Ventral Intralesional Verapamil Injections for Peyronie’s Disease: Feasibility and Safety

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Background

- Until recently, treatment options for men with PD has included medical therapies with limited evidence-based research or surgical correction.

- Intralesional verapamil (ILV) used for PD since 1994

- Minimal RCT data

- Little data on ventral injections

- Recently commenced ventral ILV injections
Background

- Small, conflicting studies in the literature regarding use of intralesional verapamil:
  - Randomized controlled trial of 14 patients with 16 month history of curvature: no significant difference in curvature between verapamil and control\(^1\)
  - Retrospective review 156 patients with mean 18 months curvature: 62% of men demonstrating a decrease in curvature (mean 31°)\(^2\)
  - Retrospective review 94 patients with mean 5.2 months curvature: 18% of men demonstrating a decrease in curvature (mean 12°)\(^3\)

Background

- Use of Collagenase Clostridium histolyticum is not approved for ventral plaques
- Concerns regarding access to plaque, injury to urethra, bleeding and efficacy of treatment
Objective

To describe the outcomes of ventrally administered intrallesional verapamil therapy in men with Peyronie’s disease and a ventral penile plaque.
Inclusion Criteria

- Men with penile curvature: stable and unstable

- Acute (unstable) Peyronie’s disease defined as:
  - Presence of flaccid penile pain OR
  - Tender plaque OR
  - Reported curvature change in past 3 months

- Patients with stable PD were treated as well
Methods

• Prospectively gathered data through MSK databases

• Curvature assessment performed in all men prior to initiation of treatment, with repeat assessment at least 3 months after completion of treatment

• 6 intralesional injections using 10mg verapamil in 5 mL normal saline, administered 2 weeks apart

• Significant change in curvature defined as $\geq$10 degree change
Technique

• Dorsal injection
  - Avoids 12 o’clock position
  - Corn-row technique bilaterally

• Ventral injection
  - Avoids corpus spongiosum
  - Flatter needle approach
  - Identical corn-row technique
Results

• 144 men received dorsal intralesional verapamil injections
  - Mean age 55±8 years
  - Mean PD duration: 8±18 months
  - Baseline curvature: 38±15 degrees

• 16 men received ventral injections
  - Mean age 59±7 years
  - Mean PD duration: 3±2 months
  - Baseline curvature: 39±11 degrees
## Results

<table>
<thead>
<tr>
<th>Comorbidity</th>
<th>Percent of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>29%</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>7%</td>
</tr>
<tr>
<td>Smoking</td>
<td>5%</td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>4%</td>
</tr>
</tbody>
</table>

*No significant difference noted between dorsal and ventral patients.*
Curvature Response to Treatment with Intralosion Verapamil

- Dorsal Intralosion Verapamil: 25% Worsening, 44% No Change, 31% Improvement, p = 0.33
- Ventral Intralosion Verapamil: 40% Worsening, 50% No Change, 10% Improvement
Effects of Ventral Treatment

- Rare, self-limiting hematuria
- Blood at urethral meatus
- No urinary retention
- No penile hematoma
- No urinary symptoms suggestive of urethral stricture
Strengths and Limitations

• Limitations
  - Small sample size
  - Differences in time course of disease in two groups
  - Not a RCT

• Strengths
  - Standardized curvature assessment
  - Baseline and EOT curvature assessment
Conclusions

• 40% of men with ventral curvature had significant improvement using intralesional verapamil

• About 10% of men will demonstrate worsening in curvature after ventral intralesional verapamil

• There appeared to be no significant differences in outcomes between dorsal and ventral intralesional verapamil in Peyronie’s disease treatment

• Ventral intralesional verapamil represents a safe and possibly efficacious treatment option in men with Peyronie’s disease