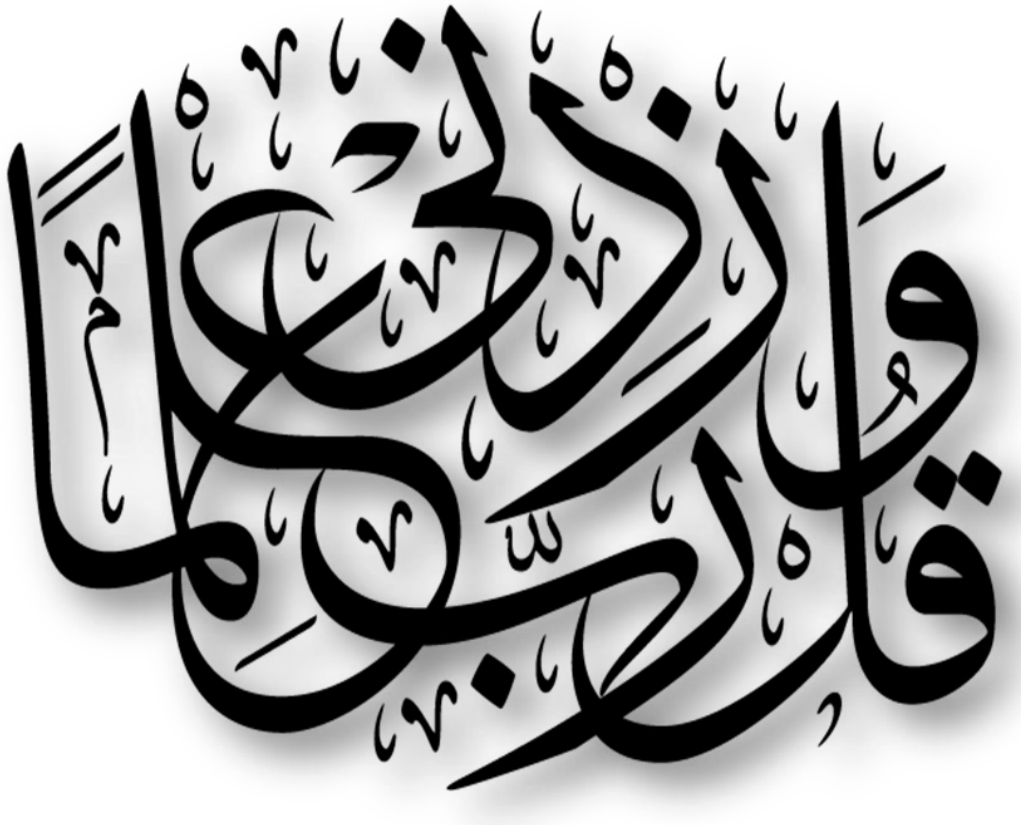

بسم الله الرحمن الرحيم


وقل رب زدني علما

Current Status of Ureteroscopic Management of stones at Urology department- Kasr El-Aini hospital

Cairo University

This thesis is submitted for partial fulfillment of master degree in Urology

By

Abdel-Karim Ali Mansour Ghaleb

M.B.B.Ch.

Supervised by

Prof.Dr. Omar M. Abdel-Razzak

Professor of Urology

Faculty of Medicine – Cairo University

Prof. Dr. Khaled Mursi Hammoud

Professor of Urology

Faculty of Medicine – Cairo University

Dr. Mohammed El-Sheemy

Lecturer of Urology Faculty of Medicine – Cairo University

Faculty of Medicine

Cairo University

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Dedication

To my family, especially my Parents for their encouragement, patience and assistance to me over years. And to my beloved wife, to my children Waseem and Dina.

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List of Abbreviations

AUA	American Urological Association
URS	Ureterorenoscopy
PCN	Percutaneous nephrostomy
CBC	Complete blood picture
BT	Bleeding time
BPH	Benign prostatic hyperplasia
PTT	partial thromboplastin time
U/S	Abdominal ultrasonography
UO	ureteral orifice
KUB	Plain X-ray
IVP	Intravenous Pyelography
C.T	Computed Tomography
NCSCT	Non-Contrast Spiral Computed Tomography
Fr	French
F_URS	Flexible ureteroscopy
SR_URS.	Semirigid ureteroscopy
GW	Guidewires
PTFE	polytetrafluoroethylene
SGW	Straight Guidewire
HN	Hydrophilic Nitinol
PL	Pneumatic lithotripsy
DJ	Double-J catheter
LL	Laser lithotripsy
KUB	Kidney, Ureter and bladder

PUJ	Uretropelvic Junction
ESWL	Extracorporeal Shockwave Lithotripsy
AUA	American Urological Association
DFU	Digital Flexible Ureterorenoscope
UUT	Upper Urinary Tract
UVJ	Ureterovesical junction
Rt	Right
Lt	Lift
1st	First
2nd	Second
I.V	Intravenous
I.M	Intramuscular
Y	Year

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Abstract

This prospective study aimed to evaluate the current status of ureteroscopic management of stones in the term of efficacy, safety, operative procedure and early postoperative complications.Ninty five ureteroscopes were performed on 90 patients using pneumatic or laser lithotripsy, as well as both semirigid and flexible ureteroscopes.

The overall success rate was 83.2% after 2nd session and was 94.7%, 76.9%, 70%, 50% and 66.7% in the lower, middle, upper ureter, renal pelvis and lower calyx respectively. The failure rate was 16.8% after 2nd session and was due to stone migration in 7 (7.4%) cases, access failure in 7 cases (7.4%) and equipment failure in 5 patients (5.3%). The results of flexible ureteroscopy showed that more experience must be conducted to younger urologists to avoid complications especially equipment failure during the management of lower calyceal stones. The extravasation was significantly higher among flexible ureteroscopy group (50%), in cases with stone size 15.1-20 mm (33.3 %), in cases with lower calyceal (33.3%) and renal pelvic stones (16.75%).Ten cases with upper ureteric stone were successfully treated using semirigid URS with 2 cases stone migration. The operative time was significantly longer in cases using laser lithotripsy (89 min) as compared to pneumatic lithotripsy (77 min) but without any difference in success or complications.

Key words: Urinary tract stones, ureteroscopy, intracorporeal lithotripsy, complications.

Introduction

The trend in medicine continues to be toward non operative or minimally invasive endoscopic procedures replace open surgical procedures. As a part of this increasing trend toward non operative therapy, there has been a steady increase of the number of endoscopic procedures performed within the upper urinary tract **(Huffman, 1998)**

Advances in endoscopic technology have led to a revolution in the management of upper tract pathology. The development of semirigid, fiberoptic, and actively deflectable, flexible ureteroscopes has allowed urologists to gain access to all areas of the collecting system. **(Leone et al, 2010).**

Recently, Gyrus ACMI introduced the first totally digital flexible ureterorenoscope (DFU) system. The major advantage of this device is imaging: Better resolution, fidelity, and quality. Contrary to conventional flexible URS, image resolution is not delivered by fibers; also, a camera at the tip of the ureterorenoscope provides fully digital image capture giving an 80-degree field of view, automatic image focus, and zoom up to 150%, **Binbay et al, (2010).**

Duration of pediatric ureteroscopy should be short, and warm irrigation fluids should be used to avoid complications, and there is no need for dilation of the intramural ureter before each ureteroscopy. When dilation is required it should be done only to the smallest size that will allow introduction of the ureteroscope. Some reports suggested vesicoureteral reflux (11% to 17%) as a late complication when a large-caliber ureteroscope is used. **Basiri et al (2008).**