Biofilm formation on ureteral stents - Incidence, clinical impact, and prevention

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Ureteral stents are a simple, minimally invasive method of maintaining ureteral drainage to assure renal function, treat pain caused by ureteral obstruction and avoid external or visible devices. Ureteral stenting is, however, associated with a clear side-effect profile, including irritation on voiding, pain and haematuria. Complications such as stent dysfunction and clinically significant urinary tract infections are also regularly observed. Although this has not yet been thoroughly researched, it appears that biofilm formation on ureteral stents plays a key role in the associated morbidity. In this review, we summarise the current evidence and identify areas that should be further studied to reduce the morbidity associated with ureteral stenting.