

CLINICAL ARTICLE SUMMARY

Early and Late Complications of Double Pigtail Ureteral Stent

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The study analyzes the early and late complications of indwelling ureteral stents. The most common complications were stent discomfort and encrustation.

ABSTRACT

Objectives: To analyze the early and late complications of indwelling ureteral stents in a series of 146 patients with nephroureteral lithiasis.

Materials and Methods: 146 patients with obstructing nephrolithiasis were treated for urinary diversion with double pigtail ureteral stent before extracorporeal shock-wave lithotripsy (ESWL) and following ureterorenoscopic treatment of lithiasis. All patients were scheduled for stent removal or replacement at specific 3 month intervals until stone-free status was achieved.

Results: Early complications during the first 4 weeks after stent insertion were stent discomfort (37.6%), irritative bladder symptoms (18.8%), hematuria (18.1%), bacteriuria (15.2%), fever > 104 degrees F (12.3%), and flank pain (25.3%); late complications included hydronephrosis (5.7%), and stent migration (9.5%), encrustation (21.6%), fragmentation (1.9%), and breakage (1.3%).

Conclusions: Ureteral stents have proven to be an invaluable tool for endourologists. Morbidity is minimal for up to three months but longer indwelling times are associated with an increasing frequency of encrustation, infections, secondary stone formation, and obstruction of the stented tract.

COLOPLAST KEY TAKEAWAYS

- The most common early complication during the first 4 weeks after stent insertion was stent discomfort (37.6%).
- Stent discomfort is the most common early complication, therefore, a stent that minimizes discomfort should be considered when selecting a stent.
- Longer indwelling times are associated with more complications. The most common late complication at 3 months after stent insertion was encrustation (21.6%).
- The frequency and extent of encrustation increases with length of indwelling time.
- Encrustation is the most common late complication, therefore, a stent that minimizes encrustation should be considered when selecting a stent.
- Coloplast silicone stents are shown to both minimize patient discomfort¹ and reduce rates of encrustation², therefore, Coloplast silicone stents should be considered as an option for addressing the most common early and late complications in patients.

1. El-Nahas et al. Self Retaining Ureteral Stents: Analysis of Factors Responsible for Patients' Discomfort. Journal of Endourology 2006 Jan; 20(1):33-7
2. Tunney et al. Comparative Assessment of Ureteral Stent Biomaterial Encrustation. Biomaterials 1996; 1541-1546

Indications

Drainage of the upper urinary tract over fistulas or ureteral obstacles (e.g. periureteral tumor). Healing of the ureter.

Warnings

Reuse of this single use product may create a potential risk to the user. Reprocessing, cleaning, disinfection, and sterilization may compromise product characteristics which in turn create an additional risk of physical harm to or infection of the patient.

Precautions

The following events have been reported although their occurrence greatly depends on medical conditions of patient: infection, encrustation, obstruction, rupture, migration, bladder irritation symptoms, pain, hematuria, erosion.

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

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