

**self-dilation. (Conditional Recommendation; Evidence Level: Grade C)**

Proper evaluation of a urethral stricture may require a period of “urethral rest,” without urethral instrumentation, to determine the true severity of the stricture including its degree of narrowing. Experts agree that urethral rest via SP cystostomy promotes a safe transition strategy for patients with unstable stricture being referred for urethroplasty. Tissue recovery and stricture maturation can be expected in 4-6 weeks, which enables accurate radiographic and/or endoscopic identification in preparation for definitive management. If a patient can forgo clean intermittent catheterization without acute urinary retention, a SP tube may be omitted during urethral rest.<sup>9</sup> This allows the full length of the stricture to develop, and accurate determination of definitive treatment options.

**Dilation/Internal Urethrotomy/Urethroplasty**

**7. Surgeons may offer urethral dilation, direct visual internal urethrotomy, or urethroplasty for the initial treatment of a short (<2cm) bulbar urethral stricture. (Conditional Recommendation; Evidence Level: Grade C)**

Urethral dilation and direct visual internal urethrotomy (DVIU) have similar long-term outcomes in short strictures, with the highest success rates found in those with bulbar strictures <1cm.<sup>10</sup> Urethroplasty may be offered as the initial treatment for a short bulbar urethral stricture but must be weighed against the increased anesthesia requirement and higher morbidity compared to endoscopic treatment.

In patients with a short (<2cm) bulbar urethral stricture, non-transecting substitution urethroplasty results in fewer penile complications (eg, poor glans filling, penile shortening) compared to transecting urethroplasty.<sup>11</sup> However, there appears to be no difference in sexual dysfunction measured by IIEF-5 at 12 months.<sup>11</sup>

**8. Surgeons may perform either dilation or direct visual internal urethrotomy when performing endoscopic treatment of a urethral stricture. (Conditional Recommendation; Evidence Level: Grade C)**

Dilation and DVIU can be used interchangeably for the initial treatment of urethral strictures. Success rates diminish as stricture length increases.<sup>12</sup> Clinicians may endoscopically inject pharmacological agents into a urethral stricture at the time of DVIU to reduce risk of stricture recurrence, although the evidence to support this approach is limited. Drug coated balloons have not been assessed in controlled clinical trials for first-time treatment of anterior urethral stricture.

**9. Surgeons may safely remove the urethral catheter within 72 hours following uncomplicated dilation or direct visual internal**

**urethrotomy. (Conditional Recommendation; Evidence Level: Grade C)**

The reported length of catheterization after dilation or DVIU is highly variable in the literature, ranging from 1 to 8 days.<sup>10,12-14</sup> There is no evidence that leaving the catheter longer than 72 hours improves safety or outcome, and catheters may be removed after 24-72 hours. Catheters may be left in longer for patient convenience or if in the surgeon's judgment early removal will increase the risk of complications.

**10. In patients who are not candidates for urethroplasty, clinicians may recommend self-catheterization after direct visual internal urethrotomy to maintain temporary urethral patency. (Conditional Recommendation; Evidence Level: Grade C)**

Varying self-catheterization schedules after DVIU, ranging from daily to weekly, have demonstrated that stricture recurrence rates were significantly lower among patients performing self-catheterization.<sup>13</sup> Specifically, self-catheterization for greater than 4 months after DVIU reduced recurrence rates compared to performing self-catheterization for less than 3 months.<sup>15</sup>

**11a. Surgeons should offer urethroplasty, instead of repeated endoscopic management, for recurrent anterior urethral strictures following failed dilation or direct visual internal urethrotomy. (Moderate Recommendation; Evidence Level: Grade C)**

**11b. Surgeons may perform urethral dilation, or direct visual internal urethrotomy, combined with drug-coated balloons, for recurrent bulbar urethral strictures <3cm in length. (Conditional Recommendation; Evidence Level: Grade B)**

Urethral strictures that have been previously treated with dilation or DVIU are unlikely to be successfully treated with another endoscopic procedure,<sup>12</sup> with failure rates of >80%.<sup>16</sup> Repeated endoscopic treatment may cause longer strictures and may increase the complexity of subsequent urethroplasty.<sup>17</sup> In patients who are unable to undergo, or who prefer to avoid, urethroplasty, repeated endoscopic procedures, or intermittent self-catheterization may be considered as palliative measures.

The OPEN<sup>18</sup> and ROBUST III<sup>19</sup> trials provide insights into the evolving role of endoscopic management in recurrent bulbar urethral stricture. The OPEN multicenter RCT<sup>18</sup> used patient reported voiding symptoms as the primary outcome comparing endoscopic urethrotomy versus open urethroplasty in men with recurrent bulbar urethral stricture <2cm in length. There was not a statistically significant difference in urethral stricture specific patient reported measures between the 2 groups over the 24-month study period. Participants who underwent urethroplasty were at a