

Urological Association of Uttar Pradesh

# **UAU Newsletter**

August 2016

Website: www.uauonline.in Email: office.uau@gmail.com

# President's Message

Respected seniors and friends,

Greetings from UAU !!! The month of July saw some refreshing by good rains in all quarters of state and it was quite relieving after a scorching summer. There has been good academic activity in the last week again at Dr. R.M.L. Hospital in New Delhi as a part of North zone midterm CUE and workshop (Perineocon) which was well attended by members of UAU. The large attendance in workshop shows that members of our organisation work hard to learn and share more and more for better care in their respective towns which is a healthy sign. The month of August is the Independence month and we should try to break all shackles to treat Urological ailments at a affordable price to common men.



There has been good response to attend WCE 2016 to be held in Cape Town in the month of November. I received a lot of queries not only from our states but also from all over India. Those desirous of attending the meet can register (both members and non members of Endourological society) at discounted charges before 22<sup>nd</sup> August which is the last date. A mail shall be again forwarded to all members in this regards. In case, if one does not receive it, one may contact the undersigned.

We have not yet received many applications for starting Centres of Excellence, the proposed guidelines of which are finally being published in this issue of Newsletter. It is still open for discussion and amendments before we finally incorporate it as our final guideline. I reiterate you all to go through the proposed guidelines so that we may finalise it and request all senior members and Institutes to propose their centres as **Centre of Excellence** both for training Consultants and Para medical staff.

I am thrilled to announce that one of our senior members Dr. Dilip Chaurasia is going to organise a workshop on Stone disease on 11<sup>th</sup> September at Allahabad. I extend my personal invitation to all members to attend it and share their expertise in this workshop. I also request all members to share the events organised by them in their cities so that the youngsters get an initiative to do more activities.

The month of September is celebrated as World Prostate Month and I request all members to spare at least one day in doing some activity under the banner of UAU for spreading the message of Prostate Cancer awareness program. The activity could be in form of camp, public lecture, surgeries, CME for general practitioners, workshops or distribution of pamphlets and medicines to the elderly patients. We would be glad to publish the messages from all quarters in the month of October from all cities.

The **Service Cell & Medico legal cell** has been created and members are requested to use their services for the betterment. The membership drive is still on and many members have contributed by enrolling new members from their cities. A focus should also be made to enrol associate members who are general surgeons with interest in Urology.

Long live UAU.

Jai Hind!!

Dr. Vinod Kr. Mishra, President UAU MBBS, MS (Surgery), MCh (Urology) FIMSA, FICS Kanpur Urology Center, Mobile: 09839068697

# Hon. Secretary's Message

## Wish you All A VERY HAPPY INDEPENDENCE DAY

Hope you must all be enjoying the rains, bringing a much awaited relief from the scorching sun. The academic session takes a jumpstart from next month when we have a workshop at Allahabad being organized by Dr. Dilip Chaurasia. It is a one day workshop on 11th September 2016 and I call upon everybody to take part in it.

The service cell and medicolegal cell has been started and any member having any issues related to service of equipments or medicolegal issues can contact the two co-coordinators of each cell. The names & addresses of the co-coordinators are mentioned in the newsletter.



I call you upon any member interested in holding any wokshop, CME or camps under the banner of UAU to please contact the undersigned for any possible help or suggestion.

World conference of Endourology is in Capetown, South Africa. Concessional registration is on and it would be good to participate in large numbers to have an academic upgradation.

We are such a strong body of urologist with vast experiences & so I suggest we share some of our experiences in the form of articles & case reports in the newsletter.

Dr. Madhu Agrawal conducted a symposium on PCNL and a guest lecture on mini PCNL during international conference on Urolithiasis in Chiba, Japan. Hearty congratulations to Dr. Madhu for this achievement.

Dr. Salil Tandon, our Andrologist colleague from Lucknow deserves lots of appreciation for UP Govt. Science & Technology award he received from the chief minister.

Once again, I request all my colleagues to actively take part in the organisation to take it forward.

Dr Neeraj K Agrawal Hon. Secretary UAU M.S. M.Ch (Urology), MBA (Healthcare Servics) Neeraj Life Care & Stone Centre, Bareilly Mobile: 9837057929

Legal and Service Cells have been formed for UAU Members. Dr Anil Elhence (Email: anil@elhence.com, Mobile No.: 9837031323) & Dr Pawan Jindal (Email: <u>pkjindaldr@yahoo.co.in</u>, Mobile No.: 9415224411) have agreed as nodal officers for Service Cell & Dr Dilip Chaurasia (Email: <u>dilipchaurasia@yahoo.com</u>, Mobile No.: 9415309456) along with Dr Sanjay Goel (Email: <u>drsanjayuro@yahoo.com</u>, Mobile No.: 9837348964) will look after the Legal Cell. Members can consult them & seek their guidance in the matters related to service of equipments and medicolegal cases.

# UAU Executive Council

**President** Dr V K Mishra, Kanpur Email: <u>mishravk2k@hotmail.com</u>

**President Elect** Dr U S Dwivedi, Varanasi Email: <u>udaishankarbhu@gmail.com</u>

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Hon. Secretary Dr Neeraj Agarwal, Bareilly Email: drnkabr2@gmail.com

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Dr Sameer Trivedi, Varanasi Email: <u>drsameertrivedi@gmail.com</u>

Dr Dilip Chaurasia, Allahabad Email: <u>dilipchaurasia@yahoo.com</u>

Dr S N Sankhwar, Lucknow Email: <u>sankhwarsn</u> sn@yahoo.com

Dr Apul Goel, Lucknow Email: drapul.goel@gmail.com

# Minimally-invasive PCNL (MIP): Current Perspectives

## Dr (Prof) Madhu Sudan Agrawal

MS, MNAMS, MCh (Urology) Head, Department of Urology & Centre for Minimally-Invasive Endourology, Global Rainbow Healthcare, Agra Ex- Professor, S. N. Medical College & Hospital, Agra, India dr.madhu.agra@gmail.com

## Introduction:

Management of nephrolithiasis witnessed a revolution in the 1980's due to the advent of shock-wave lithotripsy (Chaussey, 1980) and percutaneous nephrolithotomy (Fernstrom and Johannson, 1976; Smith, Alken, Marberger, Wickham, 1980-84). The success of these new revolutionary techniques can be gauged by the fact that open surgery for kidney stones has now been practically relegated to a thing of the pastin most well-equipped Urology centers in the world. Today there are several minimally-invasive treatment options available for removal of renal calculi, including Extracorporeal Shock Wave Lithotripsy (ESWL), the Percutaneous Nephro Lithotripsy (PCNL) and Retrograde Intra-renal Surgery (RIRS).

Choosing an appropriate treatment necessitates a balance between stone clearance and morbidity related to the procedure. ESWL is a low-risk procedure, but has a high re-treatment and ancillary procedure rate, and even then, often leads to persistent residual fragments. Retrograde intra-renal surgery (RIRS) can minimize the risks associated with bleeding and renal parenchymal or visceral injury, but sometimes the complexity of pelvi-caliceal anatomy may impact its success rate. Frequent need for stenting pre- or post- procedure, relatively high cost of disposables, and limited life of the flexible ureteroscope may also act as limiting factors in its application, especially in socio-economic settings of developing countries. In addition, the overall stone-free rates of RIRS are not very significantly different from ESWL.

Percutaneous nephrolithotripsy (PCNL) is based on the creation of a direct percutaneous renal access to the pelvi-calyceal system of the kidney, followed by fragmentation and removal of the stone. It has been well established by now that PCNL can achieve a higher stone-free rate over a shorter treatment period in most patients as compared to other modalities. In today's time, when post-operative CT scan is considered the standard method of confirming stone clearance, no other procedure can match the primary stone-free rates of PCNL. However, the biggest limitation of PCNL is its relatively higher morbidity, including complications like bleeding and renal injury. Since there is now enough evidence suggesting that decreasing the tract size for PCNL could decrease bleeding and morbidity, recent efforts to decrease the complications of PCNL have focused on reducing access size, leading to the development of several 'Minimally-invasive' percutaneous approaches.

'Minimally-invasive PCNL' (MIP), also previously referred to as 'Mini-PCNL', essentially signifies use of nephroscope and Amplatz sheaths of smaller caliber as compared to the conventional PCNL, where nephroscopes of 19-26 F are used with Amplatz sheaths of 24-30 F sizes. The popularity of Mini-PCNL started with the nephroscope of 12 F size (now available as MIP-M), with Amplatz sheath size being reduced to 15-18 F. Reducing the sheath size from 30 F to 15 F effectively reduces the cross-sectional surface area of the tract to one-fourth, thereby significantly reducing the tissue trauma as well as the risk of bleeding-related complications. With the success and popularity of Mini-PCNL, there has been development of further miniaturization in the form of addition of MIP S/XS nephroscope from Storz, which has 7.5F caliber, which can be used with Amplatz sheath sizes of 11 and 8.5 F (the MIP-S & MIP-XS respectively). This has allowed the tract size to be reduced further, making the procedure even more minimally-invasive.

### Indications:

Minimally-invasive PCNL is technically feasible, safe, and efficacious alternative for small volume renal calculus disease with an advantage of high stone-free rates and lower complication rates. This procedure offers an alternative to ESWL and RIRS for the management of kidney stones in the smaller (upto 1.5 - 2.0 cm) range. The indications for this minimally invasive PCNL approach are moderate-sized stones as an alternative to ESWL or RIRS, lower pole stones which are not amenable to RIRS, diverticular renal stones, and stones refractory to ESWL. The choice of sheath size will depend upon the stone size, and to some extent on the stone density. In our experience MIP XS is suitable for stones  $\leq 1$  cm, MIP S for 1.0-1.5, whereas MIP M

is best if it is a stone in 1.5-2.0 cm range. If the stone is >1000 Hounsefield Units in density on CT scan, or if it is found to be hard to fragment intra-operatively, a larger sheath is suitable even for a correspondingly smaller stone.

## Procedure:

A detailed medical history, physical examination, urinalysis, urine culture, complete blood count, serum biochemistry, coagulation test, kidney urinary bladder X-ray (KUB), renal ultrasonography (US), and intravenous urography (IVU) or computed tomography (CT) are performed on all patients. Patients who have positive urine cultures are treated with appropriate antibiotics pre-operatively.

The basic steps of MIP remain the same as the conventional PCNL. The procedure is done under general anesthesia, but can also be done under epidural or spinal anesthesia. After retrograde ureteric catheterization with a 5 or 6 Fr open-ended ureteric catheter, the patient is placed prone under a C-arm image intensifier. The initial puncture is done using 18-gauge puncture needle under fluoroscopic and ultrasonic guidance through the flank into the desired calyx. A nitinol core hydrophilic guide wire of .035 or .038 size is passed down the pelvi-caliceal system through the needle, and the tract is dilated by passing a Teflon or metal dilator over the guide wire. Unlike conventional PCNL, only single-step dilatation is required in most cases. Dilatation proceeds under fluoroscopic control and the Amplatz sheath is passed over the dilator, to provide direct access to the collecting system. The nephroscope is passed through the sheath to visualize the inside of the collecting system.

The calculus is then fragmented by preferably holmium-YAG laser using a 365 micron end-firing fiber with the settings of 10– 50 W under direct visualization. If preferential 'fragmentation' mode is desired, the energy settings of the laser are chosen as high power and low frequency, whereas low power and high frequency results in 'dusting' mode. The maintenance of the vision and irrigation is provided by a pulsed irrigation pump (Uromat) controlled by the surgeon. One additional feature of minimally-invasive PCNLis spontaneous expulsion of stone fragments through the sheath as they are broken up, under influence of the turbulence produced by the irrigation fluid, as opposed to the conventional PCNL, where each fragment requires to be manually extracted using a forceps. The MIP M and MIP S systems allow free drainage of irrigation fluid through the Amplatz sheath around the nephroscope, thereby maintaining a high-flow and low-pressure system. The MIP XS system requires a suction pump (a component of the Uromat) to be attached to the ureteric catheter in addition, for providing additional drainage and to keep the intra-renal pressure low.

At the end of the procedure, the collecting system is examined for any remaining fragments with combined nephroscopy and fluoroscopy. As a rule, these MIP procedures are done in a 'tubeless' manner, as no nephrostomy tube is routinely placed except for those requiring a second-look nephroscopy. In majority of patients double-J stent is also not required, except when there is edema or obstruction at pelvi-ureteric junction or ureter. Only the ureteric catheter which was placed at the beginning of the procedure is left indwelling overnight, to be removed along with the Foley catheter before discharge from the hospital. Thus these procedures are mostly truly 'tubeless', ie, without a nephrostomy tube or double-J stent.

The comparatively smaller tract in minimally-invasive PCNL, as opposed to standard PCNL, allows the procedure to be significantly less painful in the post-operative period, with significantly less tissue trauma and faster recovery. Majority of the patients can be discharged from the hospital on the first post-operative day, with 24 hours or less hospitalization.

Post-operative stone clearance can be confirmed by KUB X-ray, or better still, NCCT in all patients before discharge from hospital on postoperative day 1. The composition of the stones of all patients is analyzed by infrared spectroscopy (FTIR), and appropriate long term prophylaxis advised accordingly.

## Advantages:

- As mentioned, the biggest USP of this procedure is its minimal invasiveness, leading to reduced post-operative pain and need for analgesia, along with shorter period of convalescence as compared to conventional PCNL.
- With proper case selection, the operating time can be kept quite short, comparable with conventional PCNL. It is usually shorter than flexible ureteroscopy (RIRS) for a comparable sized stone. The entire procedure is finished invariably in a single sitting.
- Due to the use of a small caliber nephroscope allowing free flow of irrigation fluid, the intra-renal pressure is kept low during the operative procedure, thus avoiding hazards associated with high intra-renal pressure as generated in procedures like RIRS, eg. extravasation, fluid absorption, post-operative pyrexia, flank pain, etc.

- The advantages of using Laser for stone fragmentation are many. Laser lithotripsy is very efficient in fragmenting stones of all varieties and densities with equal ease, in a controlled fashion, without pushing the stone and causing stone migration. The thin laser fiber is ideally suited to use through the miniature endoscopic instruments.
- The vast majority of these cases are done truly and completely 'tubeless', with no nephrostomy tube or DJ-stent left indwelling. This further reduces the post-operative pain and discomfort and eliminates the need for a second procedure for stent removal.
- The hospital stay of the patients is shorter than conventional PCNL, the average hospital stay being less than 24 hours. These procedures can often be done as day-care cases. Readmission rates for secondary procedures are very low.
- The risk of bleeding, both intra-operatively and post-operatively, is significantly minimized. Blood transfusion is almost never required. The much-dreaded complication of arterio-venous fistula formation and recurrent secondary hemorrhage is also significantly reduced, if not completely eliminated.
- The cost of the procedure, including the cost of disposables and maintenance of the equipment is quite low, as opposed to procedures like RIRS, which require high expenditure on disposables, accessories and cost of frequent repair/ replacement of equipment.

However, the limits of the minimally-invasive PCNL are that the operative time taken to fragment large volume stones will be much longer than that of the standard PCNL. Thus standard PCNL is still required for large stone burden cases, especially for stones larger than 2 cm, multiple or staghorn stones.

## Conclusion:

Minimally-invasive PCNL (MIP) expands the treatment range for percutaneous removal of kidney stones. Compared with ESWL and RIRS, this approach offers higher stone-free rates with low complication rates. Prospective randomized trials are ongoing to compare these modalities in the management of small and medium sized renal lithiasis, to establish the true place of each of these modalities in nephrolithiasis.

MIP is possibly the only procedure for kidney stone where the patient can routinely leave the hospital within 24 hours after treatment completely stone-free and tube-free, something which cannot be claimed after other minimally invasive options like ESWL or RIRS.

### Fig 1: Mini-PCNL Equipment (12F Nephroscope and 15F Amplatz)



Fig 2: MIP XS Equipment (7.5F Nephroscope and 8.5 & 11F Amplatz)



Fig 2: Mini-PCNL steps



Fig 3: Spontaneous expulsion of fragments







Fig 4: Comparison of Standard Amplatz Sheath (30F), Mini-PCNL Sheath (15F) and MIP XS Sheath (8.5F)

# **Important** Notification

This year the UAU Council proposed and passed a resolution in regards to the training of Consultants and full members for specialized procedures and requested our members to volunteer for it. There is a need for getting our paramedical staff also to be updated in this regards.

We request you to kindly suggest some guidelines so that the task is completed and we select centres immediately so that more members are benefited.

We also request you to volunteer to train and teach more of our colleagues so that the technique is propagated and practiced by all for the betterment of patients.

Applications are invited from members of UAU for conduct of CMEs & Workshops under the aegis if UAU. For details please contact: **Dr. V. K. Mishra** at <u>mishravk2k@hotmail.com</u> or **9839068697** 

**UACON 2017** UAUCON 2017, Bareilly - 25th & 26th March 2017



# Proposed Guidelines for establishing the Centre of Excellence

Guidelines for Centre:

- 1. The Centre should be high volume performing at least 10 surgeries in a week.
- 2. It should be well equipped with good audio visual system and recording facility.
- 3. A trainer/simulator is mandatory especially for laparoscopy and other high tec surgeries.
- 4. The course duration should be for a maximum of 7 days and the number of participants should not exceed four at a time.

5. The Centre shall submit the curriculum of course to the UAU office and a copy of the same to the candidates. The course should include details of anatomy, physiology instrumentation working & update of the procedure so that at the end of course the candidate can take independent decisions to manage and operate the patient.

6. There should be proper arrangements for the attendees stay and other hospitalities.

7. There should be a visit of UAU certified observer during the course to supervise and assess the type of training being imparted during or at the end of course.

- 8. The Centre should have reference library facility.
- 9. It should have master video facility for the trainee with dedicated computer.
- 10. It will maintain a record of all trainees and submit to the Secretariat for endorsement.

11. The Course Certificate should bear the signatures of Principal Operator, Observer and President of UAU and it shall be awarded in Annual UAU meet of the same year.

12. There shall be disclosure by the Centre if the activity is being funded by any other sources especially from the pharma industry.

13. The Centre will pay a token registration fee of Rs. 5000/- to the UAU which will be renewed on yearly basis with the renewal fee being Rs. 2500/ only.

Guidelines for the Candidates:

- 1. The Candidates should be full member of UAU.
- 2. The trainee should be either M.Ch. or DNB in Urology from recognized Institute.
- 3. The trainee will maintain all decorum of surgical ethics and shall not indulge in any misconduct both with the Guide as well as UAU officials both during and after the completion of course.
- 4. This training is being imparted with an idea that the trainee shall maintain high standard of care to patients in future and shall do initial work with a mentor so that the skill & technique do not compromise the results of patient care.
- 5. This training is not a degree or diploma course to practise but it shall be for skill enhancement and to undergo update and exposure to newer technology in Urology.
- 6. During the training the candidates have to arrange his to and fro travel, fooding and lodging but the Institute/Centre will provide all help in this process.

Please Note:

All suggestions may be sent to Dr. V. K. Mishra at the earliest so that necessary amendments can be made and the same can be incorporated for identifying the proposed Centres.

# Congratulations

UAU is pleased inform you that one of our esteemed member, Dr. Salil Tandon has being awarded "Uttar Pradesh Government-Science and Technology Award-VIGYAN RATAN SAMMAN 2013-14". The function was held at Chief Minister's Residence Lucknow on 23rd July 2016 and the award was conferred to him by Honourable Chief Minister Shri Akhilesh Yadav Ji.

This awarded is give by the U.P. government to two scientists from the entire state every year for the outstanding contribution in the field of science including medical. It has been awarded to him for the work done in the field of Andrology /Reproductive Medicine.



# Important Notification - WCE 2016, Cape Jown, South Africa

#### Join us in Cape Town, South Africa for WCE 2016!

The Endourological Society (ES) would like to formally extend an invitation and a reduced registration rate of \$450 USD, which includes the 14% VAT, to all members of the Urological Society of India to the 34th World Congress of Endourology. The Congress will be held for November 9-12, 2016 at the Cape Town International Center in Cape Town, South Africa.

Please find the link for Registration for the Conference: www.compusystems.com/servlet/ar?evt\_uid=234&siteCode=ATT

We look forward to seeing you in Cape Town!

Tadashi Matsuda, M.D. President Margaret Pearle, M.D. Secretary General John Denstedt, M.D. Treasurer

# For UAU Members Only

Members are invited to give advertisement for their hospital requirements / instrumentations / vacancies etc. The next issue shall have these advertisements free of costs.

#### Contact for any detail and registration:

Dr R C Gupta 9415216359

Dr Vibhav Malaviya 9415215607

**Dr Vipul Tandon** 9415235225

# A Live Operative Workshop on Management of Renal Stones **STONECON 2016**

**Conference Secretariat** 

Dr Dilip Chaurasia Reader Niwas -6, Panna Lal Road, George Town, Allahabad -211002 Mobile - 9415309456, 9839047479, 7599448888 E-mail: dilipchaurasia@vahoo.com

**Organizing Committee** 

Patron **Dr S P Singh** Principal, MLN Medical College

**Organizing** Chairman Dr R C Gupta

Treasurer **Dr** Akhilesh

Organizing Co Chairman Dr Shabi Ahmad

**Organizing Secretary Dr Dilip Chaurasia** 

Travel Desk - To book Hotel accomodation and Travel assistance SAS Travels: 0532- 2622460, 0532- 2424619 Sujata - 9450591690, I M Tewari - 9335159993

Venue **Prof. Pritam Das Auditorium** MLN Medical College Campus Allahabad

#### Dear Friends and Colleagues,

Regards and Greetings from Sangam city, Allahabad

Allahabad a well known ancient city having High Court, A G Office, Police Head Quarter, Anand Bhawan – the birth place of Smt Indira Gandhi, Allahabad University known to be Oxford University of East needs no introduction.

It gives us immense pleasure to invite you all to attened and watch live operative open as well as high tech minimally invasive surgery on 11th Sept 2016.

The wheather in Allahabad in September remains pleasant with some humidity. It is an ideal time to visit various tourists places in and around Allahabad.







Dr R C Gupta Organizing Chairman

Dr Shabi Ahmad Organizing Co Chairman Organizing Secretary

Registration rec		
Registration upto	31 Aug	After 31Aug & Spot
UAU member	₹ 2000	₹ 3000
Non UAU member	₹ 3000	₹ 4000
PG Students *	₹ 500	₹ 1000
Accompanying Person	₹ 1000	₹ 1500
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Certificate from Head of the Department/Unit is mandatory for PG students.

Demand draft/multicity cheques must be made in favour of STONECON 2016, payable at Allahabad

#### **BANK DETAIL**

Corporation Bank C Y Chintamani Road, Allahabad Ac no. 053301601000911 IFSC Code - CORP0000533

#### **Programme At a Glance**

8 am to 9 am - Registration

#### 8:30 am to 9:30 am - Lectures on

- 1. Development of skills and surgeries for stone disease from ancient age to laser and Robotic age
- 2. Metabolic workup for recurrent stone disease and importance of stone analysis

#### 10 am to 6 pm – Live Operative Workshop

#### **Proposed Operative Procedures**

Open Pyelolithotomy	PCNL
Laproscopic Pyelolithotomy	Mini PCNL
Ureterolithotomy by Lumbotomy incision	Micro PCNL
Laproscopic Ureterolithotomy	1 URSL
Anatropic Nephrolithotomy	RIRS

7 pm onwards - Inauguration and Cultural Evening

#### **UAU COUNCIL MEMBERS**

President Dr V K Mishra, Kanpur mishravk2k@hotmail.com

President Elect Dr U S Dwivedi, Varanasi udaishankarbhu@gmail.com Imm. Past President Dr Anil Elhence, Meerut anil@elhence.com

Hon. Secretary Dr Neeraj Agarwal, Bareilly drnkabr2@gmail.com Hon. Treasurer Dr Vijay Bora, Agra

vijaybora@gmail.com

#### Members:

Dr Sanjay Goyal, Dehradun

Dr Sameer Trivedi, Varanasi Dr Dilip Chaurasia, Allahabad Dr S N Sankhwar, Lucknow Dr Apul Goel, Lucknow

Download the Registration Form from the website : www.stonecon2016.com

MBERS