

Supplementary Table 2: Definitions of urethral trauma cited in analysed articles.

Definition
'This measure alone does not seem to prevent urethral irritation and trauma in the long term. Urethral stricture and false passage were the most common and occurred in the proximal urethra' <sup>54</sup>
'Urethritis and urethral stricture formation represent severe degrees of urethral trauma and their sequelae' <sup>16</sup>
'Urethral trauma was evaluated by urethral cell count on the surface of each catheter used on the last day of each study period' <sup>56</sup>
'Several indirect approaches have been used to assess urethral trauma caused by intermittent catheterization. One of these is measuring catheter withdrawal friction force. If a catheter exerts a high level of friction on the urethral wall, it is assumed that damage to the epithelium will also be increased with long-term use. Another way of assessing the degree of urethral damage is to analyse the abrasion of epithelial cells by performing urethral cytology, or to count epithelial cells on the surface of used catheters. Furthermore, haematuria is often used as a parameter for evaluating the degree of urethral trauma' <sup>30</sup>
'With regard to urethral microtrauma, as determined by the presence of haematuria' <sup>35</sup>
'Urethral trauma can occur as a result of transurethral intervention', 'rushing IC may cause pain, trauma and loss of confidence' <sup>36</sup>
'Traumatic UC was defined as a physician requesting a urological consultation after difficult/failed catheter placement and at least 1 of the conditions of hematuria, blood at the urethral meatus, perineal/urethral pain, cystoscopic evidence of urethral trauma and retrograde/antegrade urethrogram demonstrating urethral trauma' <sup>28</sup>
'Measured the number of epithelial cells after catheter withdrawal as an indicator for urethral friction and trauma' <sup>41</sup>
'Urethral trauma can occur with or without the presence of haematuria and is associated with an increased risk of UTI' <sup>42</sup>
'(...) gross (macroscopic) haematuria or visible bleeding to represent urethral trauma' <sup>51</sup>
'Urethral trauma occurs by the friction of the badly lubricated catheter, against the urethral mucosa and is characterized by urethral pain and/or bleeding. Its use is usually associated with increased catheter friction against the urethral mucosa, and consequently, increased risk of urethral trauma' <sup>46</sup>
'Urethral trauma, usually evaluated by haematuria, has also been reported and shown to affect the risk of UTI. Haematuria is an acute form of urethral trauma, and trauma to the urethral mucosa can lead to long-term complications such as urethral stricture, which was rarely reported in most trials' <sup>13</sup>
'Generally, gross hematuria is used as an indicator to estimate urethral trauma. Innovatively, our study assessed urethral microtrauma using microscopic hematuria' <sup>52</sup>
'Decreased friction should translate into decreased trauma, thereby, decreasing the stricture rate, improving patient satisfaction and perhaps decreasing the rate of urinary tract infection' <sup>22</sup>