Bacteriuria and colonization of double-pigtail ureteral stents: long-term experience with 237 patients.

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Abstract

We prospectively studied 266 patients with indwelling double-pigtail ureteral stents to determine the incidence of stent colonization and associated bacteriuria. A urine culture was obtained just prior to stent insertion and was repeated at the time of its removal. The stent itself was also cultured. Of the 237 evaluable patients, 71 (29.9%) developed bacteriuria. Of the 237 stents, 161 (67.9%) became colonized with microorganisms. Pseudomonas aeruginosa was the most common pathogen isolated from the urine and the stents. Stents in female patients had a higher rate of colonization than those used in males (74.4% v 66.5%). The longer the duration of stenting, the higher was the rate of colonization (58.6% for stents left for < 1 month v 75.1% for those left for > 3 months). The rate of colonization according to catheter type was as follows: C-flex 55.5%, silicone 62.6%, urethane 100%, and Urosoft 56%. Long-term ureteric stenting is associated with a high rate of bacteriuria and stent colonization. The duration of stenting and the type of stent influence the results. We recommend that patients with double-J ureteral stents who could be at risk from bacteremia be covered by appropriate antibiotics, and the stents should be kept indwelling for the shortest possible time. If a patient with a stent develops symptomatic infection, an antibiotic should be started that covers the Pseudomonas species