Urinary Tract Infection (UTI) and hydrophilic catheters

Single-use hydrophilic catheters for intermittent catheterization lower the risk for short and long term complications, including UTIs, and are a convenient and preferred choice for many patients.

Single-use hydrophilic catheters were developed in the early eighties to address long-term complications of intermittent catheterization as seen when reusing plastic catheters with add-on lubrication. As reported by Wyndaele and Maes and Perrouin-Verbé et al., the majority of complications related to intermittent catheterization occur after long-term use as a result of damage to the urethral wall from repeated catheterizations. In contrast, long-term use of hydrophilic catheters is reported to prevent urethral trauma and complications.

Several recent reports support the use of single-use hydrophilic catheters to reduce the risk of urological complications such as UTI and hematuria. For example, Li et al. conclude that use of single-use hydrophilic catheters could reduce the risk of UTI by 64% and the risk of hematuria by 43% as compared to non-hydrophilic catheters. Summarizing the literature some publications confirm this conclusion, while others claim more evidence. Very few or none conclude the opposite. Comparing UTI incidences in the literature gives further support with figures between 40%-60% reported for single-use hydrophilic catheters as compared to figures around 70%-80% for conventional catheters. Although it should be noted that studies investigating UTI incidence are compromised by the facts that different UTI definitions are used, different populations are studied, and different research perspectives are used. To facilitate comparisons standardized definitions of UTI are proposed.

To optimize compliance and to ensure long-term success of intermittent catheterization patients should be able to choose the catheters that best fit their needs and preferences. Good patient compliance is crucial to reducing risk factors for UTI, such as adequate catheterization frequency to maintain low bladder volumes. Chartier-Kastler and Denys report that many patients prefer single-use hydrophilic catheters due to their ease of use and comfort. Single-use hydrophilic catheters have also been referred to as being more convenient, making catheterization away from home easier, and by being mess-free they may contribute to good patient compliance. When a choice is available, the majority of patients prefer use of hydrophilic catheters over conventional catheters among patients practicing intermittent catheterization.