



# Urological Association of Uttar Pradesh

## UUAU Newsletter

**December 2015**

**Website: [www.uauonline.in](http://www.uauonline.in) Email: [office.uau@gmail.com](mailto:office.uau@gmail.com)**

## President's Message

Dear Friends

I hope each one of you had a very enjoyable time with family and friends. Expect this year's Deepawali brought happiness and prosperity to all our members.

We now approach USICON at Hyderabad and followed by our own UAUCON in April at Kanpur. I expect the Kanpur Urologists to be fully immersed in preparations for a grand meeting and our Secretary would be making the appropriate arrangements for a scientific feast which appeals to most of our members. I would urge members to come forward with suggestions and also volunteer for taking up responsibility for various academic sessions.

The second part of the write up by Dr Anil Takvani is finally here and I hope members find it as exhaustive as part one of his write up.

Looking forward to an enthusiastic response to our 3rd annual meeting

*Anil Elhence*  
*President UAU*



## ***Hon. Secretary's Message***

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Dear Friends

Greetings to you for a happy & healthy winter season and New Year

As our academic programme for next UAUCON is in process of preparation, I request you to provide your active feedback to make it more interactive and useful for everybody. 'Kanpur Urology Club' is also working actively to make our next UAUCON a memorable one. Please make early registration to help organising team to work over logistics.

I congratulate Dr. M. S. Agrawal again for performing state of art surgery and delivering a lecture on Micro - PCNL in international conference of Urolithiasis recently held in China.

Our WhatsApp group active members are also to be congratulated for great academic discussions throughout year. Looking forward to meet you all during USICON Hyderabad in January session for forthcoming UAUCON

With Best Wishes

***Dr. A.K. Sanwal***

***Hon. Secretary, UAU***

## ***UAU Council***

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## Postnatal Management of Antenatally Detected Hydronephrosis

*Anil Takvani*

### **PRENATAL to POSTNATAL Interpretation of HN**

In this second part we will discuss about significant obstruction and how early or late to treat these conditions. The degree of AHN predicts the severity of postnatal HN. 98% of patients with APD<10 mm had mild or resolved dilation on postnatal evaluation. APD 10–20 mm corresponded to improvement in 80% or persistent moderate HN postnatally in 20% of patients. The rate of postnatal pathology increased with the degree of pelvic dilatation ranging from 12% for mild, 45% for moderate to 88% for severe HN. This relation was evident for patients of PUJ-O but not in patients of VUJ-O. (Herndon CD. Scientific World Journal 2006, Lee RS. Paediatrics. 2006,Barbosa J. Prenatal Diagn 2012). **Severity of HN in patients of UPJ-O correlates positively with postnatal HN and need for surgery and correlates negatively with spontaneous resolution.** Measurement of pelvic APD was shown to be predictive of retained renal function. Stable or decreased APD on serial imaging is predictive for retained or improved renal function. The risk of postnatal pathology increased with the degree of antenatal pelvic dilatation. ANH resolved or stabilized in 98% patients with APD<10 mm as compared to 51% with larger APD. Surgical intervention is needed in all patients with APD>40 to 50 mm.

### **Risk Categories:**

Using SFU grading and grading based on AP diameter we can classify them in various risk category which identifies group of patients likely to have renal deterioration and or are need of early intervention.

**LOW RISK:** Patients with SFU grade 1 or 2 HN or postnatal APDs <20 mm

**INTERMEDIATE RISK:** Patients with SFU grade 3 or bilateral HN or postnatal APDs 20-30 mm

**HIGH RISK:** Patients with SFU grade 4 HN or postnatal APDs >30 mm.

**While deciding on surgical intervention in patients of postnatal HN some of relevant questions are raised:**

How to confirm significant obstruction amounting to surgical correction?

Which parameter is better for insight for significant obstruction; serial USG findings or findings of diuretic renal scan?

If surgery is required question is how early?

First two questions have not been addressed clearly in the literature. There is no consensus. Those assessing with US grading, rely a lot on SFU grading and grading it into 4 grades, which is known to all of us as we discussed in previous write up. G Sindu et al 2006, in a meta analysis which is the one often referenced in most articles, mention that data extracted from 25 articles revealed that SFU grade 1 and 2 with Anteroposterior Pelvic Diameter (APPD) of <12 mm revealed overall resolution or stabilization in 98%, while SFU 3 and 4 with an APPD of >12mm revealed an overall resolution or stabilization in only 51% of Children. It means that there is a chance for spontaneous recovery in a large proportion of Grade 3 and 4 cases as well. This is one of the points raised by opponents of SFU Grading in stating that SFU grading alone may not give us the true factor on which a decision for surgical intervention can be made. But the innumerable proponents of SFU grading mention that there is no system available that can replace SFU in decision making of surgical intervention.

There are some who mention that in postnatal set up, APPD of 20 mm should be considered as the cut-off level. Any APPD more than 20 mm should be considered for surgical intervention (Gyanendra Sharma et al 2014). Onen (2007) has categorically mentioned in his alternate grading system for antenatally detected post natal hydronephrosis that the measurement of APPD at hilar level alone may lead to erroneous decision. This measurement will be low in true intrarenal pelvis but having marked pelviectasis. Classically from a long time we have classified hydronephrosis as Extrarenal (most common), Extra and Intrarenal combined and rarely purely intrarenal. Hence the concern of Onen can be appreciated.

To obviate this concern, Cost *et al.* showed in 1996 that renal longitudinal parenchymal area and renal longitudinal pelvic area could be measured on routine US studies and that renal parenchymal area correlated well with renal function on renal scans. This concept was modified by Shapiro (2008) and Venkatesan et al (2009) by introducing what they termed as Hydronephrosis index (HI). They added this score to SFU or even Onen's alternate grading system and said that this combination will give more reliability in decision making for surgical intervention. As we discussed in previous write up the score was calculated by measuring the total area of the kidney (parenchymal) involved and also measuring the area occupied by the renal pelvis intrarenally on US (longitudinal scan). The Index was calculated using the area occupied by renal pelvis intrarenally divided by Total area of the renal parenchyma multiplied by 100 to give an accurate percentage.

We are relying on Radionuclide scans for assessing the renal function and Diuretic renograms for assessing the drainage. But the interpretations of these studies are as yet operator dependent as the area of interest is marked manually on the screen before calculations are made. Recently some articles have emerged wherein a semiautomatic calculation are made and there are studies claiming superiority but they are still research tools and not available for routine use. The other aspect we give considerable importance is T half and if a value of around 20 is achieved, then it may be an indication of obstruction and needing surgical intervention. But the fallacies of this measurement have been emphasized by many workers and this value may be enhanced or diminished by several factors. Gyanendra Sharma et al (2014) have mentioned that the major pitfall in this interpretation is what has been called the "reservoir

function". When there is a dilated system, the tracer, even under the influence of Furosemide has to fill the renal pelvis before leaving the kidney, even if there is no significant impediment to urinary flow and hence may give a false functional status. We consider 40 as the lower cut-off levels in decision making as to whether surgical intervention is required. This has time again shown to be fallible and a decision made exclusively on this is not to be accepted. To improve the decision making with Radionuclide scans, two additional methods are being described though they have not yet been considered for routine use.

Two new parameters which have shown promise in differentiating an obstructed from a non obstructed system are:

Post micturition and post erect images acquired 1 h after tracer injection (Gordon et al 2011) and the cortical transit time.

Cortical Transit time as we discussed in previous write up is measurement of time taken for the isotope used to transit the parenchyma and enter the renal pelvis. In a normal kidney one expects a rapid transit with more or less homogenous kidney filling in about 2 min. A delay in this suggests obstruction. Studies have found that kidneys with delayed cortical transit times are not only at high risk of deterioration of renal function, but can also provide information as to which kidney will show functional improvement postoperatively, in the preoperative setting. Schlotmann et al (2009) have termed this study as Tissue Transit Time (TTT).

Hence with the available evaluation modes at our disposal at present, how can we decide on the need of intervention better? Since we now know that no one single option can be reliable for proper selection it is imperative that combinations will have to be considered. If these tests can be performed at the same time, there will be no escalation of costs, as is possible. USG studies should have SFU grading system or Onen's alternate grading system or AP diameter with description of rest of the kidney along with Hydronephrosis Index and APD measurements in Supine and prone positions.

When performing radionuclide scans, the fallacies will have to be noted at interpretation and not to take the values given to us at face value. The cut-off value of 40 is questionable and considerable care will have to be exercised taking this alone in decision making. The Cortical Transit time appear promising but whether this can be employed by our nuclear medicine experts will have to be seen.

Most of these modifications that have been mentioned can easily be employed and could be included in our decision making as regards on which surgical interventions may be required. Having said this, Chertin et al (2006) in a study of 16 yrs follow-up on patients with antenatally detected hydronephrosis followed postnatally and having decided non surgical management, needed surgical intervention in about 30% of these children in 4 to 5 yrs time and thus emphasizing the need for long term follow-up of those cases being treated with non surgical treatments.

Ransley et al (1985) was the first to mention that in many of these antenatally detected PUJ obstructions can be managed conservatively if there is no renal functional deterioration on sequential functional studies. They mentioned a kidney with over 40% function can be safely left alone on observation and close follow up. The follow-up studies by Ransley et al (1990) that some mature kidneys did not



completely recover their lost function after pyeloplasty. This may reflect a possible delay in relieving the PUJ obstruction surgically once the functional change is established. Hence do we decide on early intervention or not. Ramnath Subramaniam in article in 1998 opined that the improvement in renal function was the lower in the delayed pyeloplasty group than in the early pyeloplasty group. The improvement was inversely related to the AP Diameter. Cornford et al (1998) considered that early intervention is mandatory if function is less than 20%. But later studies do not entirely agree with these views and mentions that even with delayed Pyeloplasty, functional loss is seen in very few. As a result of these reports, surgery is reserved for children who become symptomatic or who have deteriorating renal function during the follow-up. Ulman, Ram Jayanti et al reported results of the initial conservative treatment of patients with severe hydronephrosis, indicating that in no patients was pyeloplasty undertaken for subjective reasons. Boris Chertin et al (2006) in an article on 'Conservative treatment of ureteropelvic junction obstruction in children with antenatal diagnosis of hydronephrosis: lessons learned after 16 years of follow-up' came out with views as regarding as to what happens to these children on conservative management. They concluded with the statement 'In contrast with previous publications by others these data show that almost 50% of children with antenatal diagnosis of UPJ obstruction in this series required surgical correction while on conservative protocol.

In conclusion we can say Conservative approach in >50 % of hydronephrosis (in 80-90% of megaureters) is possible. It is mandatory to achieve a balance between the excessive imaging and risk of surgery. Close follow-up should be applied to prevent irreversible renal deterioration

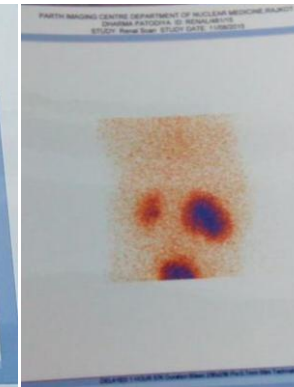
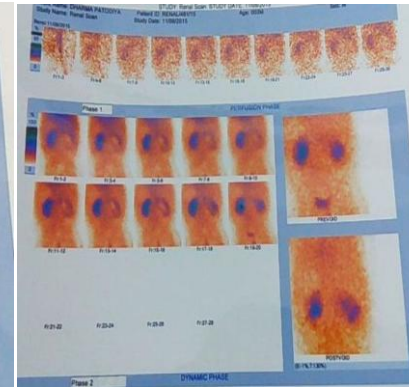
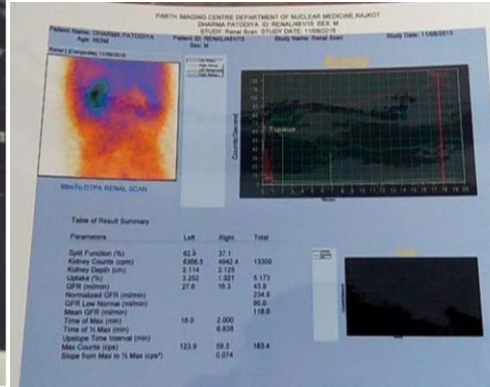
Intervention criteria based on proper mixture of:

**Symptoms & Signs**

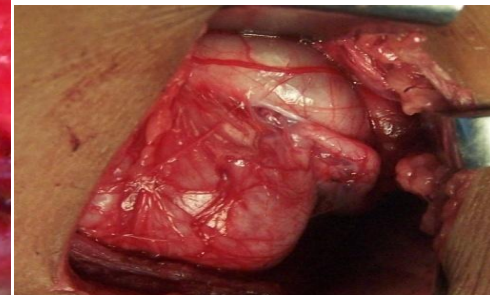
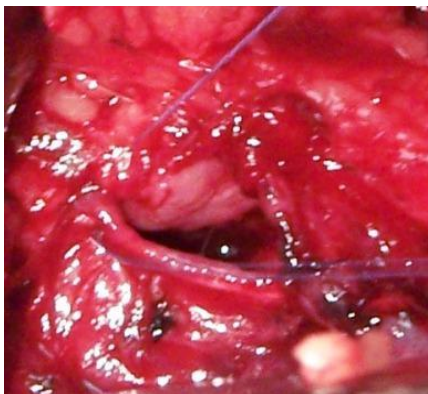
**Morphological changes in sonography**

**Function estimation on renal scintigraphy**

If we have adequate experience of pyeloplasty in infant it does not make any difference whether we operate at 2 months, 3 months or six months age. Most important thing is confirmation of diagnosis and renal damage because of UPJ-O. (AP diameter, cortical thickness, split function and obstructed drainage and infection are criteria to see for early intervention). I would prefer to put 3F splint across anatomises with nephrostomy or internal stent of 3F. 6 0 vicryl as suture material and intermittent stitches are of choice. Below given is a classical set of investigation for early intervention. Post natal USG shows increased dilatation with cortical thinning. HI was increased. Cortical transit time increased. Tracer appearance is inhomogeneous in P/C system and high rising drainage curve. This is a case of 2 months child detected with ANH.



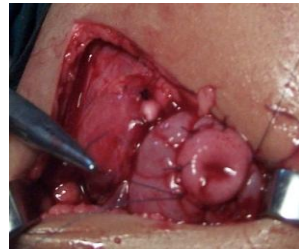
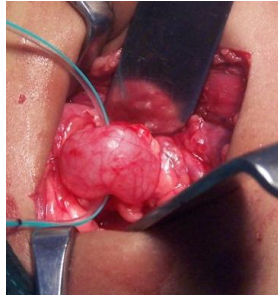
We have several kind of configurations at ureteropelvic region which requires some changes in our handling with ureteropelvic junction. We may require doing Y-V plasty if there is high insertion of ureter. There can be sail or curtain type of adhesions between pelvis and upper part of ureter. There can be issue of negotiation blade of scissors for spatulation of ureter in case of very narrow upper ureter at the uretero pelvic junction. In below set of pictures I have tried to provide examples in sequence. In open pyeloplasty in infants there are many ways available to tackle all these variations.





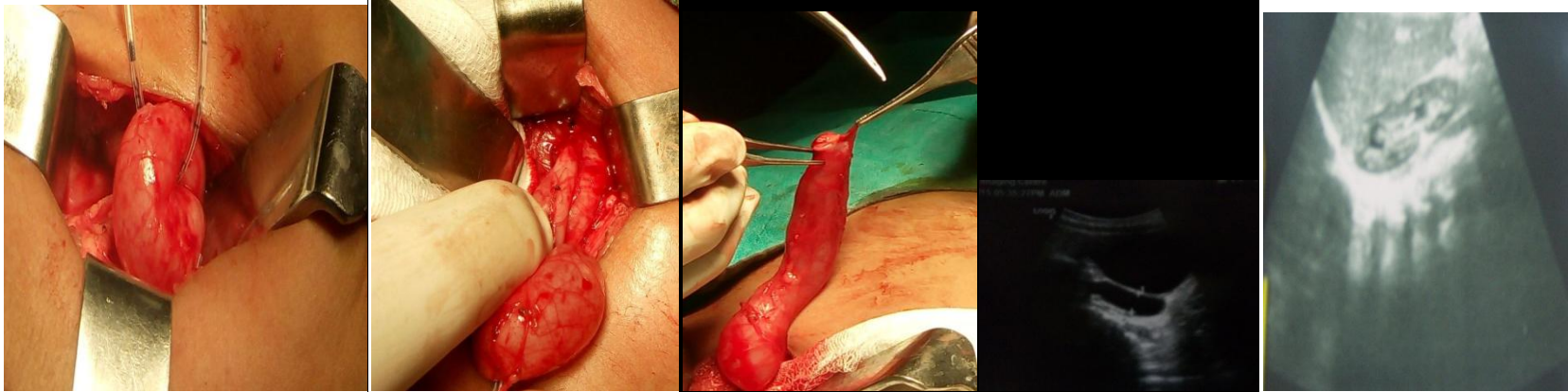
## Vesicoureteric Junction Obstruction:

### Reimplantation for VUJ Obstruction( Ob. Megaureter



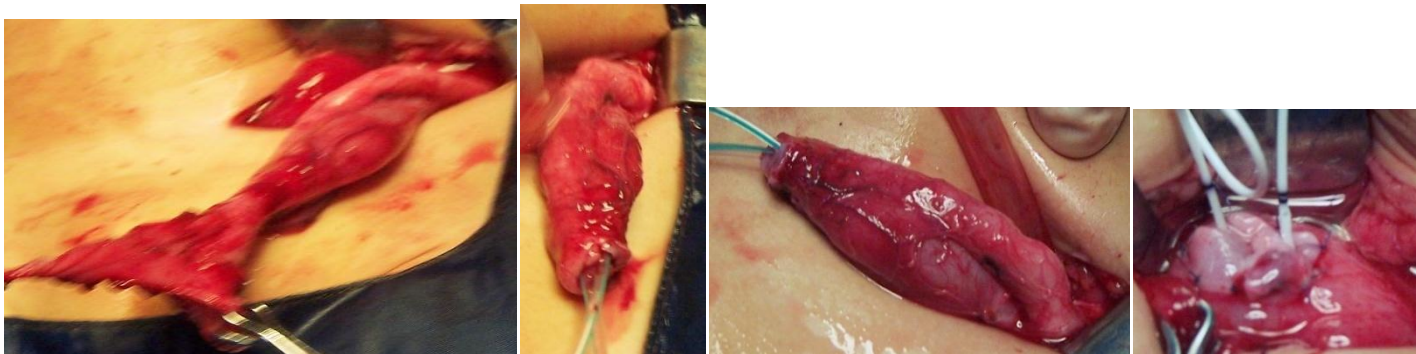
Pictures of extra and intravesical combined method of reimplantation in case of congenital obstructed megaureter or VUJ obstruction.

If the child is very small many advocates refluxing temporary reimplant on dome of bladder [J Pediatr Urol. 2014 Oct; Refluxing ureteral reimplantation: a logical method for managing neonatal UVJ obstruction.Kaefer M1,] followed by definitive non refluxing reimplant of ureter at 1 year or at letter age. But those who have experience with unilateral non refluxing reimplantation are not having an issue even in infant. Below I have provided set of pictures of purely extravesical method of reimplantation for congenital obstructed megaureter in patient of 4 months age. This patient was operated for congenital obstructed megaureter. Indications for reimplantation: Two episodes of documented febrile UTI, Presence of moderate to severe dilated system from lower end of ureter to calyces and thinning of parenchyma. DTPA scan showing accumulation and retention of isotope in delayed and post lasix studies. Extravesical dissection & reimplantation done. A good length of healthy lower ureter was available to do reimplantation with required length and breadth ratio. We can see outcome in follow up USG performed 3 months after surgery.

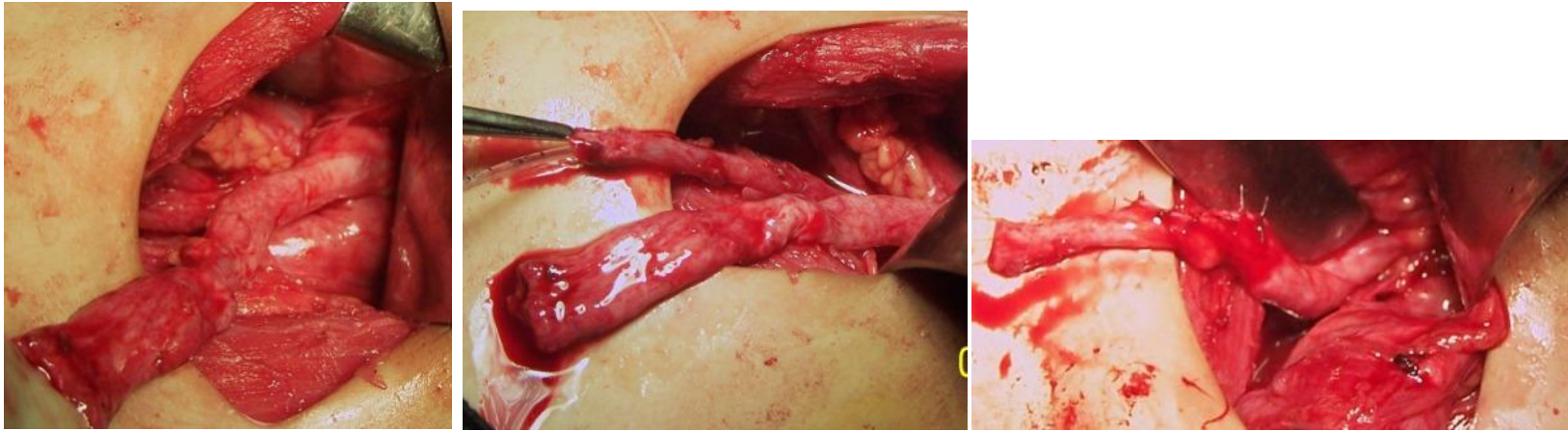


#### Ureterocele Duplex System:

We need to plicate detrusor muscle at the back of ureterocele. Without this backing reflux is very likely. We may need to taper ureter wider than 10 mm in diameter to avoid reflux. Very rarely we may need to reimplant separately if there is severe discrepancy of size and diameter. At that time we need to do all efforts to preserve or not to damage adventitia and precious vascularity of lower end. Below I have provided pictures of combined reimplantation and separate reimplant of ureters of both the moiety with tapering of upper moiety ureter after excision of ureterocele.



Case 2:



Almost all these procedures can be done by laparoscopic means or by robot assisted laparoscopic methods. But advantages in the form of ultimate outcomes are not much different. Here we have done all these cases without putting drain and patients required minimum analgesia and were discharged on 3<sup>rd</sup> or 4<sup>th</sup> post operative days. May be there is some advantage with cosmetics but it at the cost of defiling the peritoneum for most of the surgery possible completely retroperitoneal.

## ***Important Information***

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### **Call for Abstracts – UAUCON 2016**

Scientific Programme committee invites abstracts for Best Video Prize, Best Podium Paper Prize, free poster and free oral presentation from all the members.

Participants are advised to send in their abstracts not later than 29th February 2016. Abstract by authors not registered for the conference shall be rejected. The content of the abstracts in the format should be described under the headings of aims & objective, methodology, result and conclusion. The abstracts should be submitted online on the UAU Website at: [www.uauonline.in](http://www.uauonline.in). The details regarding abstract submission are also available on the website.

Scientific Programme Committee also invites all UAU members for interesting cases for clinicopathological presentation during UAUCON 2016. We also request members for suggestion for topics of debate to be conducted during the UAUCON 2016. Please send us your suggestions before 31st January 2016

### **General Body Meeting 2016**

UAUCON 2016 will be held from 9th to 10th April 2016 in Kanpur. During this conference the General body meeting will take place at 6.00 pm on 9th April 2016 in the main hall. All members are requested to attend.

### **UAU Elections**

Nominations are invited for the following Posts: a) President Elect: One b) Hon. Secretary: One c) Hon. Treasurer: One d) Council Members: Two.

Nominations are invited in the prescribed forms that can be downloaded from the UAU website.

Completed Nomination forms should be submitted before 15th February 2016 to the President-Elect, Dr. V K Mishra who is also the Returning Officer for the UAU Elections.



## News Section

### International Alliance of Urolithiasis Meeting at Guiyang, China

Dr (Prof) Madhu Agrawal was invited to the annual congress of International Alliance of Urolithiasis at Guiyang, China from 13th–15th November, 2015 to participate as a guest speaker and to give live demonstration of 'Micro-perc' surgery. Like India, Urolithiasis is a common problem in China, and the operative workshop and the scientific deliberations of the meeting were quite fruitful.

This international conference was attended by over 700 delegates, and included faculty from Europe and several Indian faculty. For the Indian delegation, the Chinese hospitality turned out to be exceptionally warm and friendly, and the overall experience of visiting China was superb. The country has certainly matched the western world technologically as well as in the field of infrastructure development.

The annual congress of International Alliance of Urolithiasis next year is going to be held in New Delhi, India, under the Organising Chairmanship of Dr SK Pal in November 2016.





## UROLOGY FOUNDATION from UK: CHARITY CYCLE TOUR in INDIA

A team of Urologists from UK, their patients and supporters, under the banner of UROLOGY FOUNDATION, visited Agra as a part of a charity mission for a 500km cycle challenge across rural Rajasthan, from Bharatpur to Jaipur, in the month of November. The team was led by two urologists from UK, Roger Kirby and Abhay Rane. The expedition started from a visit to the Tajmahal.

Members of Agra Urological Association can be seen in the picture welcoming and felicitating the leaders of the team of Cycle India.





Welcome  
to *Kanpur*



# UAUCON 2016

*3rd Urological Association  
of Uttar Pradesh Conference*

**9 - 10 April 2016**

Venue: Hotel Landmark, The Mall, Kanpur

**UAU Secretariat:**

**Dr M S Ansari**

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