Arizona Urologic Society 50th Annual Meeting

El Conquistador Resort
Tucson, Arizona
August 9-11, 2024

Meeting Notes:

Saturday, August 10, 2024

Management of Hypogonadism [Priyanka Bearelly, MD]:

A. Background
    a. T declines by 1% Qyr every year after 40
    b. Liquid chromatography tandem mass spectrometry is best way to test
    c. T<300 (but cut offs should vary by age)
B. Hypothalamic-Pituitary-Gonadal Axis
    a. Giving exogenous testosterone may stop production of endogenous testosterone
C. Benefits of T supplementation
    a. Increased lean body mass
    b. Bone mineral density of bone
    c. Improved libido
    d. Improved ED
    e. May improve response to PDE-5i
    f. May improve diabetic control
    g. May improve total cholesterol and triglycerides
    h. May improve depression
D. Work-up
    a. If gynecomastia, measure estradiol
    b. If T low and interested in fertility -> have infertility evaluation
    c. Measure PSA in men >40 y/o
    d. Prior to treatment, check Hgb or Hct (risk of polycythemia0
    e. 2 morning levels <300
    f. Check LH
        i. Low: Prolactin/MRI brain
        ii. PRL > 2x normal
E. Interval Monitoring
    a. Check labs 6-8wks after starting treatment
        1. T, Hct, E2, PSA
        2. T should be between 450-600
        3. Hct should be <54
            a. If T normal and Hct high -> phlebotomy
        ii. Once stable, check T and Hct q6mo and PSA q 1-2yrs
F. Overview of Therapies:

a. Lifestyle modification (weight loss, manage comorbidities)
b. Treat OSA and sleep disorders
c. Synthetic T therapies
    i. Transdermal gel [AndroGel, Testim, Axiron, Fortesa]
        1. 1% or 1.62%
        2. Dose 40.5-100mg
        3. Comes as pump package tubes
        4. Shoulder, upper arms, abdomen
        5. Biggest risk -> risk of transference by touching someone else (maybe hours after application and even through clothing)
    ii. Patch
        1. Scrotal (not in US), nonscrotal (back, thigh, upper arm, abdomen)
        2. T levels directly proportional to surface area of skin
        3. Skin irritation (2/3 of men)
        4. Reapplication q24hrs, change sites
    iii. Oral (Jatenzo, Tlando, Kyzatrex) – more popular since 2021 due to avoiding liver metabolism
        1. Gastritis, nausea, headaches, slight increase in BP
    iv. Injection (Testosterone cypionate/enanthate/undecanoate)
        1. IM or SC
        2. Q7-14days (cypionate/enanthate)
        3. up to q10weeks (undecanoate): must be done in the office
    v. Buccal
    vi. Nasal
        1. Nasal gel 5.5mg/pump: 1 pump each nostil q8hr (11mg TD)
            a. Benefit for fertility preservation due to being short-lasting
    vii. SubQ pellets [Testopel]
        1. Each pellet 75mg
        2. Dose range: 450mg – 750mg q3-6mg (6-10 pellets)
        3. SubQ, upper outer buttock
d. Alternative agents (off label use)
    i. Aromatase inhibitors
        1. Anastrazole
            a. Indication: symptoms of gynecomastia, elevated estradiol
            b. Starting dose: 1mg 1x/week
            c. Consider DEXA q3-5yrs (based off of breast cancer guidelines)
            d. Estradiol > 60: DVT
            e. Estradiol < 10: osteoporosis, low libido
    ii. Selective estrogen receptor modulator
        1. Clomiphene citrate [Clomid]
            a. Safe long term (may need to be a lifelong therapy)
            b. T therapy for those who wish to preserve fertility
            c. Estradiol levels may rise
            d. Starting dose: 25mg 3x/week
    iii. HCG (LH analog)
        1. Indication: T therapy who wish to preserve fertility (who might not be responding to clomiphene)
        2. Starting dose: 1000U 3x/wk

G. Adverse Events
    a. Polycythemia
        i. Hypothetical risk of increased blood viscosity leading to stroke, DVT. Not been demonstrated in studies
        ii. T injections > pellets > gels > clomiphene
        iii. Make sure OSA is treated (also a reason for polycythemia)
    b. Cardiovascular
        i. No good data to show T supplementation increases cardiovascular events
        ii. Several meta-analyses show low T has a risk for CV events
            1. TRAVERSE trial (NEJM)
                a. T not associated w increased overall CV risk
                b. Higher incidence of PE (0.9% vs 0.5%)
                c. Substudies:
                    i. No difference btwn placebo and T group for fractures and erectile dyfunction
        iii. Treatment should not be started for 3-6 months after a CV event
    c. Prostate cancer
        i. T likely increases prostate volume via DHT
        ii. T treatment is contraindicated in untreated prostate cancer
        iii. T treatment is less clear in those with treated prostate cancer
        iv. TRAVERSE: no significant difference is high risk CaP or any CaP
    d. Fertility
        i. All exogenous T therapies used alone result in impairment of spermatogenesis
        ii. Should not be used in males desiring maintaining fertility
        iii. Options: clomid, hcG, T+hcG
        iv. Recovery: 3 months (up to 24 months)
            1. 90% regain by a year
            2. Majority of the rest regain by 2 years
H. Contraindications
    a. Untreated CaP
    b. Breast cancer
    c. Fertility preservation
    d. Untreated OSA
    e. Baseline Hct>54
    f. Wait 3-6mo after cardiovascular event
I. Trial of discontinuation
    a. Patients who don't have symptom benefits after 3-6months of therapy despite adequate serum levels should be discontinued from further supplementation

Novel Diagnostics and Therapeutics in Men's Health [Nahid Punjani, MD]

A. Male Fertility (Diagnostics)
    a. Semen Analysis
        i. Two main issues:
            1. Access
            2. Testing focuses not on quality but rather how it looks

ii. At home semen-analysis
    1. Fellow, Yo, Sperm Check
    2. When to use?
        a. Post-vasectomy compliance (PVSA): can help compliance get to 90+%
        b. Screening or confirmatory semen analysis (CSA)
        c. Fertility preservation (Cryo)
iii. Sperm DNA fragmentation: examines quality of sperm DNA
    1. Measure of damage or breaks in DNA from sperm
    2. Indications: recurrent miscarriage, recurrent ART failures, lifestyle factors
    3. Treatments: Antioxidants, varicocele ligation, sperm selection techniques
iv. Sperm DNA methylation
    1. Designed by Path Fertility: checks how well a sperm can penetrate an egg
    2. Epigenetic test that evaluates sperm DNA methylation
    3. When to use: decide IUI vs IVF, multiple failed IUI cycles

b. Hormone evaluation
    i. FSH and T should be checked on initial evaluation
    ii. 17-OHP (hydroxyprogesterone): surrogate for intra-testicular testosterone
        1. Can be used to monitor response to hormone therapy (i.e. transition from exogenous to endogenous T therapy)
        2. Cut off value 55
            a. If <55: suggest hormone manipulation
            b. If >55: not necessary

c. Genetic testing
    i. Genetic sequencing
        1. Karyotype and Y-chromosome microdeletion testing recommended
        2. Growing emphasis of the role of genetics in male infertility
        3. Over 300 genes implicated in infertility
        4. Mayo collab with CIM (Center for Individualized Medicine) and Program for Rare and Undiagnosed Disease (PRauD)
            a. Developed a test that utilizes genome sequencing to study >300 genes
            b. Cost remains below the standard cost for conventional testing
            c. Cost $900 (blood or saliva)

B. Sexual Dysfunction (therapeutics)
    a. Lifestyle changes
    b. PDE-5i
    c. Intraurethral
    d. Penile injections
    e. Constriction bands
    f. Vacuum
    g. Penile prosthesis
    h. Restorative therapies
        i. Shockwave
            1. Wound/tissue healing for tissue restoration

a. Neo-angiogenesis
b. Improved microcirculation
c. Vasodilation and increased NO

2. Radial vs focused shockwaves: for ED need to use focal shockwaves
3. Data:
    a. Overall some positive outcomes but many studies filled with bias
    b. First double blind randomized trial for moderate ED (published in JUrol)
4. Not FDA approved
    a. Need to purchase the device (tens to hundreds of thousands)
    b. Softwave, Karl-Storz
    c. Varying protocols for number of shocks (600-5000) & number of treatments (4-12)

ii. Platet-rich Plasma (PRP; "P shot")
1. Platelet rich layer extracted from blood
2. Data remains limited, highly variable, expensive, and difficult to draw meaningful conclusions
3. Not FDA approved
4. Have to find a facility that does this and does it well

iii. Stem cell
1. Drive angiogenesis, neovascularization, growth factors
2. Bone marrow-, adipose-, and mesenchymal-derived
3. Costly (>$5000)
4. Specialized facilities perform this

C. Not Covered Today
a. Infertility
i. CapScore
ii. cfDNA
iii. MiOSYS/OxiSperm
b. Sexual Dysfx
i. Phallofil/UroFil
ii. FirmTech smart constriction ring
iii. Unpdated IPP changes
iv. eIPP

The Emotional Toll of Surgical Complications [Aditya Bagrodia, MD]

A. "Every surgeon carries within themselves a small cemetery, where from time to time they go to pray – a place of bitterness and regret, where they must look for an explanation for their failures."
a. -Rene Leriche (1879 – 1955)

Point-Counterpoint Debate [David Mauler, MD vs Robert Parker, MD]:

Prostate Biopsy Transperineal vs Transrectal Fusion: Which Should Be Done and Why

A. Robert Parker:
   a. PREVENT Trial
      i. No difference in rates of infection
      ii. Higher pain in TP group
   b. PERFECT Trial
      i. No difference in diagnostic accuracy btwn groups
   c. ProBE-PC
      i. No diff in infxs or non-infxs complications btwn methods
      ii. No significant diff in detection rates of any GG PCA
   d. Meta-Analysis (total 1600 pts)
      i. No diff in PCa detection or postprocedural complications/infections, more pain in TP
   e. REBUTTAL:
      i. EAU Guidelines:
         1. Studies used to make this recommendation show substantial heterogeneity, predominantly observational studies, unclear risk of bias (done without blinding), possible selection bias (differences in baseline patient characteristics)
      ii. Meta-analysis from 7/2024 very strong data

B. David Mauler:
   a. Reimbursement changes coming 1/2026
   b. EUA Guidelines recommends TP due to lower risk of complications (Grade 1a): "TREXIT"
   c. PREVENT Trial
      i. Comparing TP without abx to TR w/ abx ppx and uses transrectal swabs to check abx resistance
      ii. Urinary retention: 1 case
   d. ProBE-PC
      i. TR needs abx prophylaxis
   e. Jacewicz et al: Lancet
      i. TP gives advantage of not needing abx
   f. Retrospective literature shows slight advantage for TP over TR for sepsis rates
   g. PERFECT Trial
      i. TR better for posterior lesions; TP better for anterior lesions
   h. Mayo data: 60% TP vs. 40% TR
   i. Beyond diagnostics:
      i. Focal therapy (excellent TP technique important)
         1. Crysurgery
         2. Nanoknife
         3. HIFU
         4. Water vapor ablation
   j. REBUTTAL:
      i. What about urinary retention? PERFECT trial shows similar rates btwn groups
      ii. Pain levels? Differences in pain resolved by 7 days
      iii. TR perpetuating rising resistance

iv. Inertia of adoption is changing patient expectations/perception
    1. Reddit examples

Legislative Updates [Dan Frendl, MD; Jason Jameson, MD; Amanda Sheinson, Representative Henderson]

A. AUA Urology Advocacy Summit: 3/3-3/5/25 (Washington D.C.)
B. AUA Political Action Committee (AUAPAC)
    a. www.myAUAPAC.org
    b. myauapac.org/how-to-give
C. Arizona Medical Association (ArMA) Updates (Amanda Sheinson: Asheinson@azmed.org; 602-799-2043)
    a. Senate Health Chair: TJ Shope
    b. House Health Chair: Steve Montegro
    c. Request to Speak 101 (one of the most effective ways to speak with legislators):
        i. http://aaps.azleg.gov/account/SignOn to make an account.
    d. 2024 Major Legislation:
        i. Physician title protections
        ii. Defeated bills:
            1. Permitting licensure for transitional training for med school graduates who don't place into a residency
            2. Anti-vaccine
        iii. Scope of practice battles:
            1. Psychologist prescribing psychotropics
            2. Pharmacists "test and treat" flu/strep/COVID
            3. Sunrise Report Repeal: anyone who wants to expand their scope needs to submit a report highlighting their credentials
            4. MA and administrative tasks: MAs can do prior authorizations
            5. Imaging for PTs and chiropractors
            6. Payor Transparency and Accountability
                a. Timely and accurate pay: delays in payment can be reported to Dept of Insurance
                b. Prior authorization
                c. Non-medical switching: prohibits patients from moving from one med to one less expensive (bill not passed)
                d. Credentialing: allowing retroactive billing and reducing timelines
        iv. FY2025 Budget: currently in a big deficit
            1. 3% reductions for state agencies
            2. Boards and commissions sweep
        v. Federal Updates:
            1. HB2474 Strengthening Medicare for Patients and Providers Act
            2. Noncompete ban legal challenges
            3. No Surprises Act
            4. Medicare Oversight and Reforms
    e. Looking ahead:
        i. Scope of practice battles

ii. AHCCS coverage/reimbursement
iii. Workforce shortages
iv. Rural/underserved communities

D. Legislation re: MAs placing catheters (Dr. Twiss):
   a. Restrictions being placed on MAs placing catheters. Need RNs, APPs, or MDs to place them.
   b. AZUS partnered with State Advocacy Committee in the AUA and wrote a letter to the Arizona Medial Board state department
      i. AZUS represent 78% of urologists in the state
      ii. Not much response. May need to partner with higher agencies for ongoing advocacy and legislation.
      iii. We're not the only state dealing with this.

E. Representative Alma Hernandez (serves in AZ House; Health and Human Services Committee)
   a. Research/funding considerations despite budget deficit.
   b. Cell phone # (520) 628-0011

Resident Research Presentations: Part 1

A. Mayo [Grace Madura, MS4]: Trends in Opioid Prescribing Over Time after Pediatric Urologic Surgery
B. UofA [Austin Chien, MD]: Feasibility and Safety of Xray Free US-Guided PCNL for Staghorn Stones: a Prospective Single-Institution Experience
C. Mayo [Mimi Nguyen, MD]: Clinically Significant Prostate Cancer Detection by Transperineal vs Transrectal MRI-Fusion Targeted Biopsy: Performance in Screening vs Active Surveillance Settings
D. UofA [Ava Delu, MD]: Using the Perineal Line in Dynamic MR-Defecography Grading of Pelvic Organ Prolapse and It's Correlation to Physical Exam

Sunday, August 11, 2024

Point-Counterpoint Debate [Logan Briggs, MD vs Natalie Lopes, MD]:
RPLND Should Be Performed for Stage 2 Seminoma

A. Logan Briggs: YES
   a. Take-aways:
      i. 72-90% chance of avoiding chemo or XRT
      ii. RPLND allows more accurate pathologic staging
      iii. Recurrences tend to be early, can have some peace of mind about 2yrs after surgery
   b. SEMS 2023 (USC):

i. Surgery in early metastatic seminoma
ii. Up to 83% pathologic Stage 2
iii. Recurrence rates tend to be early after RPLND but stabilizes by 2 years
iv. 2 year recurrence-free survival: 81%
v. 81% chance you could skip chemo. If you failed, you could still get chemo and be early 100% disease free.
vi. Overall complication rates are low.

c. PRIMETEST 2023:
i. Single-arm, single-center study (Germany) RPLND for Stage II A/B <5cm RP mets
ii. 33 patients, med f/u 32mo
iii. 2 year RFS 72%
iv. Overall survival 100%
v. Overall complications low

d. COTRIMS 2024: RPLND for marker negative clinical stage II A&B seminoma
i. 30 patients, med f/u 22 mo
ii. RFS 90%
iii. OS: 100%
iv. Low morbidity

e. Tachibana et al (retrospective analysis, Indiana): pathologic Stage 2 after primary RPLND
i. 97 patients, median f/u 52mo
ii. 5yr RFS 79%
iii. OS 100%

f. REBUTTAL:
i. Yes, chemo/XRT have higher recurrence-free survival rates compared to RPLND, but overall survival (including subsequent therapy for recurrence) is 100% regardless
ii. Chemo/XRT cause significant morbidity and delayed mortality compared to the general population
1. Relative risk compared to general population:
a. Cardiac events: 2.4
b. Metabolic syndrome: 2.2
c. Solid malignancies: 2.0
d. Leukemia: 2.7
2. Mortality ratio for testicular cancer patients is 1.89x higher in XRT patients after 15 years and 2.5x higher in chemotherapy

B. Natalie Lopes: NO
a. Take-aways:
i. AUA guidelines: Stage IIA or IIB can be treated with chemo or XRT (unless pts want to avoid long-term toxicity), and should be in nodes <3cm. Chemo recommended if nodes >3cm
ii.

b. Chemotherapy:
i. Overall survival: Stage IIA 96-100%; Stage IIB 95-100%
ii. Chemo side effects:
1. Nausea, vomiting, stomatitis, alopecia, bone marrow suppression
2. Long term: secondary malignancy, cardiac/pulm fibrosis (mitigatd by lifestyle interventions), ototoxicity, neurotoxicity, fertility disorders

c. Radiation:

i. Survival: 95.3% and 88.9% for Stage IIA and IIB, respectively.
ii. Radiation side effects:
1. Nausea, diarrhea
2. Long-term: secondary malignancy, sexual dysfx, hypogonadism, diabetes, CAD

d. RPLND
i. Side effects:
1. Lymphocele, chylous ascites, ileus
2. Incisional hernia, bowel obstruction
3. Retrograde ejaculation/anejaculation: 10% (less concerning with modified templates)
ii. Major downfall: relapse rate is 20-30% (compared to <10% with chemo/XRT)
iii. Variable approach to RPLND (should be referred toa high-volume center)

e. REBUTTAL:
i. SEMITEP trial:
1. 102 patients with Stage II seminoma on International Germ Cell Cancer Collaborative Group: treated with 2 cycles EP followed by FDG-PET
2. 2 year PFS rate 93.7%
ii. Patterson et al:
1. 1/19/ patients relapsed after 70 months
iii. SAKK01/10 trial:
1. 3yr PFS 95.2%
iv. Sigg et al:
1. Reduces risk of recurrence from 30% with primary RPLND alone to 5%

Podcasting: A Passion Project for Evolving Medical Education "backtableURO" [Aditya Bagrodia, MD

A. Conception
a. March 2021 during pandemic
b. Missed talking to people
c. Medical eduction was evolving, lots of different ways to do things
i. New generation of learners:
1. Strengths: redefining productivity, entrepreneurial spirit, desire agility, redefining respect
d. Burnout in urology
i. Exercise, talking with friends
ii. New job
iii. Cut back to part time
iv. "Passion projects": it should be inspiring to you, not taxing
v. Spend time on something meaningful to you
e. Podcasts:
i. Rapid expansion in medical info
ii. Need for accessible, updated sources

iii. Adjuncts to traditional resources
iv. Empowers teachers, learners, etc

B. Execution
    a. Pick your audience
    b. Build your brand
        i. Be a guest on an existing show
        ii. Start your own podcast
            1. Equipment
            2. Editing
                a. GarageBand, Audacity (free)
                b. Descript ($30/month): audit audio/video and transcribe
            3. Distribute
                a. Platform to host the podcast
                b. Social media and sharing

C. Challenges
    a. Limitations:
        i. Misinformation, no peer review
        ii. Establishing accuracy
        iii. Collaborate with peers
        iv. Surplus of content

D. Reflections
E. Measuring success

AZ Business Meeting

A. Filled leadership roles
B. Recommendation made to create a Task Force to address AZ urologist workforce shortage

Resident Research Presentations: Part 2

C. UofA [Irasema Paster, DO]: Bladder Calculi are not Associated with Prostate Volume or Severity of Bladder Trabeculations – Results from a Prospective HoLEP Registry
D. Mayo [Mouneeb Choudry, MD]: Germline Pathogenic Variants Identified in Patients with Genitourinary Malignancies Undergoing Universal Testing: a Multi-Site Single-Institution Prospective Study
E. UofA [Jonathan Seaman, MD]: Distal Robotic Ureteroureterostomy – Feasibility and Outcomes
F. Mayo [Jon Lin, MD]: A Snapshot of Industry Payments to Urologists