Erectile and Ejaculatory Dysfunction

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SMSNA – 16th Annual Fall Scientific Meeting
Scottsdale, AZ
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Overview – ED and EjD Well Represented

- Symposiums: 6
- Master Lectures: 5
- Workshops: 5
- Round Table: 4
- Special Lectures: 3
- Point / Counterpoint: 3

- Poster / Podiums:
  - Posters: 45
  - Podiums: 24
- Videos: 13
ED Basic Science
#137 – Superparamagnetic iron oxide nanoparticle targeting of adipose tissue-derived stem cells in diabetes-associated erectile dysfunction

- Tagged ADSC w/ SPION (contrast agent for MRI)
- Magnetic field – guide to target area
- STZ diabetic rats

**Results / Conclusions:**
- Biological characteristics of ADSC maintained
- Increased # of cells delivered to target area
- Improved erectile function
- Increased smooth muscle and endothelial cell densities

**Clinical implication** – potential method to overcome issues with stem cell therapy

*Zhu L, 2016*
#140 – Influence of anti-cancer agent oxaliplatin on erectile function in rats

- Oxaliplatin 4mg/kg

**Results / Conclusions:**
- Reduces erectile function up to 28 days
- Mechanism – reduces NOS
- Despite rebound NOS, persistent ED
- Oxidative stress / fibrosis markers increased
- Clinical – provides mechanism for observed ED post chemotherapy
#142 – Intracavernosal injection of botulinum toxin to improve erectile function in older rats

- Rats aged 8.5 months
- 10 units Botox

**Results / Conclusions:**
- Treated rats exhibited improved erectile function
- Clinically – Very intriguing
  - Risk of priapism x 3-12 months?
  - Bonus – no penile wrinkles

*De Young, et al, 2016*
Erectile Dysfunction
#105 – Does neoadjuvant androgen deprivation therapy impact erectile function recovery post-radical prostatectomy?

- Retrospective analysis 1089 men post-prostatectomy
- Neoadjuvant ADT
- 43 (ADT+), 1046 (ADT-)

Results
- ADT significantly worsened EF
- Equivalent to nerve sparing score
- Age, baseline fx more important

<table>
<thead>
<tr>
<th>Factor</th>
<th>ADT+</th>
<th>ADT-</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good EF (EFD ≥ 24)</td>
<td>19%</td>
<td>41%</td>
<td>0.45</td>
</tr>
<tr>
<td>Severe ED (EFD ≤ 10)</td>
<td>44%</td>
<td>24%</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Factor  | Beta  
--- | ---  
Age     | -0.18 
Baseline EF | 0.31 
Number Vascular Comorbidities | -0.07 
Nerves Sparing Score | -0.10 
ADT Group | -0.08 

The disrupted baseline brain activity of the insular region in psychogenic ED patients: a resting state MRI study

- 27 psychogenic ED vs 27 control
- fMRI

**Results**
- R insular region w/ decreased activity in psychogenic ED
- Correlates with IIEF
- No other regions correlated

**Clinical**
- Novel method of evaluation?
Medical Management of ED
#24 – The effect of botulinum toxin on penile vascular parameters and clinical outcome in patients with severe ED: a pilot study

- Randomized, n=24
- Vascular ED unresponsive to PDE5i and ICI
- 40-70 yr old, ICI w/ 50 units BTX
- Compression ring x 25 min
- Both given Sildenafil 100 daily
- Mean PSV < 27, mean EDV < 5

- Results
  - 4 wks after Rx

The effect of botulinum toxin on penile vascular parameters and clinical outcome in patients with severe ED: a pilot study

#24 – The effect of botulinum toxin on penile vascular parameters and clinical outcome in patients with severe ED: a pilot study

Patients who answered Yes after treatment

Ghanem et al, 2016
The effect of botulinum toxin on penile vascular parameters and clinical outcome in patients with severe ED: a pilot study

Adverse Events:
- No systemic
- One episode of prolonged erection (2.5 hr), managed with ephedrine

Comment:
- Unclear how to interpret U/S results

Patients who answered Yes after treatment

#26 – Penile low intensity shock wave therapy for PDE5i non-responders: a prospective, randomized, placebo-controlled study

- 58 ED, refractory to PDE5i
- Randomized
- LIST, 1 session/wk x 6 wk
- 1,500 pulses 0.1 mJ/mm$^3$, 5 Hz

- Results
  - 4 wks after Rx completed
  - SEP-2,3, GAQ1

#26 – Penile low intensity shock wave therapy for PDE5i non-responders: a prospective, randomized, placebo-controlled study

**LIST Treatment Outcome**

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Active</th>
<th>Sham</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean IIEF6 Baseline</td>
<td>22.3</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>Mean IIEF6 After treatment</td>
<td>27.7</td>
<td>31.8</td>
<td></td>
</tr>
<tr>
<td>Change in IIEF6</td>
<td>5.4</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>No. patients with IIEF6 &gt;21</td>
<td>10</td>
<td>12</td>
<td>0.148</td>
</tr>
</tbody>
</table>

**Authors Conclusion:** More studies with larger sample size and longer follow-up, comparing different lithotripters and shock wave protocols, are imperative to elucidate the real role of LIST in erectile dysfunction.
Surgical Management of ED
In contrast to prior study, new data shows bacteria found at revision IPP surgery differs from previously identified Biofilm.

- 304 patients with revision surgery
- 4 institutions
- 11 pts subsequent surgery with cultures

Results
- Evaluated correlation between initial culture and subsequent infection
- What % w/ + cultures developed infection
- What % w/ neg cultures developed infection

In contrast to prior study, new data shows bacteria found at revision IPP surgery differs from previously identified Biofilm

<table>
<thead>
<tr>
<th>Reoperation Reason</th>
<th>Organisms Cultured</th>
<th>Complication</th>
<th>Organisms Cultured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical failure</td>
<td>No growth</td>
<td>Infection</td>
<td>Candida albicans</td>
</tr>
<tr>
<td>Mechanical failure</td>
<td>S. epidermidis</td>
<td>Autoinflation</td>
<td>No growth</td>
</tr>
<tr>
<td>Mechanical failure</td>
<td>S. lugdunensis</td>
<td>Bladder laceration</td>
<td>No growth</td>
</tr>
<tr>
<td>Mechanical failure</td>
<td>No growth</td>
<td>Infection</td>
<td>S. epidermidis, e. faecalis</td>
</tr>
<tr>
<td>Mechanical failure</td>
<td>No growth</td>
<td>Infection</td>
<td>S. epidermidis, e. coli</td>
</tr>
<tr>
<td>Mechanical failure</td>
<td>No growth</td>
<td>Infection</td>
<td>S. epidermidis</td>
</tr>
<tr>
<td>Autoinflation</td>
<td>No growth</td>
<td>Autoinflation</td>
<td>No growth</td>
</tr>
<tr>
<td>Floppy glans</td>
<td>No growth</td>
<td>Infection</td>
<td>MRSA</td>
</tr>
<tr>
<td>Hematoma</td>
<td>S. epidermidis</td>
<td>Infection</td>
<td>S. warneri</td>
</tr>
<tr>
<td>Loss of fluid</td>
<td>No growth</td>
<td>Infection</td>
<td>C. freundii, e. faecalis</td>
</tr>
<tr>
<td>Retained components</td>
<td>No growth</td>
<td>Erosion</td>
<td>No growth</td>
</tr>
</tbody>
</table>
Device autoinflation following penile implant surgery

- 546 men s/p IPP
- Compared AI rates + predictors

**Results**
- 5.5% overall rate

<table>
<thead>
<tr>
<th>Parameter</th>
<th>OR</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOR reservoir location</td>
<td>6.2</td>
<td>2.1 – 11.1</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>NLOV (vs LOV)</td>
<td>3.4</td>
<td>1.9 – 7.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Complete filling of reservoir</td>
<td>2.3</td>
<td>1.8 – 6.6</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Defining predictors of penile implant infection

- 902 implants, 12 month minimum f/u, 2009-2015
- Evaluated predictors of infection
- 76% of implants malleable

**Results**

- 9% rate of infection overall
- Predictors for infection
  - HgA1C (cut point 8.5) – sensitivity 80%, spec 65%
  - Surgeon volume (≥30)
  - BMI
  - PD
- Not predictive
  - Type of implant, age, vascular risk factors

#40 – The minimally invasive no touch (MINT) penile implant, the first 150 consecutive cases

“Minimally Invasive”

“MINT”

“No Touch”

“Ectopic”

Katz DJ and Love C, 2016
#40 – The minimally invasive no touch (MINT) penile implant, the first 150 consecutive cases

- **Patient selection**
  - Primary implants (2012-2015)
  - Exclusions: revision, >1 incision, <3 month F/U
  - Mean age 60
  - Post RP=67, vasc=51, DM=32, PD=20
  - Median f/u 18 months
  - Coloplast=144, AMS=6

- **Results**
  - No intraoperative complications
  - 1% hematomas
  - <1% infection (1/150)
  - 5% revision (pump)

*Katz DJ and Love C, 2016*
#42 – Tunica albuginea structural changes in erectile dysfunction patients: first clinical evidence and pathophysiological implications

- Evaluated 17 refractory ED, 14 PD patients w/ good EF
- Sub-albuginean tissue sampled
- Evaluated for adiposity

**Results**
- ED patients w/ increased adiposity
- Lack of differentiation to muscular cell lines?
- Disruption of intracavernous androgens?

Ejaculatory Dysfunction
#113 – Relationships between IELT and NIH-chronic prostatitis symptom index in the four types of PE syndromes: a large observational study in China

- 3016 men
- IELT, NHS-CPSI scores

**Results**
- 26% overall rare of PE
- LPE 12%, APE 19%, NVPE 44%, PLED 25%
- PE men had worse CPSI scores
- APE had higher CPSI scores

**Clinical**
- APE, consider evaluating for CP

[Graph showing ratio of cases by CPSI scores for PE and No PE]
#114 – Is routine laboratory examination essential for patients with PE? Data from clinical practice

- 222 pts w/ PE reviewed
- Yield of lab tests assessed
- Mean age 43

**Results:**
- Age, ED status increased dyslipidemia
- Age = low T, elevated PSA
- PE otherwise not relevant

**Clinical** – routine lab tests not required for PE;

**W/U based on age and other medical conditions**

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**Comparison of characteristics of subjects between younger and older subgroup**

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Age &lt; 50y (138)</th>
<th>Age ≥ 50y (84)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperglycemia, N (%)</td>
<td>13 (9.4%)</td>
<td>8 (9.5%)</td>
<td>0.86</td>
</tr>
<tr>
<td>Dyslipidemia, N (%)</td>
<td>11 (8%)</td>
<td>26 (30.9%)</td>
<td>0.007</td>
</tr>
<tr>
<td>Lower total testosterone, N (%)</td>
<td>5 (3.6%)</td>
<td>14 (16.7%)</td>
<td></td>
</tr>
<tr>
<td>Higher PSA, N (%)</td>
<td>1 (0.7%)</td>
<td>6 (7.1%)</td>
<td></td>
</tr>
</tbody>
</table>

Tsai WK and Chiang PK, 2016
Number of intravaginal thrusts before ejaculation, a convenient and reliable tool for PE assessment

- Analyzed 204 PE vs 106 controls
- Men complaining of PE (all subtypes)
- Measures – stop watch, estimated IELT, PEDT, CIPE, AIPE

Results:
- Best – CIPE + estimated IELT or # of thrusts
- Thrusts equivalent to stop watch
- Clinical – Consider # of thrusts as surrogate for stop watch

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cutoff</th>
<th>Sens</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIPE.T.E.IELT</td>
<td>&gt;35</td>
<td>88.70%</td>
<td>94.60%</td>
</tr>
<tr>
<td>CIPE.T.NITBE</td>
<td>&gt;34</td>
<td>88.70%</td>
<td>94.60%</td>
</tr>
<tr>
<td>NITBE</td>
<td>&gt;75x</td>
<td>81.10%</td>
<td>88.20%</td>
</tr>
<tr>
<td>SW.IETL</td>
<td>&gt;88 sec</td>
<td>80.20%</td>
<td>90.20%</td>
</tr>
<tr>
<td>E.IELT</td>
<td>&gt;130 sec</td>
<td>96.20%</td>
<td>76.50%</td>
</tr>
</tbody>
</table>

World Meeting on Sexual Medicine

20th Congress of the European Society for Sexual Medicine
21st World Meeting of the International Society for Sexual Medicine

February 28 - March 3, 2018
Lisbon, Portugal

Jointly organized by:

European Society for Sexual Medicine
www.essm.org

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www.issmessm2018.org