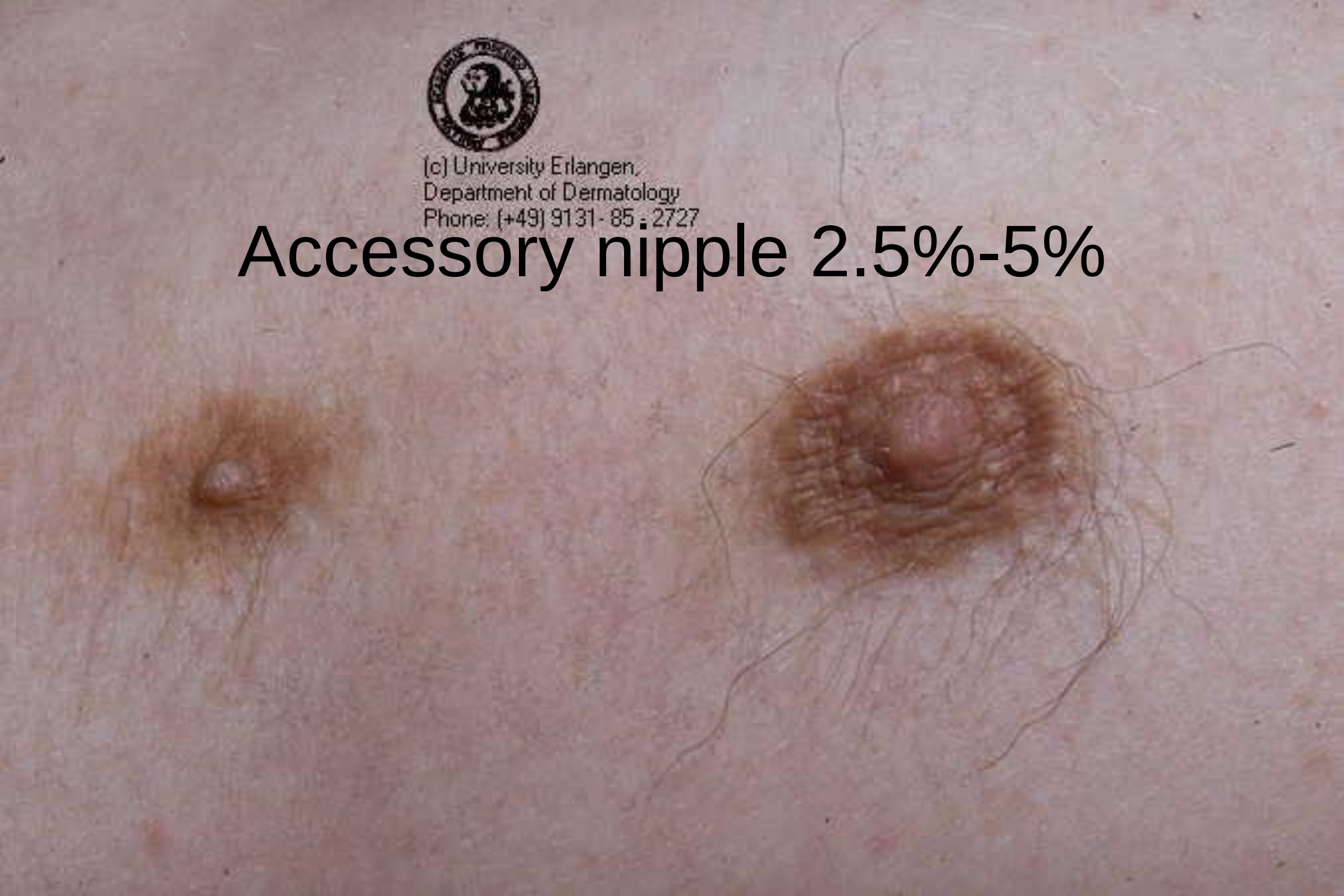
What are the causes of Gonadotropin Releasing Hormone Deficiency

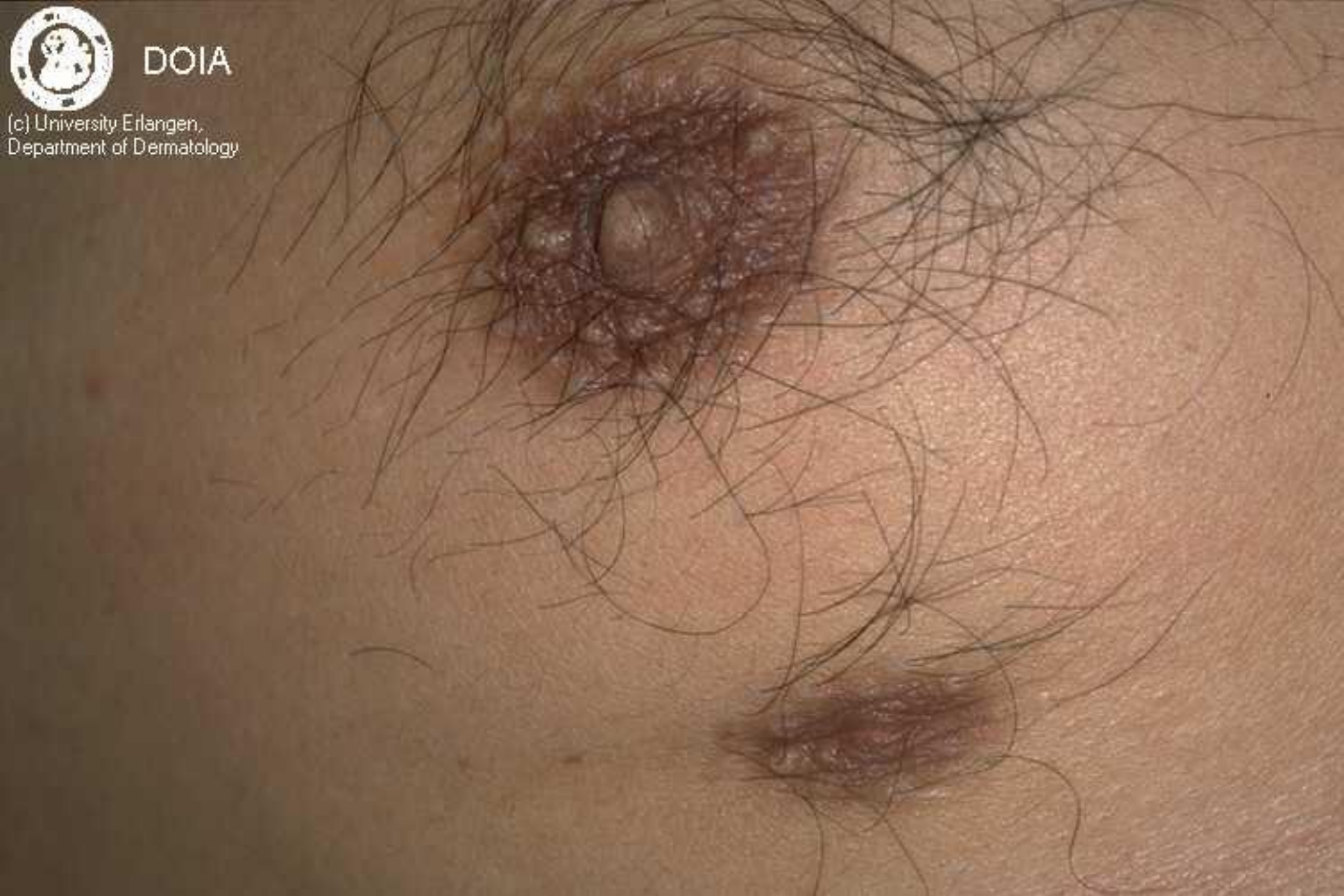
- Damage to the pituitary gland or hypothalamus from surgery, injury, tumor, infection, or radiation.
- Genetic defects.
- High doses or long-term use of opioid or steroid (glucocorticoid) medicines.
- High prolactin level (a hormone released by the pituitary)
- Severe stress.
-

Bottom line illustrated by this case. An embarrassing physical finding (breast enlargement) that could easily be ignored heralded a significant medical problem that required treatment

What is this brown spot on my chest?




(c) University Erlangen,
Department of Dermatology
Phone: (+49) 9131 - 85 . 2727
Accessory nipple 2.5%-5%



Male Health Issues Bell DL.et al. Pediatrics 2013;132;535-546

- Am I normal down there?

  Penis size – the long and short of it

Other pubertal concerns:

wet dreams

Erections

Pearly pink papules

sebaceous cysts

phimosis

paraphimosis

Penile Growth

- Rapid growth birth to 4 years
- Little growth 4 years to puberty
- Reach adult phallus length by 16-17 years
- Wide variation in normal development

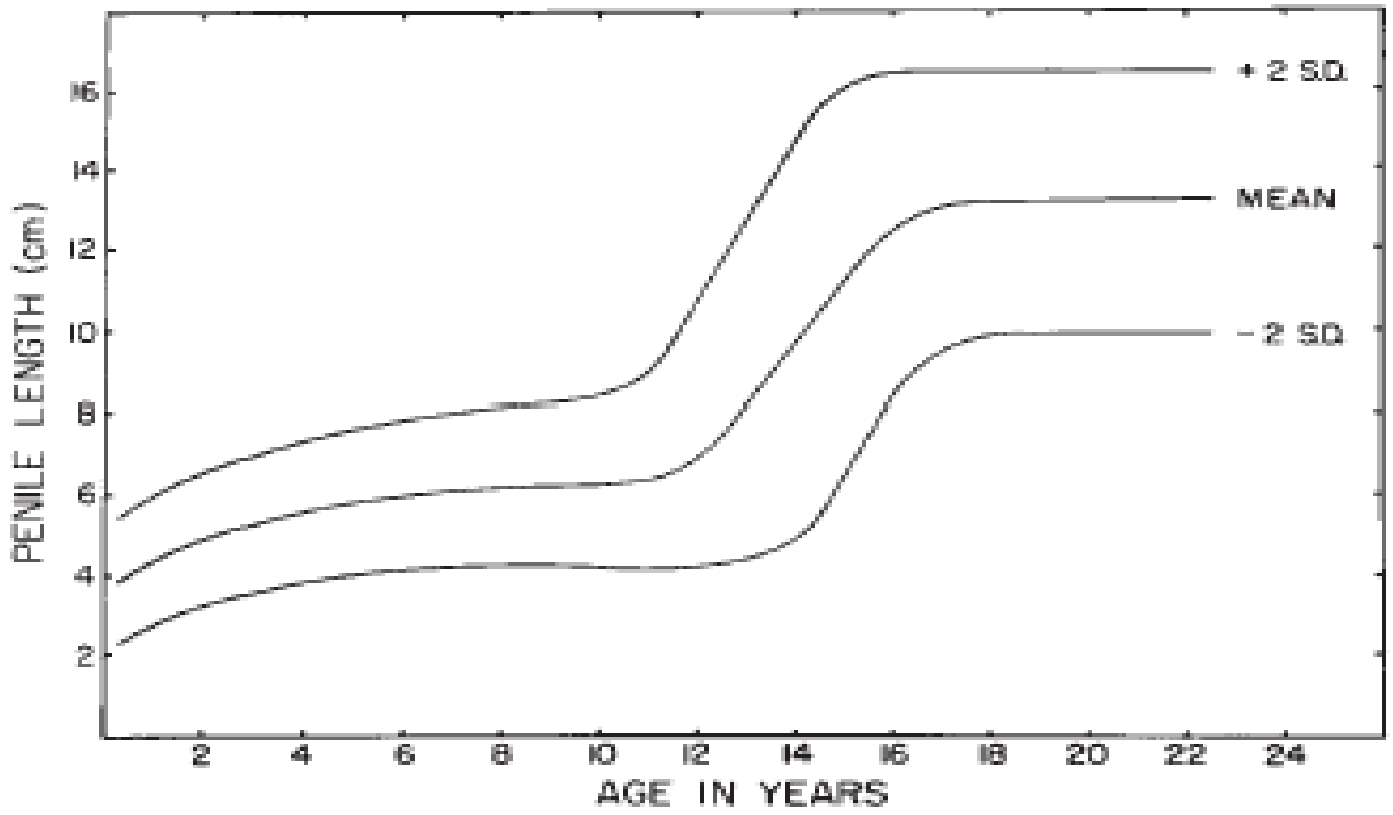


FIGURE 2. Mean ± SD of stretched penile length for age. Lines are a fitted curve based on dots that plot the actual data from Schonfeld.[27]

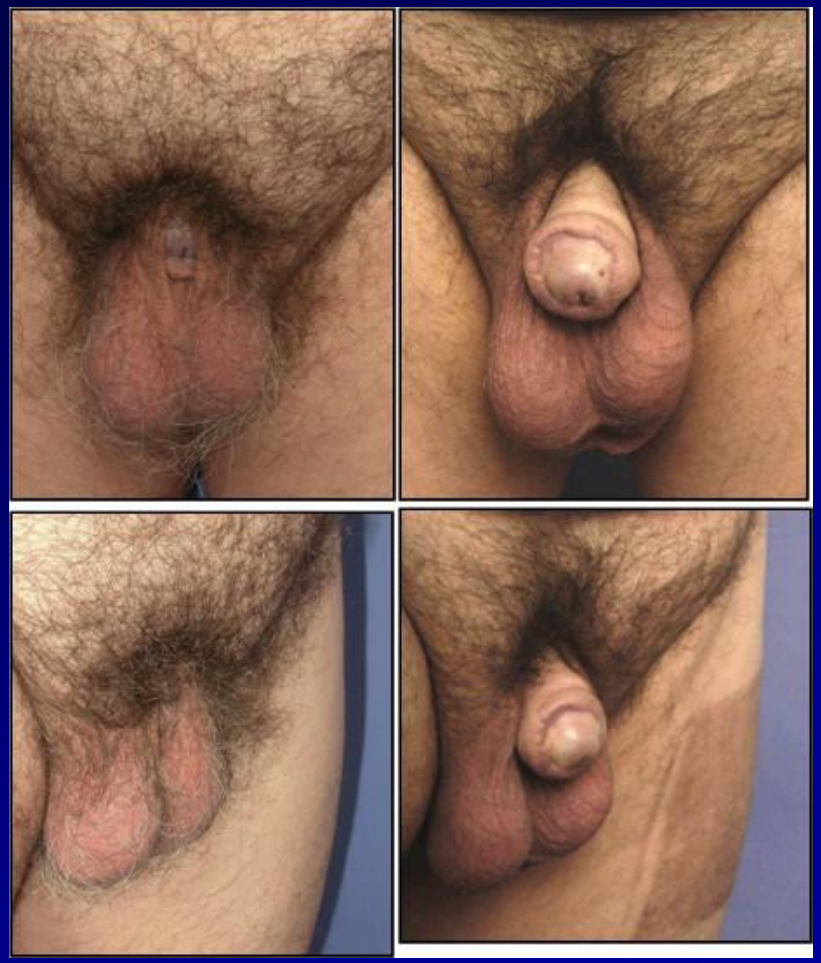
From: Lee PA and Reiter EO, "Genital Size: A Common Adolescent Male Concern. Adolescent Medicine: State of the Art Reviews, 2002:13(1):171-180. 4 inches, 5 inches, 6.3 inches

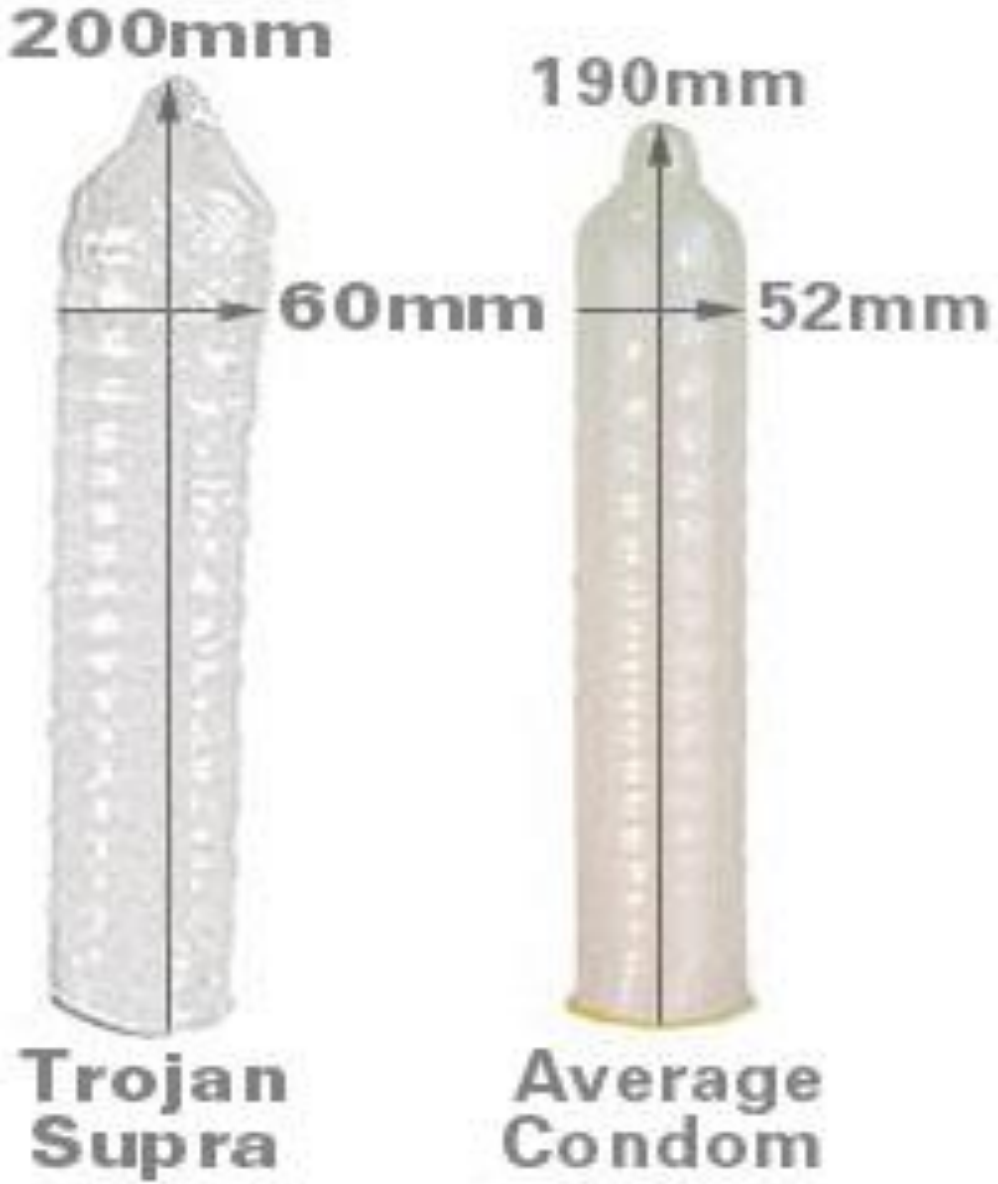
TABLE 1. Composite Mean Penile Lengths with 2.5 and 97.5 Percentile Limits

	Mean		2.5 Percentile		97.5 Percentile	
	cm	in	cm	in	cm	in
Flaccid	9.0	3.5	5.0	2.0	15.5	6.1
Stretched	13.3	5.2	10.9	4.3	16.5	6.5
Erect	15.1	6.0	11.4	4.5	19.0	7.5

From: Lee PA and Reiter EO, "Genital Size: A Common Adolescent Male Concern. Adolescent Medicine: State of the Art Reviews, 2002:13(1):171-180.

Hidden penis due to obesity




200mm
60mm
Trojan
Supra
190mm
52mm
Average
Condom

Sexual Dysfunction

- Premature Ejaculation (PE) 20%
- Erectile Disorders (ED) 45%
- Low sexual satisfaction 48%
- Low Desire 46%

Emerging Issues in Male Adolescent Sexual and Reproductive Health Care *Pediatrics* (2020) 145 (5): e20200627.

https://doi.org/10.1542/peds.2020-0627

Premature Ejaculation (PE) 20%

- PE is a persistent or recurrent pattern of ejaculation occurring during partnered sexual activity within approximately 1 minute after penetration and before the person wishes it.
- Possible causes:
  - Poor physical health
  - Alcohol consumption
  - Illegal drug abuse
  - Tobacco use
  - Less sexual experience: boy's foreplay lasts 5 min, girl's the whole date

Treatment

- Complete HX and PE and address findings.
  Testosterone level
- Masturbating an hour or two before intercourse.
- Focusing on other types of sexual play so that pressure is removed.
- Pelvic floor exercises.
- Partner squeeze the end of the penis, at the point where the head (glans) joins the shaft, and maintain the squeeze for several seconds, until the urge to ejaculate passes. Repeat as necessary then penetrate.
- "Climax control" condoms are available over the counter.
  benzocaine or lidocaine or made of thicker latex

Premature Ejaculation

- The most common reason for premature ejaculation in the adolescent is sexual inexperience that interferes with the ability to acquire the learned behavior of delaying ejaculation. In this context, the adolescent complaint of premature ejaculation is usually a normal biologic response.

Erectile Dysfunction

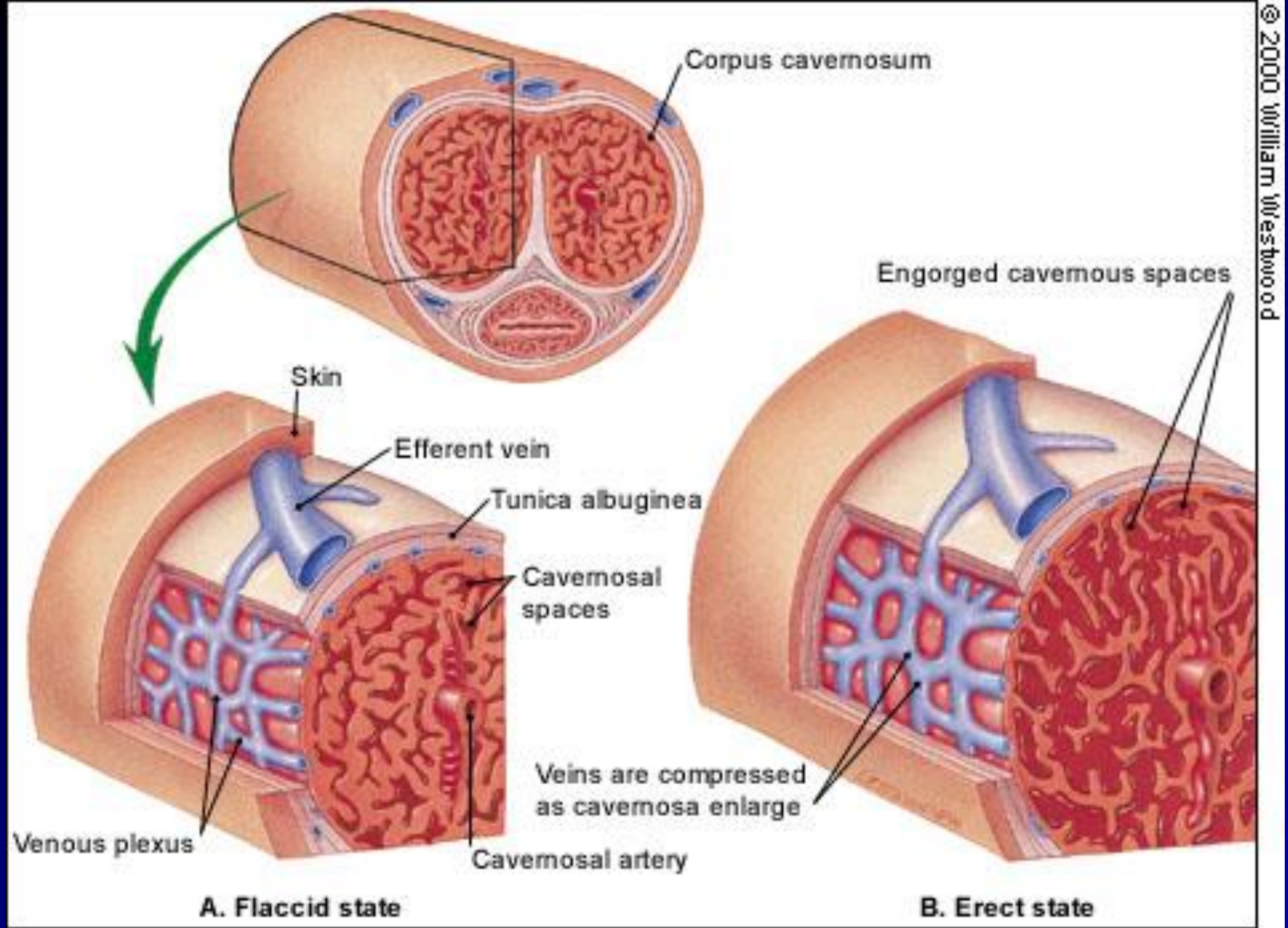
- **Central psychogenic**
- **Reflexogenic Erection: This kind of erection is the result of direct stimulation of the penis**. The brain does not control this. A full bladder or bowel may cause this type of erection. If a man has a complete Spinal Cord lesion above the L2 level, he will not be able to have a psychogenic erection.
- **Parasympathetic process– release nitric oxide**

  ↑ Cyclic guanosine monophosphate

  Penile vascular and trabecular smooth muscle relaxation

  Corporal veno-occlusive mechanism causes

  Increased inflow, decreased outflow



Etiology of Erectile Dysfunction

- Psychogenic
- Organic
  - Vasculogenic
  - Neurogenic
  - Hormonal

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Conditions Associated with Erectile Dysfunction in Adolescent Males

- **Chronic Disease**
  - **Diabetes mellitus**
  - **Hypertension**
  - **Renal failure**
- **Endocrine Abnormalities**
  - **Hypogonadism**
  - **Hyperprolactinemia**
  - **Hypo/hyperthryoidism**

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Conditions Associated with Erectile Dysfunction in Adolescent Males

- **Life Style**
  - **Tobacco**
  - **Alcohol**
  - **Drug use: Amphetamines**
- **Neurogenic Causes**
  - **Spinal cord injury/disease**
  - **Multiple sclerosis**

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Conditions Associated with Erectile Dysfunction in Adolescent Males

- **Psychological**
  - **Anxiety**
  - **Depression**
  - **Stress**

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Medications Associated with Erectile Dysfunction in Adolescent Males

- **Antihypertensive medications**
  - **Diuretics**
    - **Thiazides**
    - **Spironolactone**
  - **Clonidine**
  - **Alpha blockers**
  - **Beta blockers**

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Medications Associated with Erectile Dysfunction in Adolescent Males

- **Psychiatric medications**
  - **Antipsychotics**
  - **Tricyclic antidepressants**
  - **SSRI**
  - **Benzodiazepines**

Miller TA, “Diagnostic Evaluation of Erectile Dysfunction”, American Family Physician, 2000; 61(1):95-104, 109-10

Erectile Dysfunction

ORAL THERAPY

- Sildenafil citrate – inhibits cGMP-specific phosphodiesterase type 5 (PDE5)
- Enhances relaxant effect of nitric oxide
- Short term use of medication (8 attempts) can lead to improved self-esteem, mood , sexual relationship health and intercourse satisfaction.

Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America 2001;28(2)

Sildenafil Citrate

- Use in spinal cord injury, multiple sclerosis

  High response rate

Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America 2001;28(2)

Erectile Dysfunction

Dietary Supplements and Alternative Therapies

- Ginko biloba
  - May increase vascular perfusion
  - No placebo controlled trials
- L-arginine
  - Precursor to nitric oxide
- Yohimbine
  - Indole alkaloid – West African yohim trees
  - FDA approved for pupillary dilation
  - Yohimbe –little if any yohimbine
  - May be better than placebo in nonorganic ED

Moyad MA. Dietary supplements and other alternative medicines for erectile dysfunction. What do I tell my patients? Urologic Clinics of North America 2002; 29(1)

Erectile Dysfunction

Dietary Supplements and Alternative Therapies

- Zinc
  - No evidence for positive effect
- Korean Red Ginseng
  - Positive effects in some trials
  - ↑ nitric oxide levels; ↓ fatigue
- *Avena sativa* (wild oats)
  - No trials; may help decrease cholesterol
- *Tribulus terrestris*
  - May convert to DHEA

Moyad MA. Dietary supplements and other alternative medicines for erectile dysfunction. What do I tell my patients? Urologic Clinics of North America 2002; 29(1)

Erectile Dysfunction
Dietary Supplements and Alternative Therapies

- Acupuncture
  - Pilot study – 7/10 patients had positive results
- Androstenedione and dehydroepiandrosterone OTC
  - Androstenedione: didn't work for erections
    - ↑ estrone and estradiol
    - ↓ HDL
    - No ↑ sexual function
  - Dehydroepiandrosterone: didn't work for erections
    - ↑ estrogen
    - ↓ HDL

Moyad MA. Dietary supplements and other alternative medicines for erectile dysfunction. What do I tell my patients? Urologic Clinics of North America 2002; 29(1)

Migraine case

15 year old with migraine headaches almost daily improved on preventative daily medicine

He asks a question as you are leaving the room: Is it normal that when I masturbate nothing comes out?

- What questions do you want to ask?
- Any further labs or exam?
- What should you do?

- Ask about his medications
- He is taking amitriptyline a tricyclic antidepressant often used for migraine headache suppression can cause retrograde ejaculation, impotence and delayed ejaculation.
- Plan: stop the med and use another:

  Propanolol (not used if asthma, before beginning drug HR > 60 after 1 min. exercise) Begin 1 mg/kg divide TID titrate to max 4 mg/kg/d divided into TID.

  Topiramate: 25 mg/d increase weekly by 25 mg to max 100 mg/d divided BID

  Vit B12

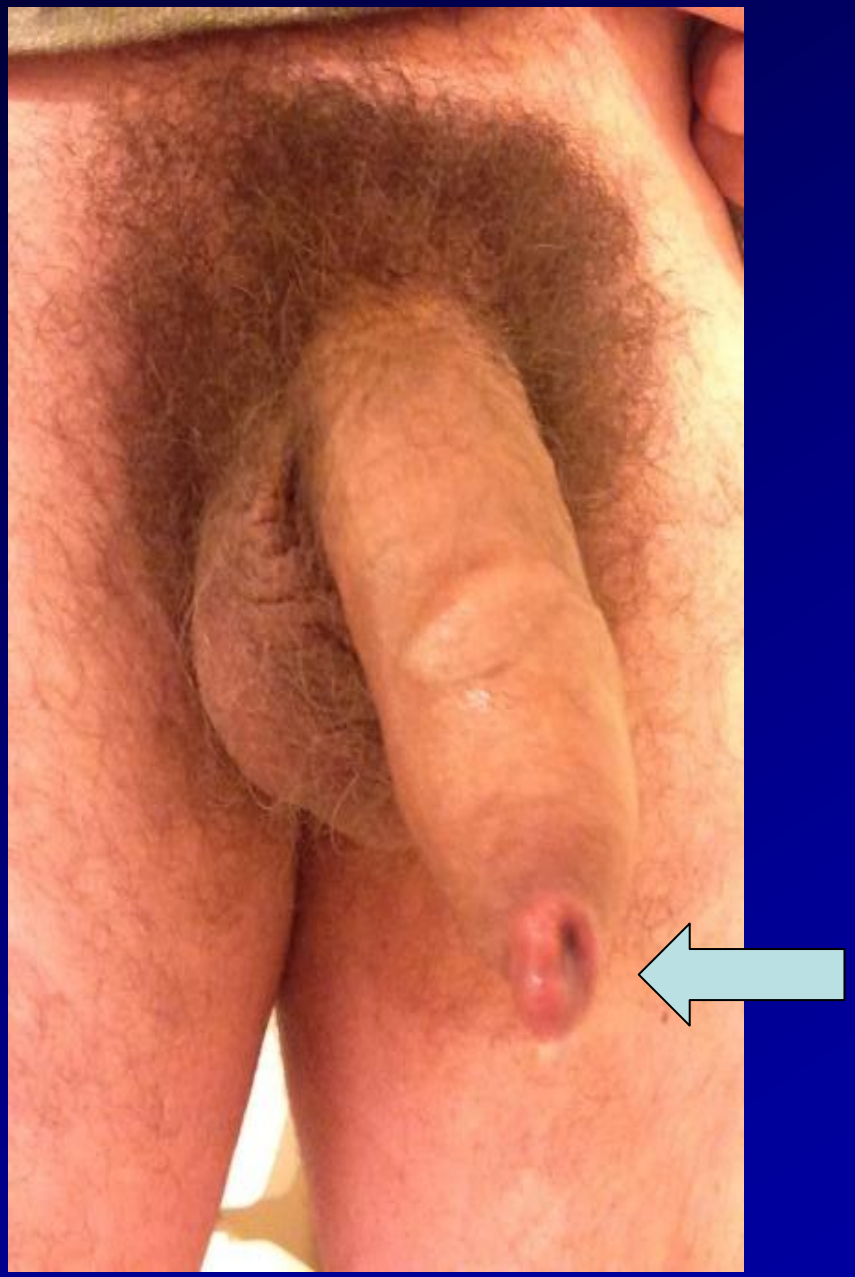
Only 37% of males 15 to 44 yo had a testicular examination in the past year

- Important to diagnose testicular cancer
- Important to diagnose genital abnormalities.
  - E.G. Klinefelder syndrome XXY – testes the size of peanuts
  - E.G. Spermatoceles
  - E.G. Varicoceles
  - E.G. Hydroceles

A 16 year old boy comes to the office for a regular checkup. He has no complaints. During the genital exam neither you nor he can retract his foreskin. What can you suggest?

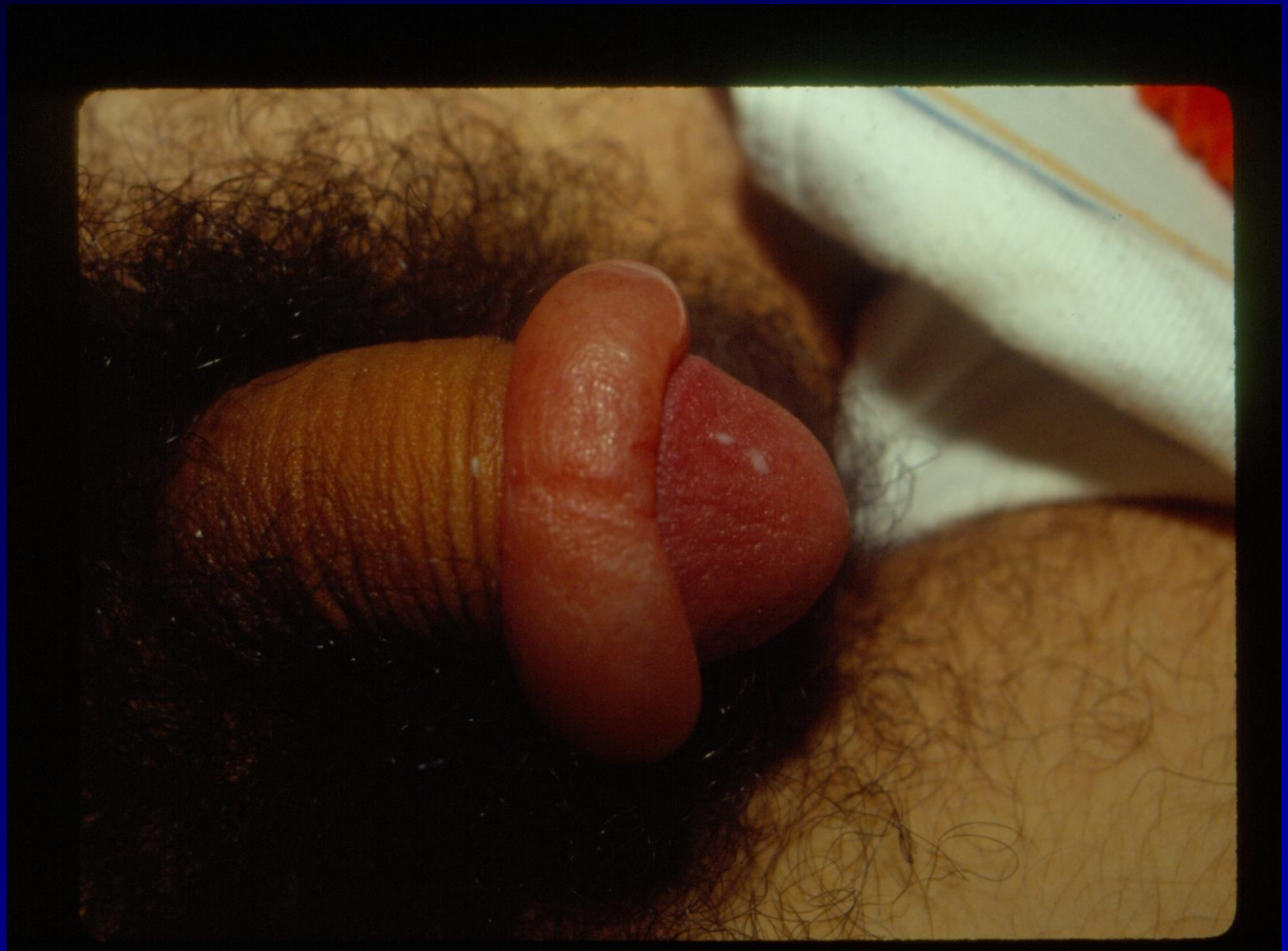
Phimosis medical treatment

- Vitamin E cream topically to the phimotic ring (ligament of the prepuce)
- High potency topical steroid (Betamethasone) to phimotic ring BID for 2 to 3 weeks
- Gentle stretching of the ring
- If fails excision of phimotic ring or circumcision



A 16 yo comes to the office with the complaint that his foreskin is stuck

Physical appearance in Paraphimosis

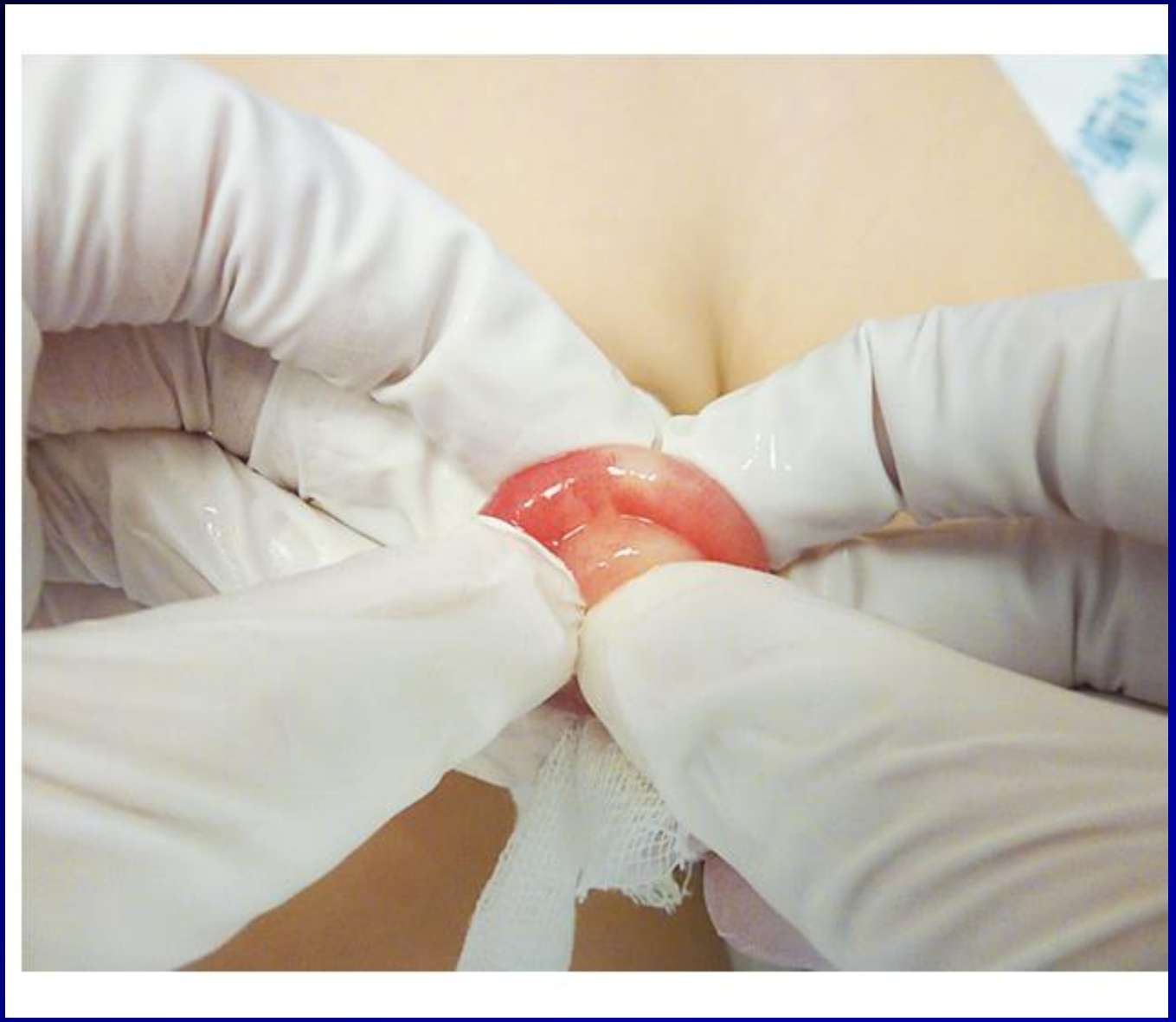


A gloved hand is circled around the distal penis to apply circumferential pressure and disperse the edema.

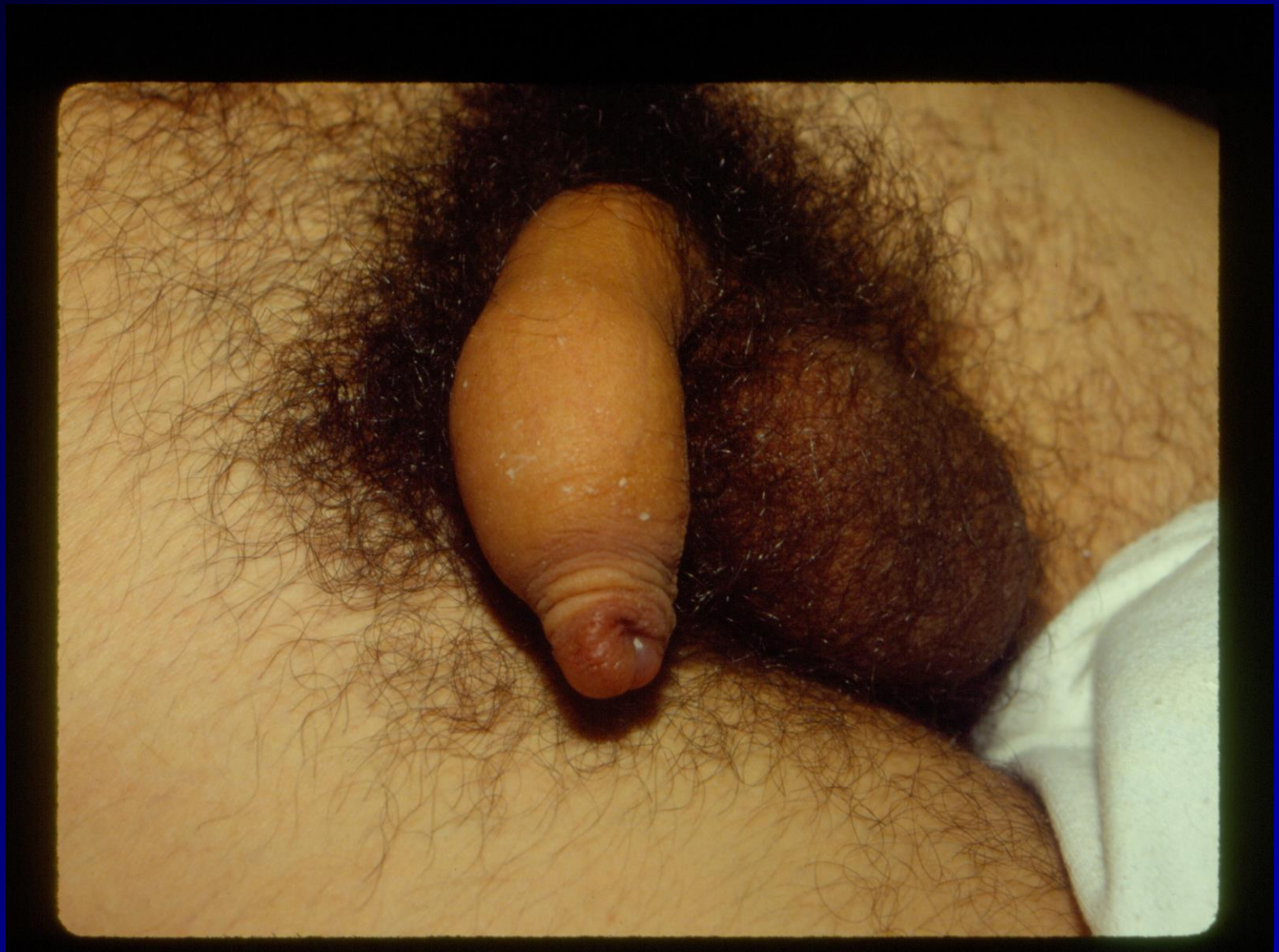
Ice packs are also useful in reducing swelling of the penis and prepuce. The penis is first wrapped in plastic, with ice packs applied intermittently until the swelling subsides.

Then with the gloved fingers encircling the penis behind the swollen foreskin slowly pull the foreskin over the glans while gently pushing the glans under/behind the foreskin so that the foreskin can be pulled back over the glans.

March 28, 2013 N Engl J Med 2013; 368:e16
DOI: 10.1056/NEJMvcm1105



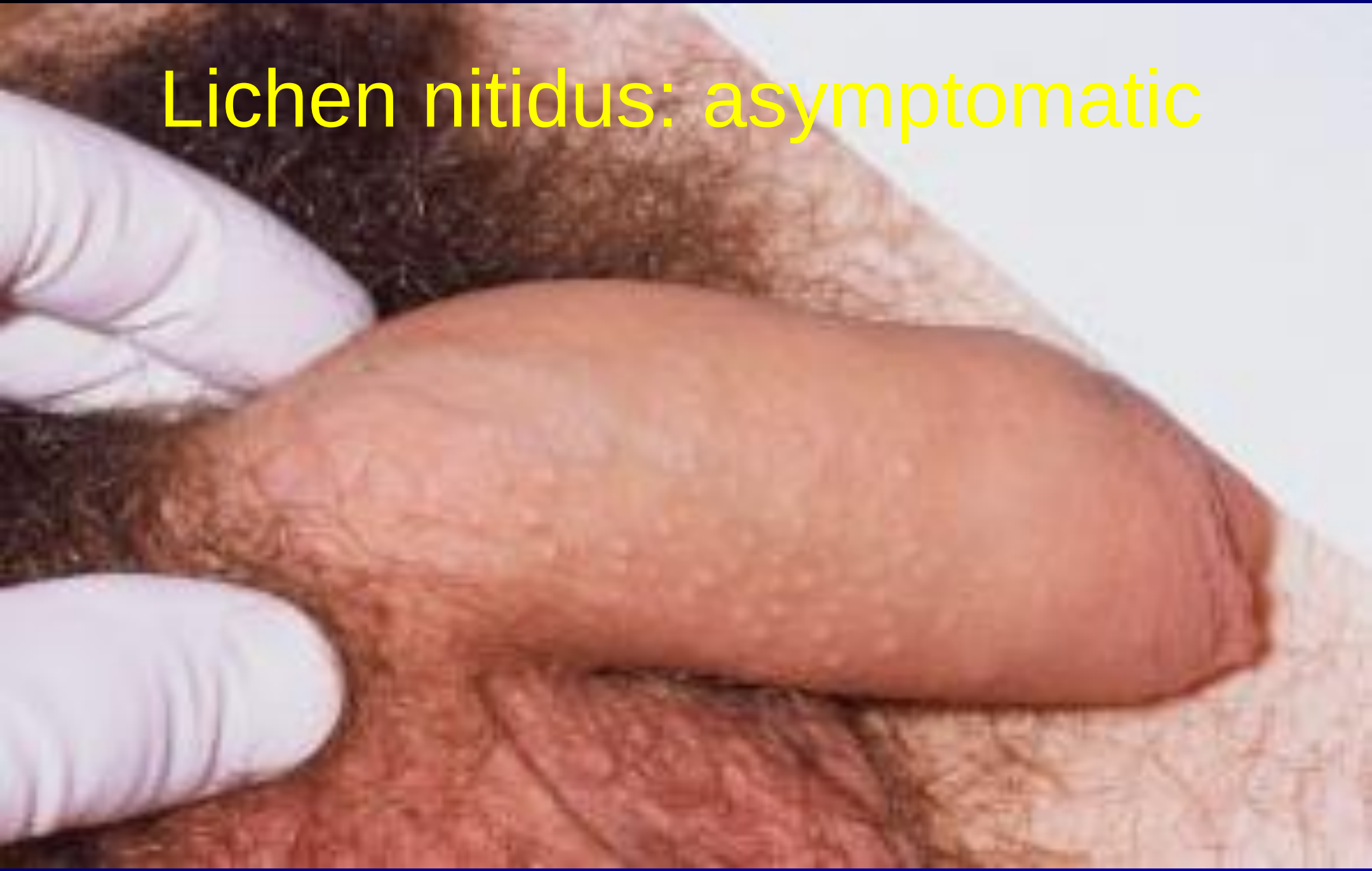
Post reduction of paraphimosis



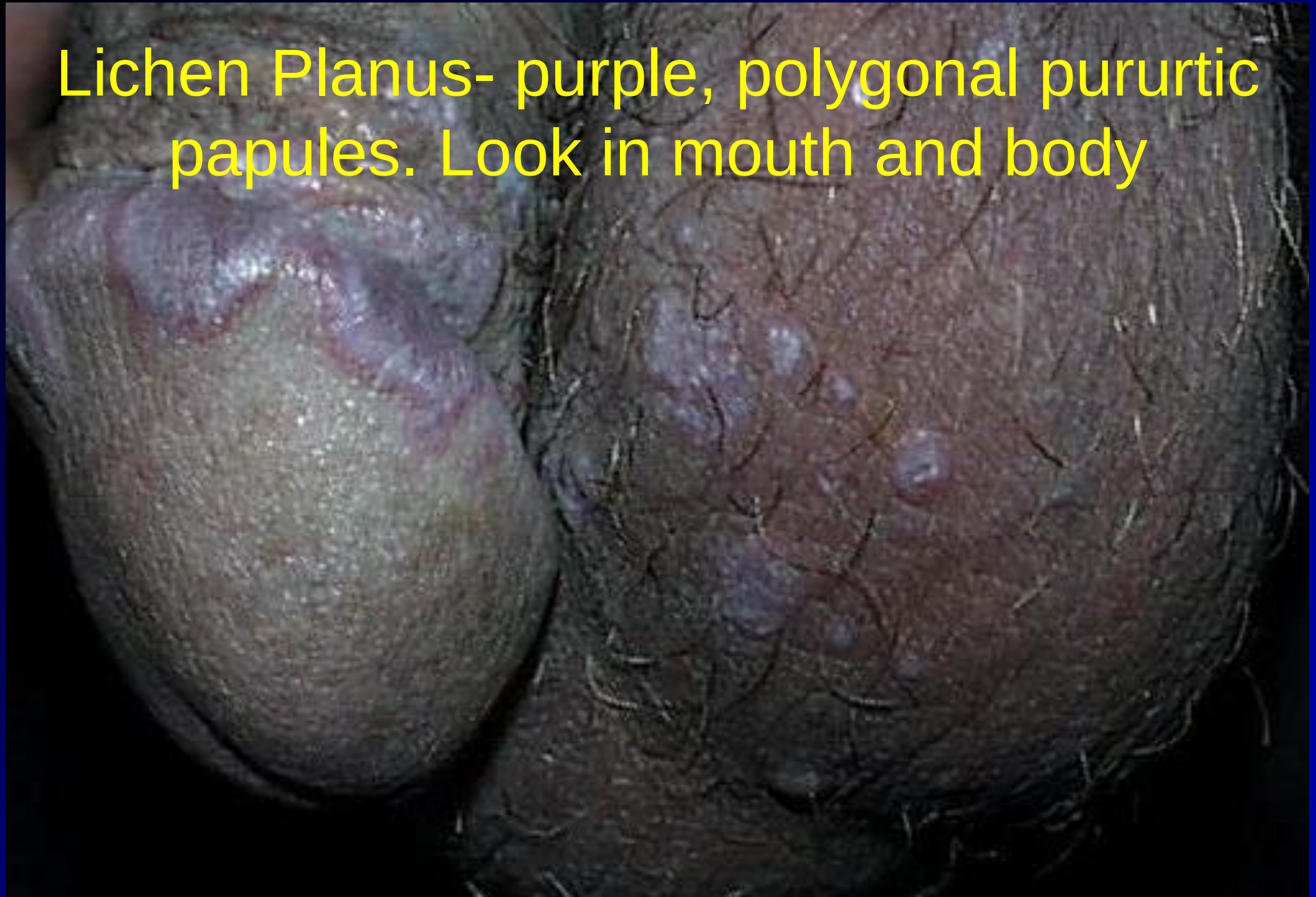
Male Health Issues

- Am I normal down there?

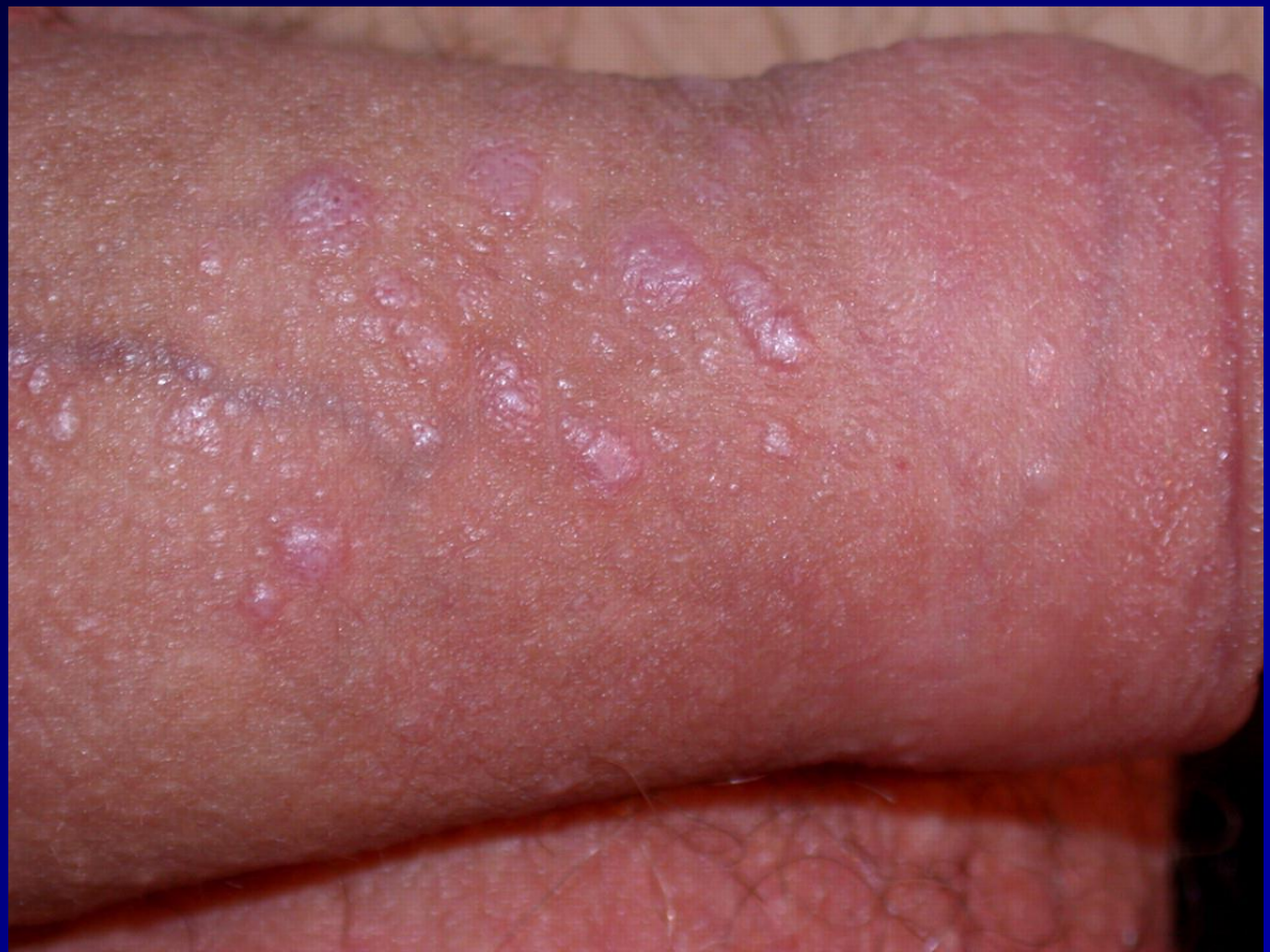
  What are those bumps?


Lichen nitidus: asymptomatic

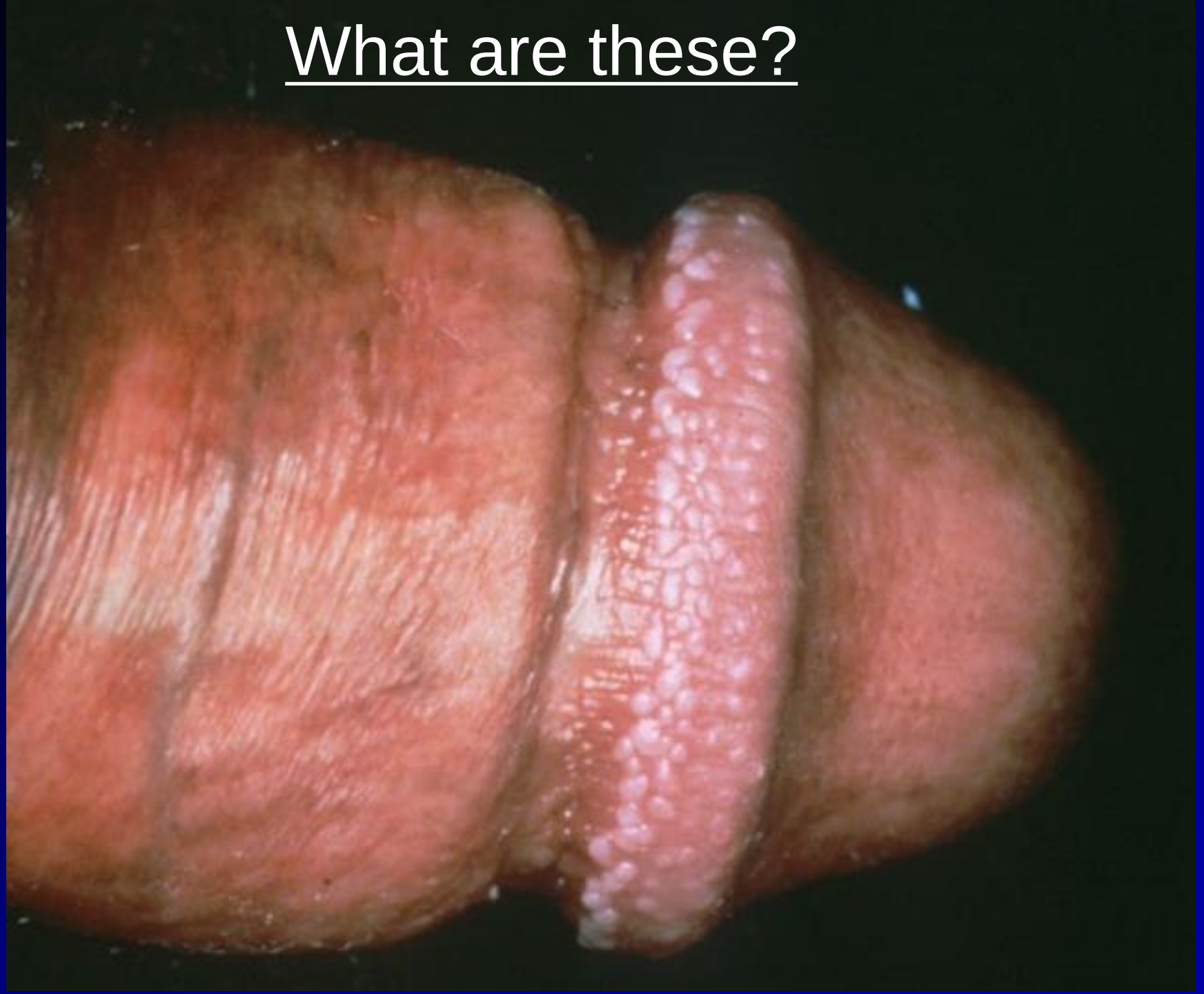
Lichen nitidus: asymptomatic


Lichen Planus- purple, polygonal pururtic papules. Look in mouth and body

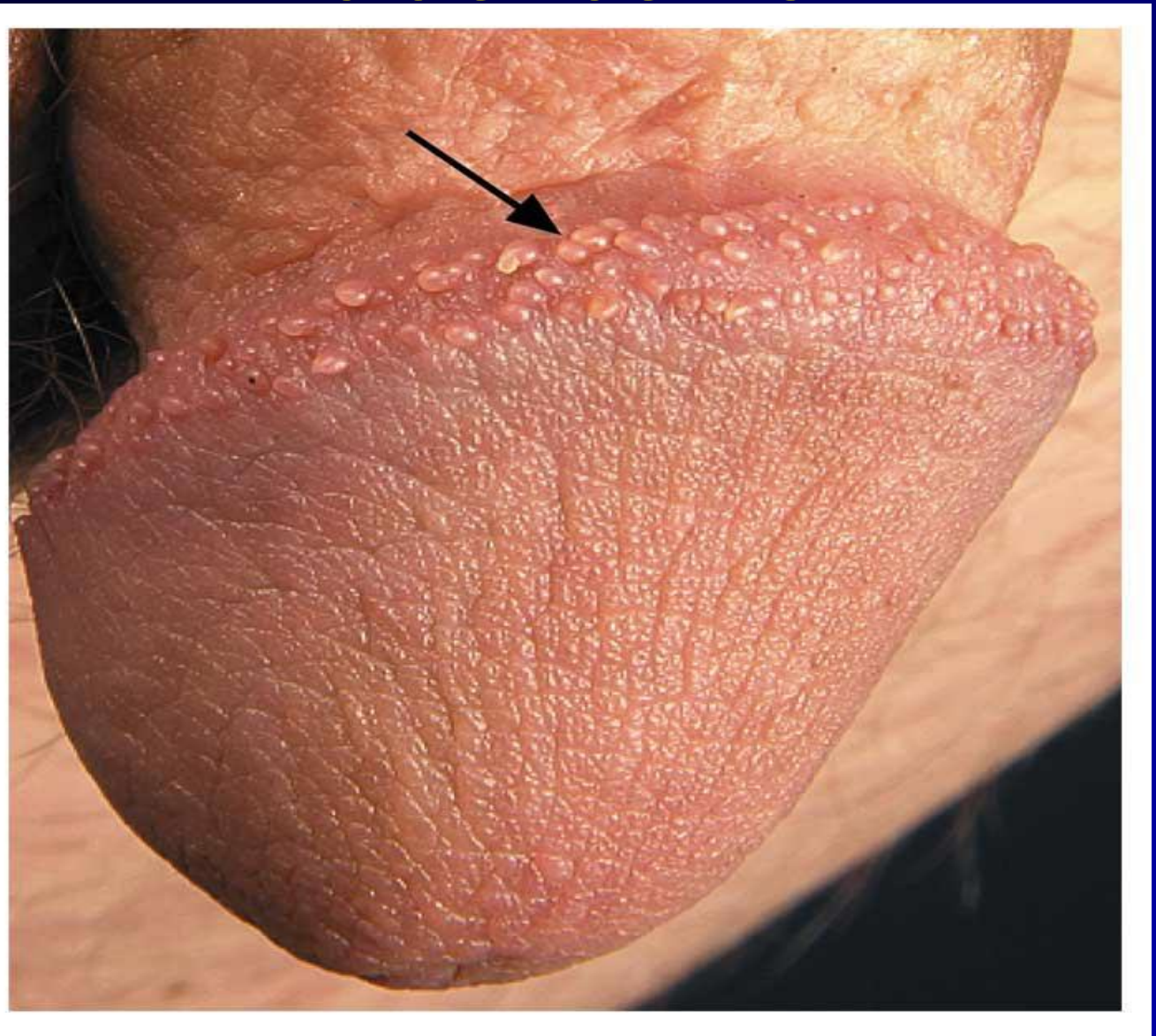
Lichen Planus: 50% clear in 9 mo , 85% in 18 mo. Topical and oral steroids, ciclosporin A, sedative antihistamines



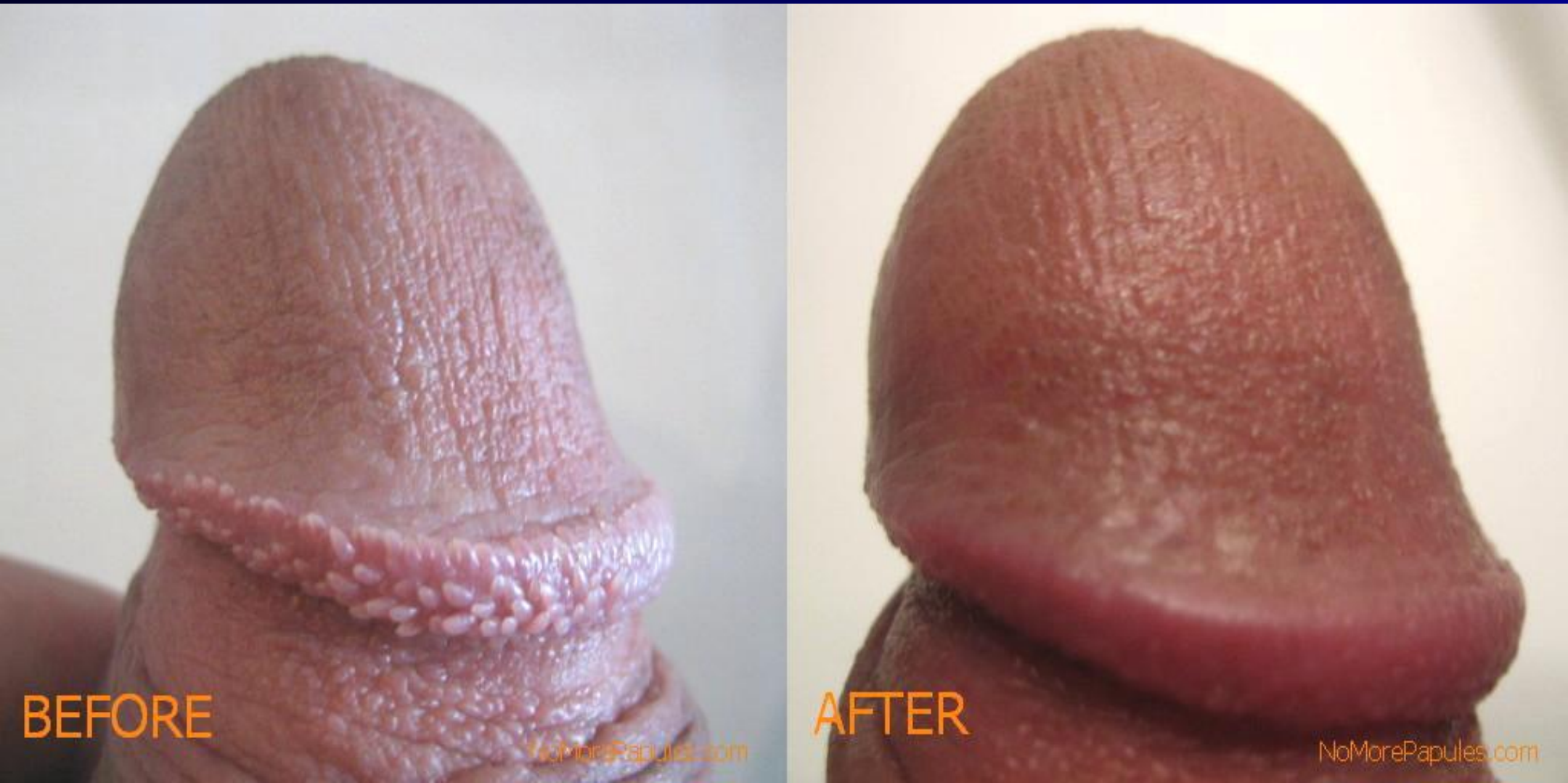
What are these?



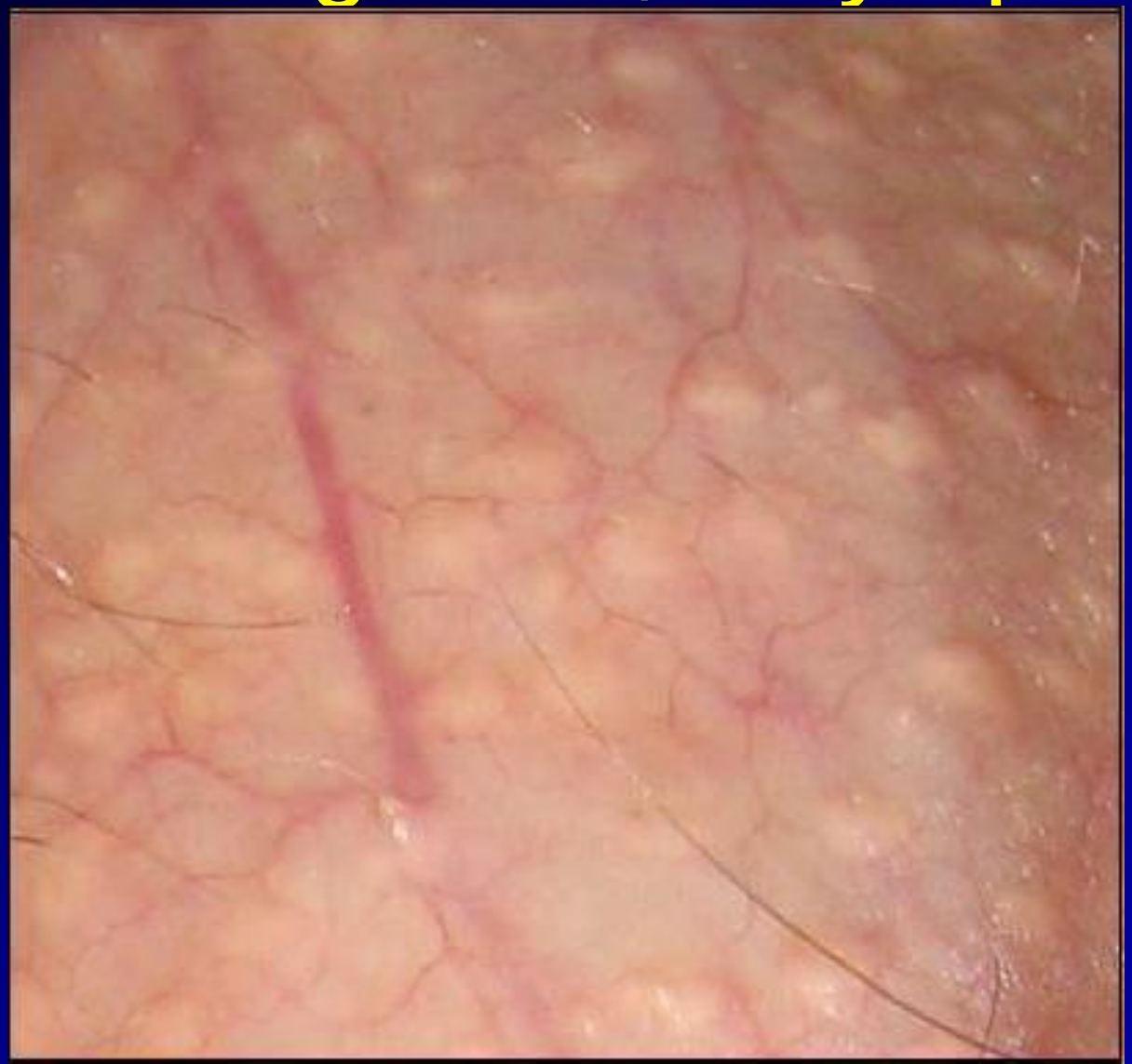
Pearly Pink Papules: angiofibromas, Incidence 15%



Pearly Pink Papules before and after laser to remove-unnecessary



Fordyce papules: normal visible sebaceous glands, asymptomatic



16 year old who comes in complaining of a penile rash that started after having sex with a new partner.

- What questions do you want to ask?
  - Circumcised, itch or pain, improving or worse?
  - What has he tried to treat?
  - Did he and partner get tested before sex?
  - Did he use a condom? Has he used before
    - Latex Allergy? Did they use lubricant
  - Any underlying illness? Diabetes?
- What is your differential diagnosis?

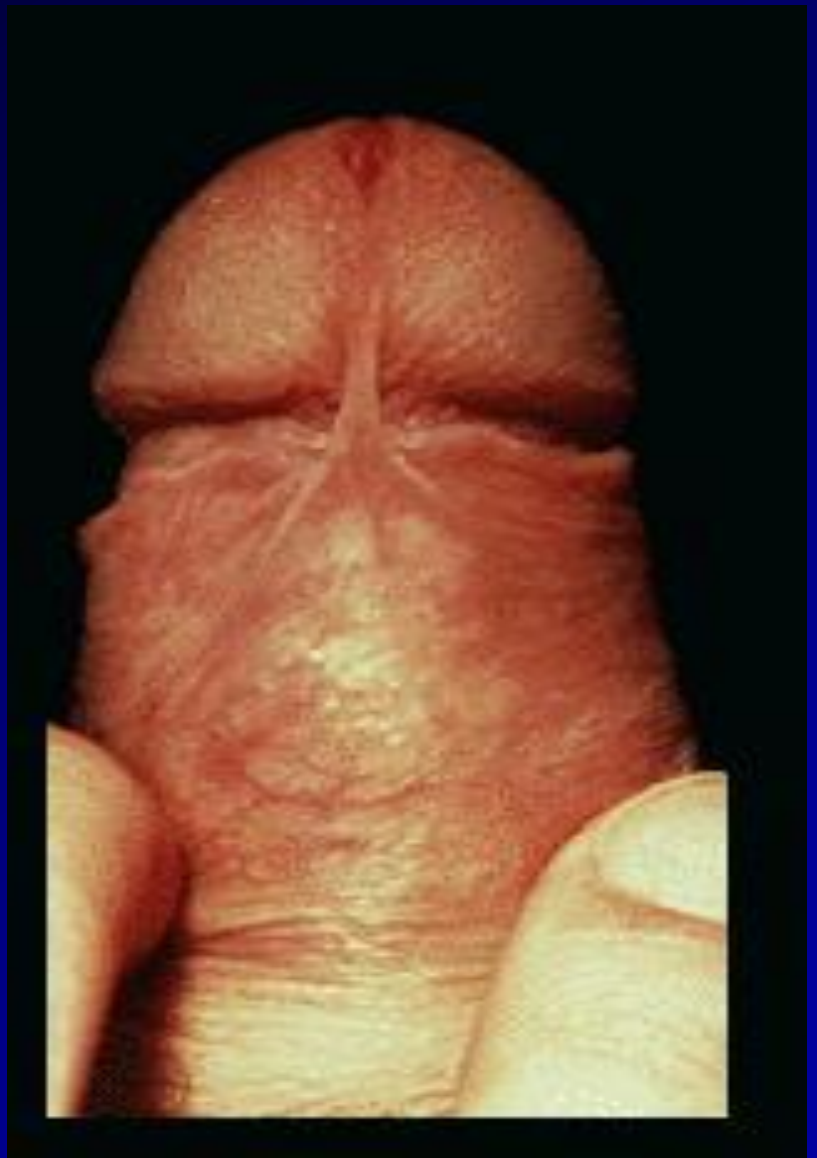
Candidiasis on Glans: treat partner Diabetes?

Psoriasis- genitals may be only affected area check fingernails, scalp. Potent topical steroids

First time sex

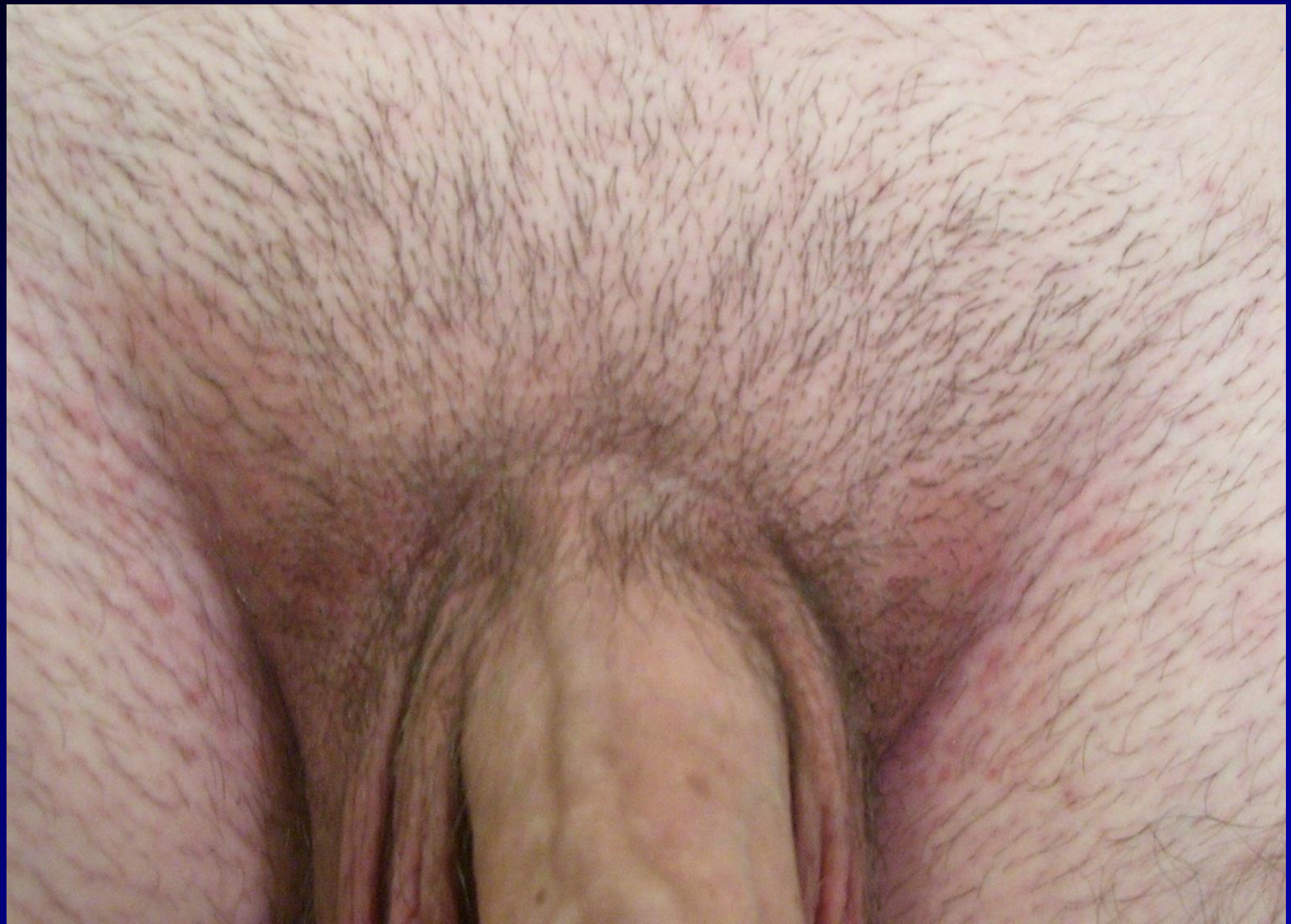
15 year old having sex for the first time feels pain and has bleeding of the head of his penis.

I bled during sex? Torn Frenulum



Red Bumps

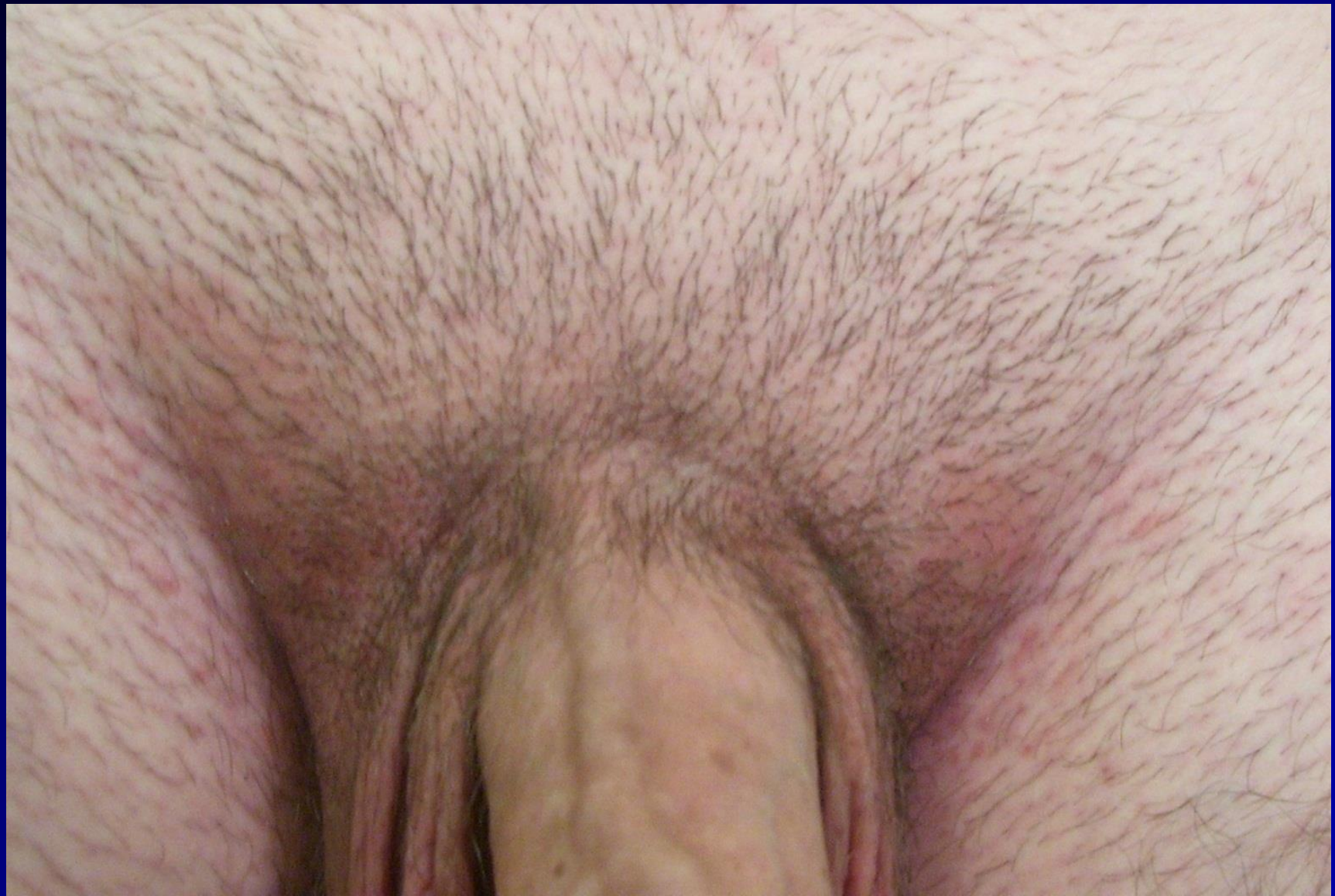
- 15 year old had health class and come is worried about red bumps in his nether regions



What does he have?

How do you treat it?

Shaving bumps



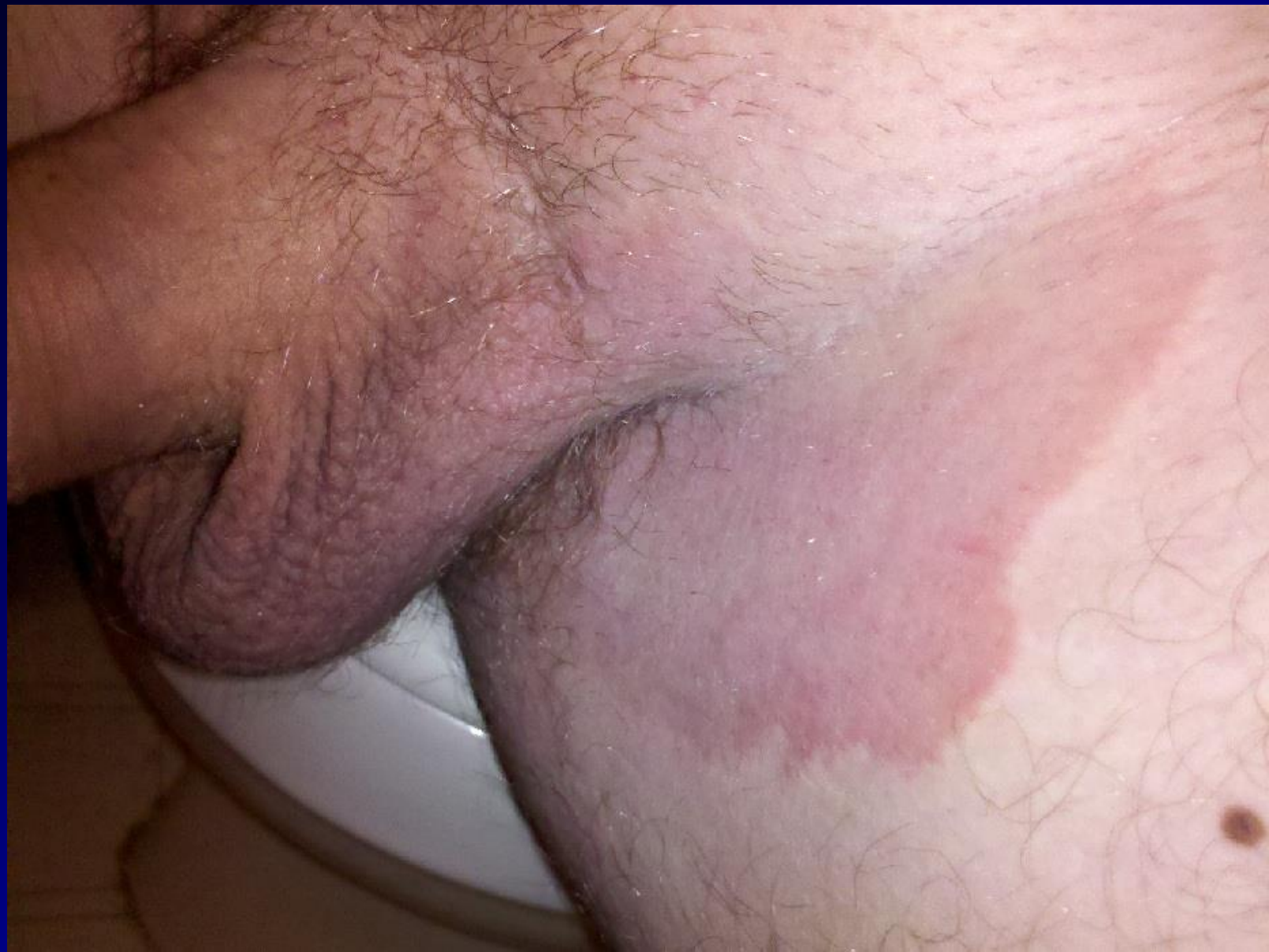
Advantages of not removing pubic hair

- Pubic hair helps prevent genital infections Osterberg EC, et al. Sex Transm Infect 2017;93:162–166. doi:10.1136/sextrans-2016-052687
- Prevents itching as hair grows back
- Prevents ingrown hairs
- Reduces friction during intercourse
- Having pubic hair allows sweating of the pubic area and pheromones the chemical that triggers natural sexual reaction from members of the same of opposite gender that enhance sexually attractiveness.
- Risk of genital warts may be reduced

Groin rash

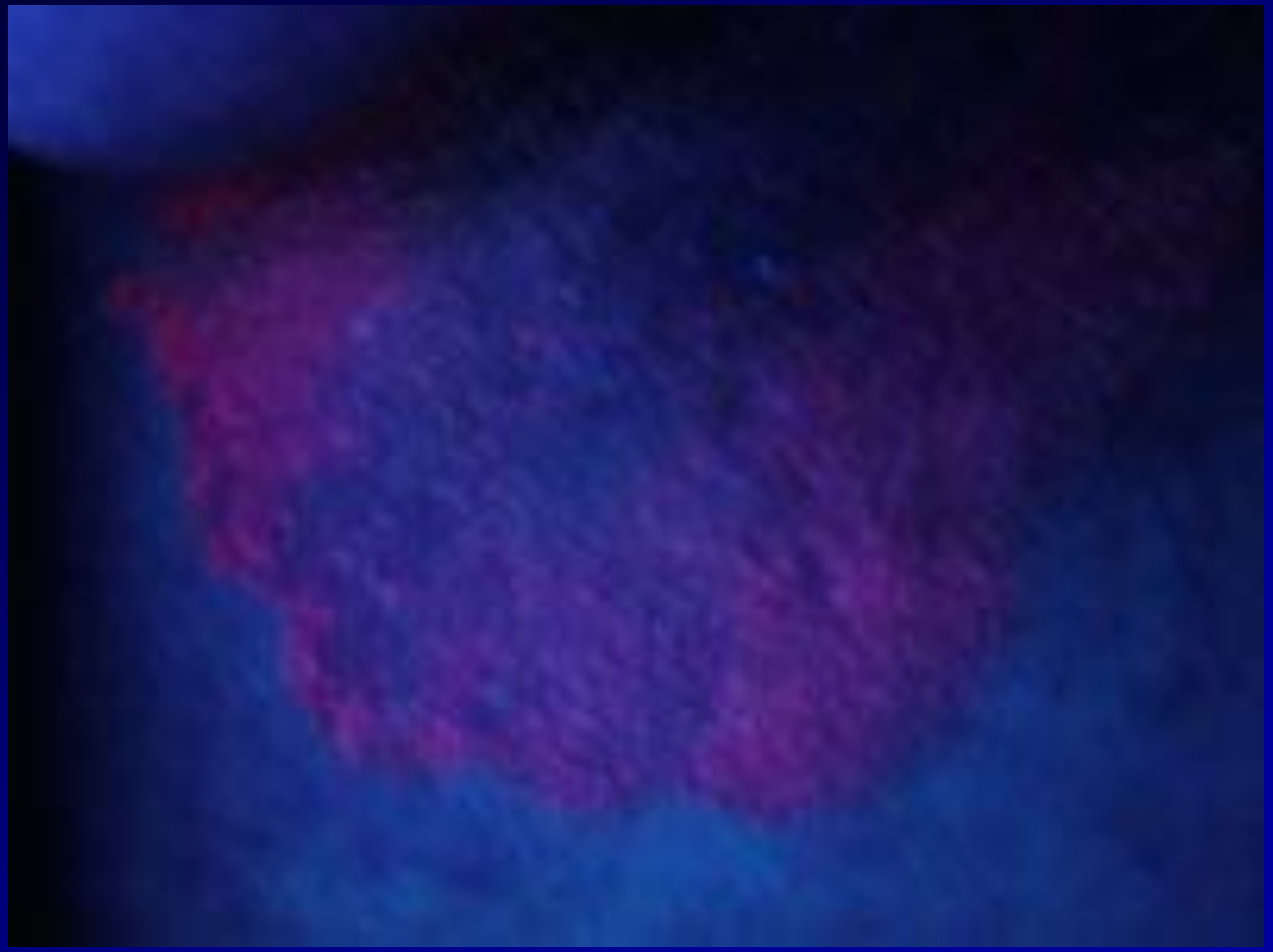
- 17 year old has groin rash that doesn't improve with topical antifungal cream
- He was using it 3 times a day without improvement
- You do a skin scraping and it is negative

May be mildly itchy. Unresponsive to antifungal cream.

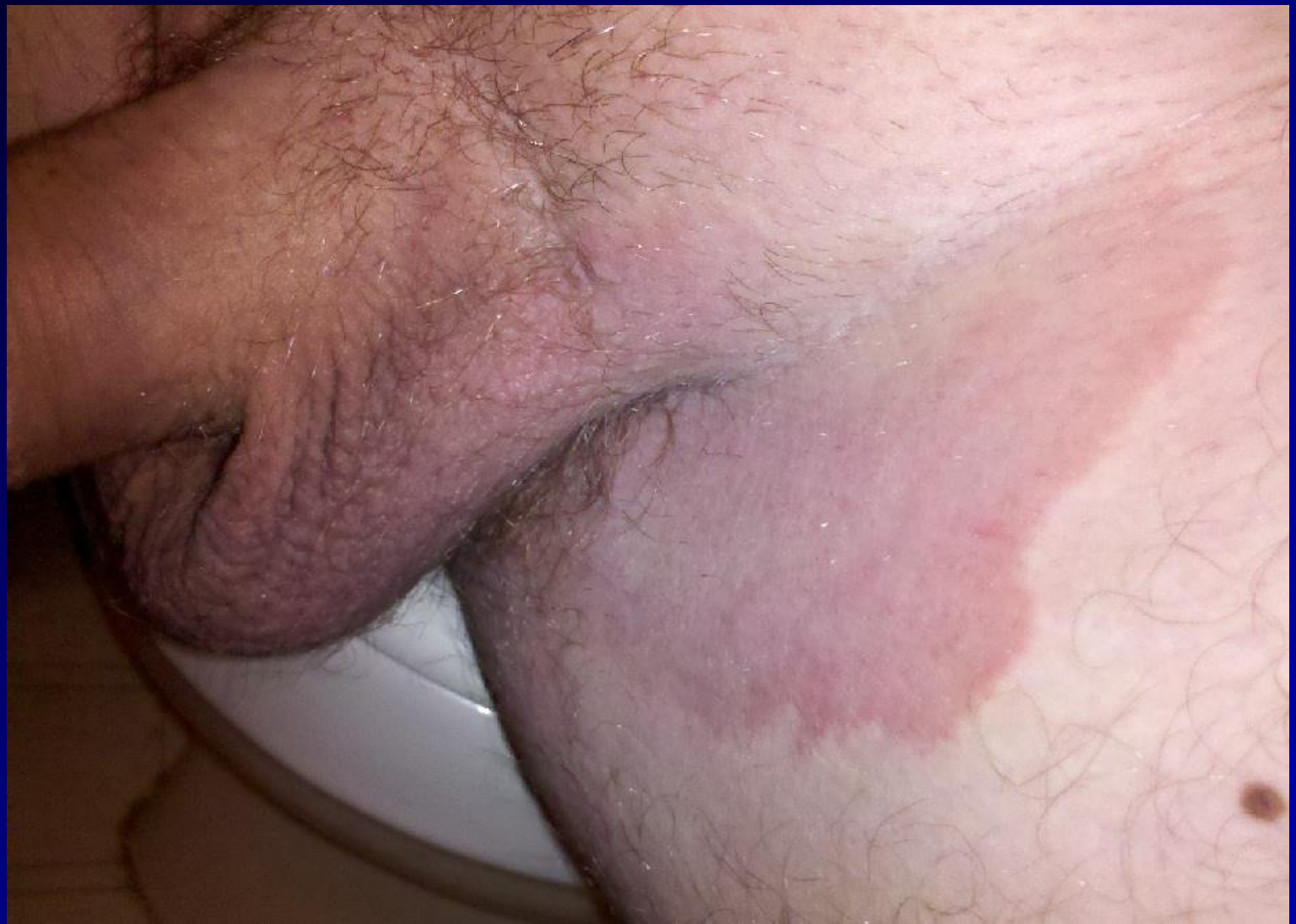


Coral-pink under wood lamp

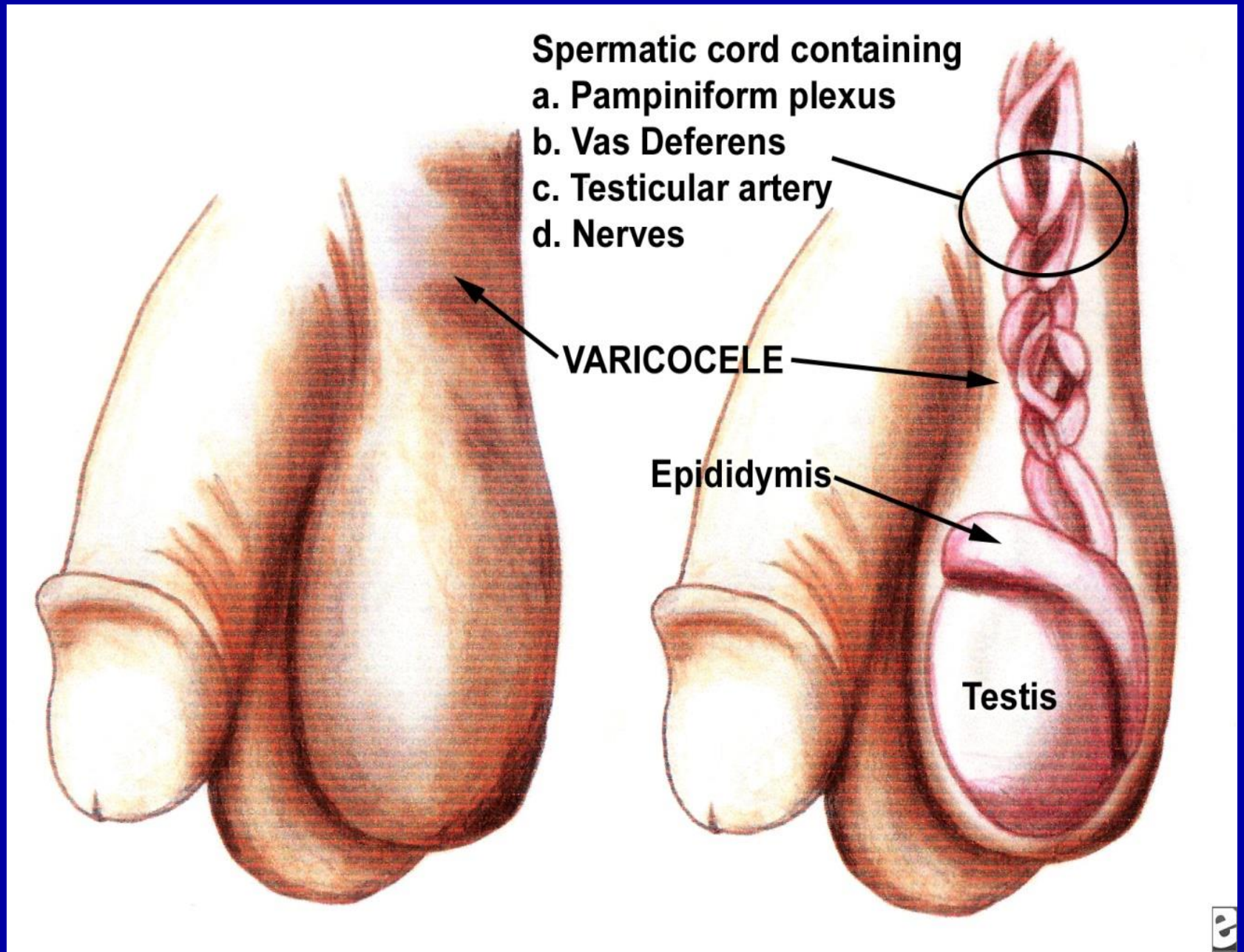
DermNet NZ or www.dermnetnz.org



Erythrasma: Corynebacterium minutissimum, asymptomatic or itch, fluoresce coral pink under Woods lamp, RX with erythromycin, or Azithromycin



Varicocele left sided (If unilateral on Right side only may be associated with abdominal tumors needs a workup


Spermatic cord containing
a. Pampiniform plexus
b. Vas Deferens
c. Testicular artery
d. Nerves
VARICOCELE
Epididymis
Testis

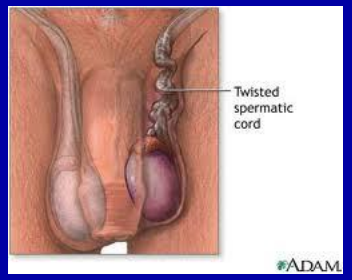
Varicoceles that need surgical repair

Generally, no surgery is needed except when:

a. Testicular asymmetry (2.5-cm difference between the testicles)

b. Abnormal semen analysis in adult men

c. For those experiencing symptoms


Twisted
spermatic
cord
A.D.A.M.

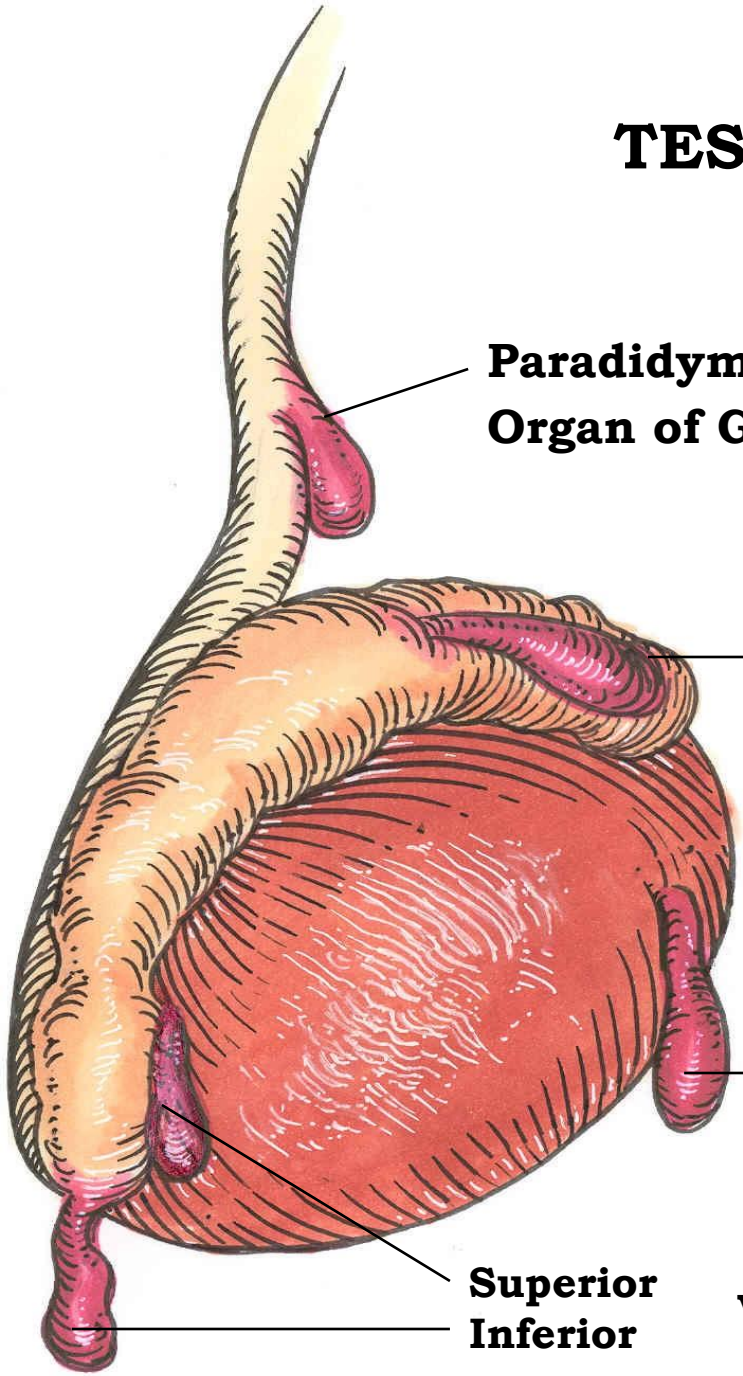
Diagnosis of testicular torsion

- Testicular torsion is a clinical diagnosis, and patients typically present with severe acute unilateral scrotal pain, nausea, and vomiting.
- Physical examination may reveal **a high-riding testicle with an absent cremasteric reflex**.
- Doppler blood flow exam
- Make the diagnosis and surgery reduction within 6 hours to avoid death of the testicle.

Blue Dot Sign of **testicular appendix torsion**

- The "blue dot sign" is a classic physical exam finding unique to testicular appendix torsion. However, **it is often absent in the setting of testicular appendix torsion** and can be falsely positive in cases of true testicular torsion.

TESTICULAR APPENDAGES



Paradidymis –
Organ of Giraldes

Appendix epididymis

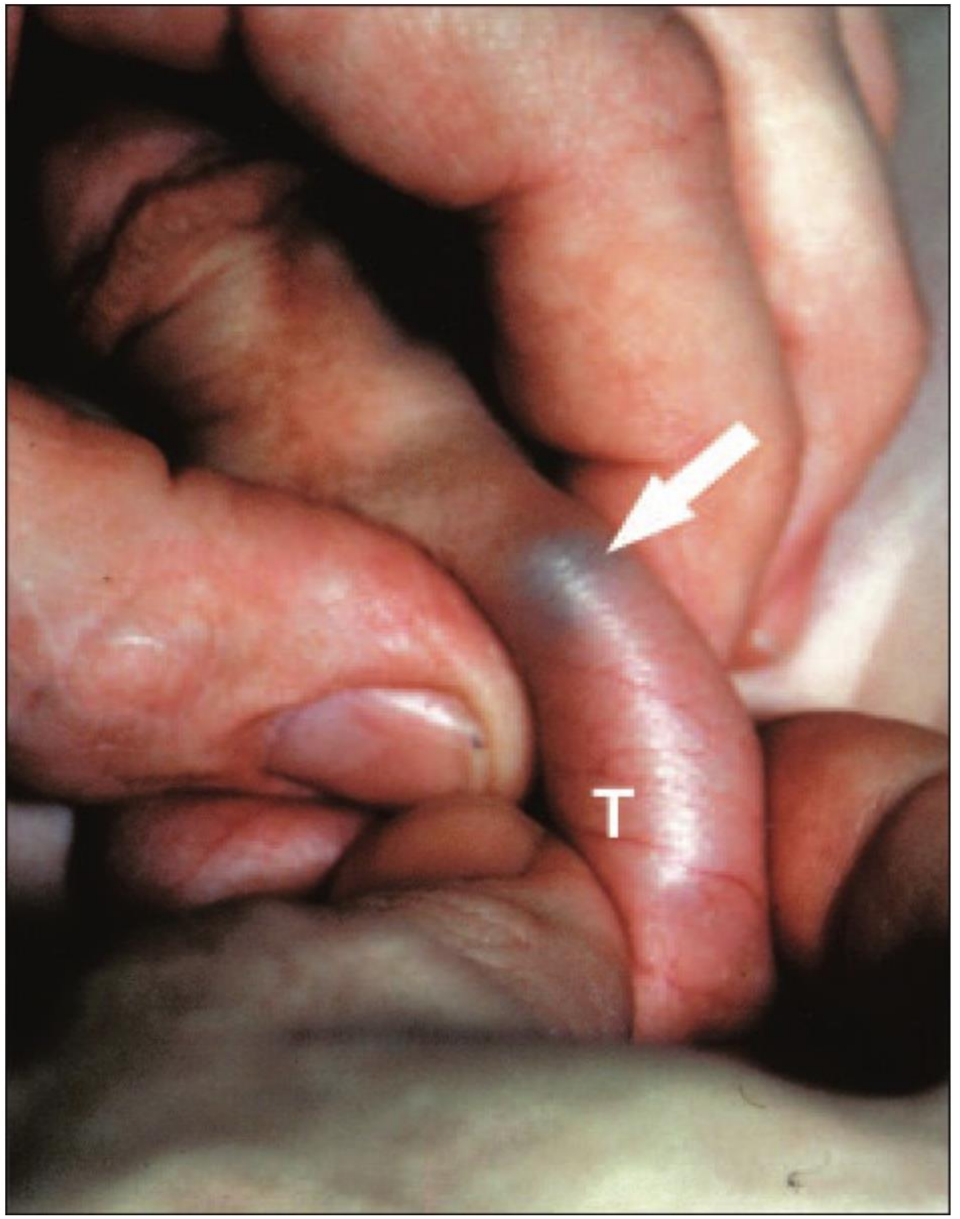
Appendix testis

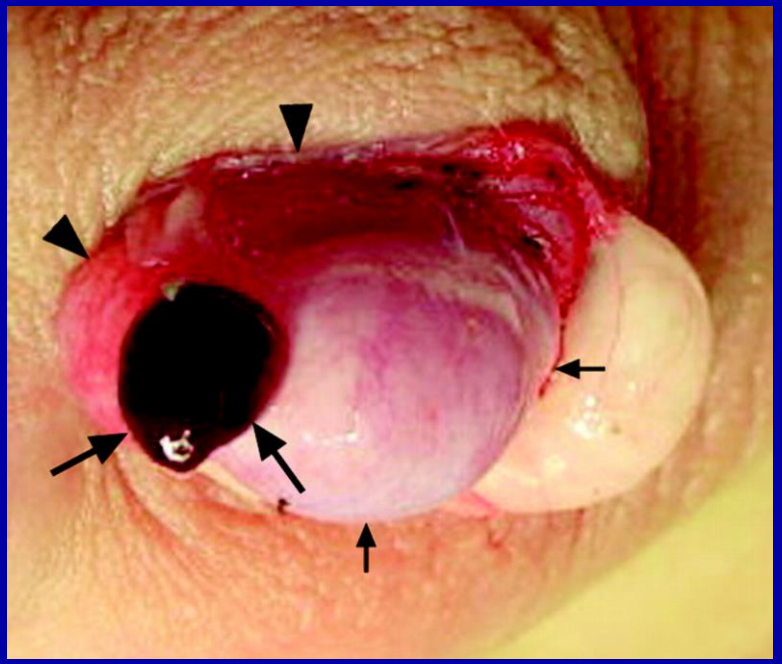
Superior
Inferior

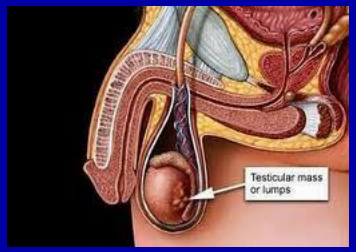
Vas aberrans of Haller

Blue Dot sign in torsion of testicular appendix

Blue dot sign






Testicular mass
or lumps

Male Health Issues

- **I hate my body.**

  Body Dysmorphic Disorder

- Athlete’s use of dietary and performance enhancing supplements is common
- Teen males may have body image concerns

Adolescent Male Body Ideal

- Ads in magazines read by men stress body shape more than diet
- Muscular male is ideal = hyper male
- Playgirl centerfolds showed an increased degree of male muscularity in photos over time
- Action figures are more muscular

Labre MP. Adolescent Boys and the Muscular Male Body Ideal. Journal of Adolescent Health 2002;30:233-242

Body Dissatisfaction

- Review of 17 studies of body image
- Males more satisfied than females
- Females want to be thinner, males want to be bigger

Labre MP. Adolescent Boys and the Muscular Male Body Ideal. Journal of Adolescent Health 2002;30:233-242

Eating Disorders

- 5-15% of males have an eating disorder
- Males with eating disorders are increasing in prevalence
- Wrestlers have increasing prevalence of eating disorders

Labre MP. Adolescent Boys and the Muscular Male Body Ideal. Journal of Adolescent Health 2002;30:233-242

Body Dysmorphic Disorder

- Increased body dysmorphia in body builders
- Muscle dysmorphia

Labre MP. Adolescent Boys and the Muscular Male Body Ideal. Journal of Adolescent Health 2002;30:233-242

Summary

- There are many causes of hair loss in teen males
- Gynecomastia is common, workup is based on age and degree
- Genital abnormalities are common in teen males
- Genital concerns are paramount in teem males worries
- Males may have issues with their body shape
- Beware of what looks like a trivial issue it may be caused by a significant illness.

Reference/Reading

- Adolescent and Young Adult Male Health: A Review. David L. Bell, David J. Breland, Mary A. Ott, PEDIATRICS Volume 132, Number 3, September 2013 pp 535-546
- Access to the Health Provider Toolkit fro Adolescent and Young Adult Males www.AYAMALEHEATH.ORG a great resource for providers, parents and youth
- Jackson EA. Hair Disorders. Primary Care; Clinics in Office Practice, 27(2) 2000.
- Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America, 2001May; 28(2):321-34)
- ***Emerging Issues in Male Adolescent Sexual and Reproductive Health Care, AAP Committee on Adolescence, Pediatrics; 145 (5) May 2020 pp77-90***

Appendix

Sildenafil Adverse Event Experience in Worldwide Flexible Dose Studies

Adverse Event	Percentage of Patients	
	Sildenafil (n=734)	Placebo (n=725)
Headache	16	4
Flushing	10	1
Dyspepsia	7	2
Nasal congestion	4	2
Abnormal vision	3	0
Diarrhea	3	1
Dizziness	2	1
Urinary tract infections	3	2

Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America 2001;28(2)

Sildenafil Citrate

PHARMACOKINETICS

- 40% bioavailability
- Peak plasma concentration 30-120 min.
- High fat meal increases time to peak by 60 min.
- Ketoconazole, erythromycin, cimetidine decrease metabolism, increases level of sildenafil

Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America 2001;28(2)

Sildenafil Citrate

CONTRAINDICATIONS AND PRECAUTIONS

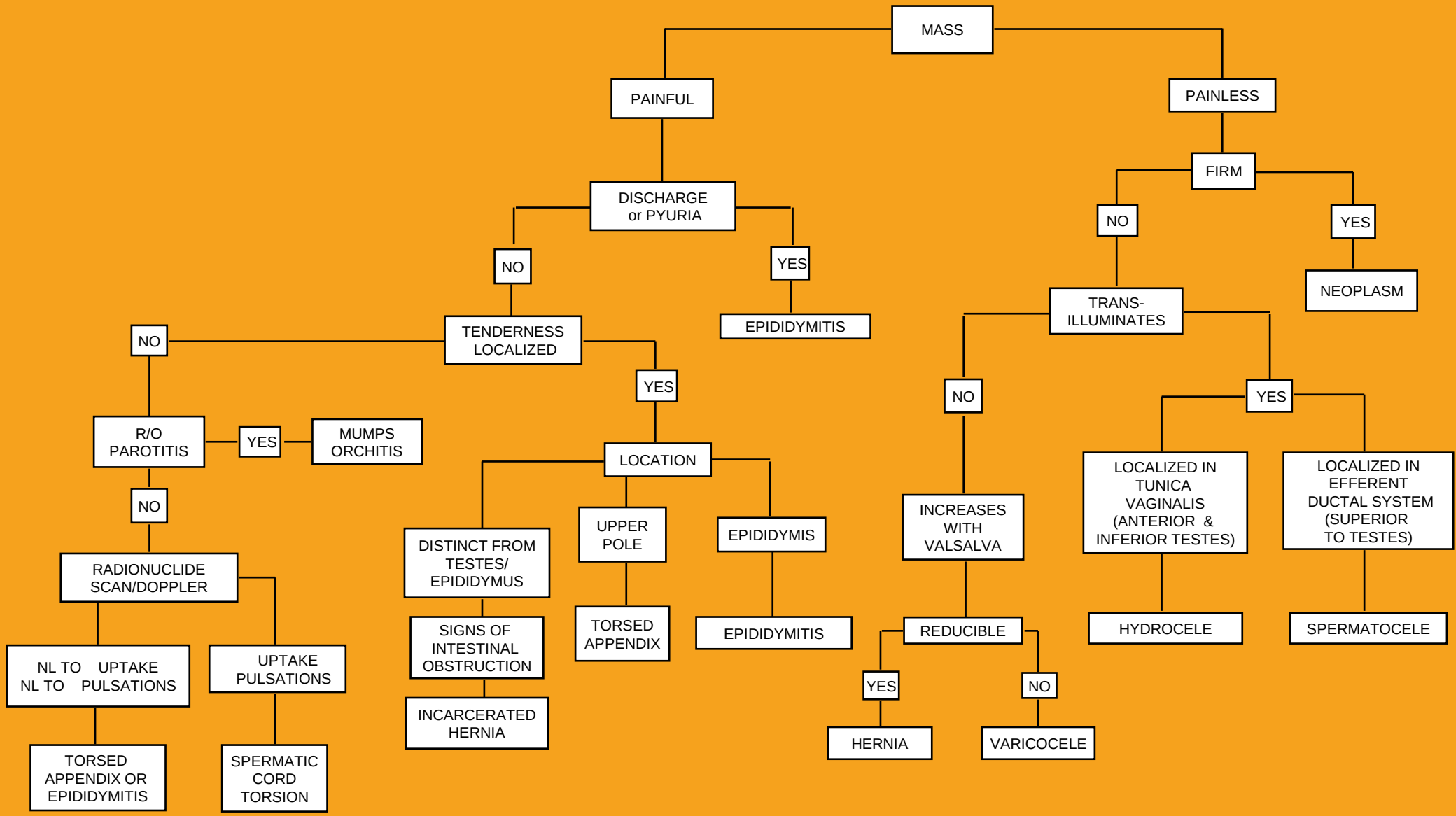
- Potentiates hypotensive effects of nitrates
  - Oral nitrates
  - Nitroprusside
  - Amyl nitrate

Padma-Nathan H, Giuliano F. Oral drug therapy for erectile dysfunction. Urologic Clinics of North America 2001;28(2)


4 Filmtabletten
Cialis® 20 mg
Filmtabletten
tadalafil


Finally,
a treatment for erection problems
that gives you the freedom
to choose the moment

DIAGNOSTIC APPROACH TO SCROTAL MASSES*



*Adapted from Norman Schlossberger, M.D., "Male reproductive health: Part 1, Painful Scrotal Masses, *Adolescent Health Update* 1992;4(3) and Klein BL and Ochsenschlager, "Scrotal masses in children and adolescents:A review for the emergency physician". *Ped Emer Care* 1993;9(6):351.

Male Health Issues
Athletic Competition

- If you want to play first string, you need to bulk up over the summer
- Competition is intense and Winning is the only goal
- Neither drug bans or testing provides an Adolescent with the tools to resolve the conflict between winning and desire to do right.

Performance-Enhancing Drug Use in Young Athletes. Laos C. Metzl JD. Adolesc Med 17 (2006) 719-731

Some Amino Acids Proposed as "Ergogenic Agents NONE HAVE VALIDITY!

- Branched chain amino acids (BCAAs)
  - Leucine (essential AA)
  - Isoleucine (essential AA)
  - Valine (essential AA)
- L-tryptophan (essential AA) HGH analogue used to ↑ HGH
- Lysine (essential AA)
- Glutamine (nonessential AA)
- Glycine (nonessential AA)
- Arginine (nonessential) HGH analogue used to ↑ HGH
- Aspartic acid (nonessential AA)

Many are contaminated with steroid compounds

Greydanus DE and Patel DR. Sports doping in the adolescent athlete: The hope,hype, and hyperbole. Pediatric Clinics of North America, 2002;49(4)

Classification of Purported Performance-Enhancing Substances

Supplements	Prescription Drugs	Illicit/banned Subances
Androstenedione	Anabolic steroids	Amphetamines
Antioxidants	Beta blockers-archery	Anabolic steroids
Caffeine	$Beta_2$ agonists-many will claim asthma HX	Blood doping (Erythropoietin)
Creatine	Diuretics-wrestling	Cocaine
Ephedra alkaloids (Ma Juang)	Human growth hormone: muscle but weak	Dihydroepiandrostenedione (DHEA)
Vitamins (B,C,E, Folate)	Human chorionic gonadotropin-blocks testicular atrophy	Gamma-hydroxy butyrate
Minerals (Boron, Calcium, Chromium, Iron, Magnesium, Phosphates, Selenium, Sodium, Bi-carbonate, Vanadium, Zinc)	Corticotrophin (ACTH)	Human growth hormone
Amino acids (Arginine, Ornithine, Lysine, Aspartate, Glutamine, Leucine, Trypotphan, Carnitine)	Local anesthetics	Narcotics
	Theophylline	

Koch JJ. Perhformance-Enhancing Substances and Their Use Among Adolescent Athletes. Pediatrics in Review, 2002; 23(9).

Common Oral and Parental Anabolic-Androgenic Steroids: 1 in 4 begins as a teen 1/3 female (strength power, speed size)

Oral Preparations Generic names (Trade Names)	Parental Preparations Generic Names (Trade Names)
Methandrostenolone (Dianabol)	Nandrolene decanoate (Deca-durbolin; Neo-durabolic)
Stanozol (Winstrol)	(Hybolin decanoate; Androlone-D)
Oxandrolone (Oxandrin)	Nandrolone phenpropionate (Durabolin; Hybolin)
Meythyltestosterone (Android; Virilon; Testred)	Testosterone enanthate (Delatestyl; Andro L A; Durathate)
Fluoxymesterone (Halotestin)	(Everone)
Oxymetholone (Anadrol; Anapolon)	Testosterone priopionate (Testex)
	Testosterone cypionate (Depo-testosteone; Duratest)

Congeni J, Miller S. Supplements and drugs used to enhance athletic performance. Pediatric Clinics of North America 2002;49(2).

Problems: Parenteral Anabolic-Androgenic Steroids

- Users take 10 to 40 times the therapeutic doses
- Side Effects: mood swings, striae, sleep disturbances, baldness, sexual dysfunction, testicular atrophy, Acne
- Girls: menstrual problems and hormone suppression, develop male body characteristics, ↑ body hair
- Withdrawal: lethargy and depression so restart drugs
- Warn teens: use is illegal, can lead to abusing other illegal drugs, long term health problems + Ethical/fair play issues

Prohormone Preparations: (they all sounds like steroids)
Athlete has to take a high dose of these to get an effect

Andro-Gen
Andro Spray
Andro-Stack
Chrysin
Cyclo-Diol
Cyclo-Noridol
Deca Force Reactor
Diol-Stack
Dyma-Bol
7-Keto Fuel
Monster Stack
Nor Andro Ripped Fuel Stack
Nor-Stak
Nor-Tek
Norandro Spray
Test-Tron Glandular
Tetrabol
Tribulus Fuel
Trioxalon
Vition
Z-mass Formula

Congeni J, Miller S. Supplements and drugs used to enhance athletic performance. Pediatric Clinics of North America 2002;49(2).

Creatine Preparations: muscle loading increases ATP providing 5-25 seconds of longer energy, faster recovery, increased muscle mass. No studies in under 18 yo., not approved, Overloading kidneys. Recommended dose 5mg/d, (but many use 20-30/d or more) 20% have no creatine

---

- Animal Max
- ATP Advantage
- Crea-Fizz Effervescent
- Creaject
- Creatine Fuel Chews
- Creatine monohydrate
- Creo-2-Cell
- Femme Advantage
- Mass Action
- Micronized Creatine
- Phosphagen Synthevol
- Prime Advantage
- Runners Female Advantage
- Super Pancreatin
- Teen Advantage
- Xtra Advantage

Congeni J, Miller S. Supplements and drugs used to enhance athletic performance. Pediatric Clinics of North America 2002;49(2).