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SURGERY WORKSHOP

Office stent placement under local anesthesia is a safe and efficient procedure for the management of multiple ureteral disorders☆

A. Carrion*, M. D'Anna, M. Costa-Grau, P. Luque, E. García-Cruz, A. Franco, A. Alcaraz

Departamento de Urología, Hospital Clinic, Universidad de Barcelona, Barcelona, Spain

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KEYWORDS
Local anesthesia;
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Abstract
Objective: To assess the outcomes of ureteral stent placement under local anesthesia for the management of multiple ureteral disorders.
Methods: Retrospective study of 45 consecutive ureteral stents placed under local anesthesia from January 2015 to July 2016. Inclusion criteria were hemodynamically stable patients with urinary obstruction, urinary fistula or for prophylactic ureteral localization during surgery. Five minutes before the procedure, 10 ml of lidocaine gel and 50 ml of lidocaine solution were instilled in the bladder. A 4.8Fr ureteral stent was placed using a 15.5Fr flexible cystoscope under fluoroscopic control. Characteristics of procedures and outcomes were analyzed.
Results: A total of 45 procedures (33 placement, 12 replacements) were attempted in 37 patients, of which 40 (89%) were successful. There were 10 male (27%) and 27 female patients (73%) with a mean age of 58.6 years (±17.5). Main indications for stent placement were stones (37.8%), extrinsic ureteral compression (28.9%) and surgery ureteral localization (22.2%). The reasons for failing to complete a procedure were the inability to pass the guidewire/stent in 4 cases (8.8%) or to identify the ureteral orifice in 1 (2.2%). Postoperative complications occurred in 8 patients (17.8%) (7 Clavien I, 1 Clavien IIIa). No procedure was prematurely terminated due to pain. Statistical analysis did not find significant successful predictors. The outpatient setting provided a fourfold cost decrease.
Conclusions: Ureteral stent placement can be safely and effectively performed under local anesthesia in the office cystoscopy room. This procedure could free operating room time, reduce costs and minimize side effects of general anesthesia.

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* Corresponding author.
E-mail address: acarrionpuig@gmail.com (A. Carrion).

PALABRAS CLAVE
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La colocación de catéteres doble J con anestesia local en régimen ambulatorio es un procedimiento seguro y eficiente para el manejo de distintas patologías ureterales

Resumen
Objetivo: Evaluar los resultados de la colocación de catéteres doble J con anestesia local para el manejo de distintas patologías ureterales.
Métodos: Estudio retrospectivo de 45 cateterismos ureterales consecutivos con anestesia local desde enero de 2015 hasta julio de 2016. Se incluyeron pacientes hemodinámicamente estables con una obstrucción o fístula urinaria o para la identificación ureteral durante una cirugía abdominopélvica. Cinco minutos antes del procedimiento se instilaron 10 ml de gel-lidocaína y 50 ml de suero-lidocaína en la vejiga. Se colocaron catéteres 4,8Fr mediante un cistoscopio flexible de 15,5Fr y escopia. Se analizaron las características y resultados de los procedimientos.
Resultados: Se realizaron 45 procedimientos (33 colocaciones, 12 recambios) en 37 pacientes, de los cuales 40 (89%) fueron exitosos. Con una edad media de 58,6 años (±17,5), se intervinieron 10 hombres (27%) y 27 mujeres (73%). Las principales indicaciones fueron litiasis (37,8%), compresiones extrínsecas del uréter (28,9%) y la localización intraoperatoria ureteral (22,2%). Los intentos infructuosos fueron debidos a la incapacidad para ascender la guía/catéter en 4 casos (8,8%) o para identificar el meato ureteral en uno (2,2%). Ocho pacientes (17,8%) presentaron alguna complicación postoperatoria (7 Clavien I, uno Clavien IIIa). Ningún procedimiento se interrumpió por dolor. El análisis estadístico no encontró ningún factor predictor de éxito. El régimen ambulatorio fue 4 veces más barato.
Conclusiones: La colocación de catéteres ureterales se puede realizar de forma eficaz y segura bajo anestesia local en el gabinete de cistoscopias. Este procedimiento podría ahorrar tiempo operatorio, reducir costes y minimizar los efectos secundarios de la anestesia general.

Introduction

Ureteral stent placement has been an important therapeutic tool in the treatment of upper urinary tract obstruction since its first description in 1967.[1] It is mainly used for the management of acute obstruction due to impacted stones in the emergency setting but also for the treatment of ureteral strictures or fistulas, extrinsic compression of the ureter, as well as prophylactic ureteral localization for gynecological or colorectal surgeries.

Traditionally, ureteral stent placement has been performed with rigid cystoscopes under general anesthesia. Recent advances in technology and the development of fiberoptic flexible cystoscopes have made possible the insertion of ureteral stents through the working channel.[2] Although ureteral stent placement under local anesthesia had been previously described,[3] this method has not reached widespread acceptance within the urological community. It has been demonstrated that flexible cystoscopy is a well-tolerated procedure that can be safely performed with intraurethral lidocaine gel, with plain lubrication, or even without lubricant instillation.[4,5] The possibility of performing this procedure under local anesthesia in the outpatient clinic could free operating room time and inpatient/day-case beds, reduce costs, and minimize side effects of general anesthesia.[6]

The objective of the present study was to assess the feasibility and outcomes of office stent placement with flexible cystoscopy under local anesthesia for the urinary tract decompression in patients with stones, extrinsic compression of the ureter, ureteral fistulas and strictures, or for abdominopelvic surgery ureter localization.

Materials & methods

A retrospective revision of 45 consecutive ureteral stents placed under local anesthesia in the outpatient clinic from January 2015 to July 2016 was conducted. The study was done in accordance with the Helsinki Declaration. The procedures were performed by one senior urologist. Inclusion criteria were hemodynamically stable patients with the ability to cooperate during the procedure and affected by upper urinary tract obstruction (stone, ureteropelvic junction (UPJ) obstruction, ureteral stricture, extrinsic compression), urinary leakage from the ureter or for ureteral localization during an abdominopelvic surgery. Written informed surgical consent including information about the potential need for intervention in the operating room (OR) was obtained.

Stent placement was performed in the office cystoscopy room. All patients received intravenous antibiotic prophylaxis at the beginning of the procedure. Blood pressure, pulse, and oxygen saturation were continuously monitored. The patient was placed in the supine position. After cleaning the external genitalia with iodine solution, 10 ml of 2% lidocaine gel were introduced into the urethra. Afterwards, 50 ml of 2% lidocaine solution were left in the bladder for 5 minutes using a 14Fr Nelaton catheter (Speedicath®). A 15.5Fr flexible cystoscope (Olympus® CYF-4) was advanced with irrigation pressure. The urinary tract was previously