# Urological Association of Uttar Pradesh

## October 2015

## Newsletter

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# President's Message

Dear Friends

I hope most of us would have enjoyed Srinagar during the North Zone USICON. There is some good news from Srinagar; the next two editions of NZCUSICON shall be in our state. Agra hosts in 2016 and Meerut has the privilege to do so in 2017. All members of UAU should strive to make these meets memorable by participating whole heartedly. During the run up to these conferences, I would appreciate if members can give suggestions to improve various aspects of the organization by writing to Dr Vijay Bora / Dr M S Agarwal and Dr Subhash Yadav and me.

This month we have an exhaustive review of Post natal Evaluation of Antenatal Hydronephrosis by Dr Anil Takvani. Dr Takvani has a special interest in Pediatric Urology and is blessed by huge clinical data. He has been kind enough to write for us and I hope this review shall be helpful to most of us.

Another bit of good news is that the technique published last month on laparoscopic repair of VVF by Dr Malikarjuna from Hyderabad has been accepted and published in Urologica Internationalis on September 26, 2015.

We have a significant number of participants in WCE at London from our state and hope to hear from them the latest in Endourology on their return.

In the meantime, Dr Sanjay Goel and Dr Vikrant Pathak are making sure that we have an academic feast in Dehradun on 24-25$^{th}$ October. I expect a large number of delegates for this meet so please hurry and register as well as book your travel and stay.

Wish you all a Happy Dusherra in advance.

Look forward to meeting most of you at Srinagar.

Thanks

**Anil Elhence**
**President UAU**
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# Hon. Secretary's Message

Dear Friends,

Greetings with Happy Festival season to all of you in advance. Once again with news letter of month of October.

I hope that you have great NZUSI conference memories. Next two NZUSI conference venues will be in Agra & Meerut, thanks to efforts put by Prof. Madhu Agarwal & Dr. Bora, Dr. Elhence, Dr. Yadav & our active members from UAU.

World Congress of Endourology held in Excel, London, from 1st – 4th October, our Indian participation was very strong with more than 120 members from India participating. An Indian Endourological session was held for full three hours which was attended by delegates from all over the world, with full capacity. UAU also had strong presence. Dr. Madhu Agarwal & Aneesh Srivastava delivered CME lectures. 14 UAU members participated & presented their papers.

Midterm meet & 1st conference on Uttarakhand is to be held on 24th – 25th October. Organizing committee is working hard to make all arrangements for your comfortable stay. I invite all of you to come, participate actively, enjoy the scenic beauty of the region & and make this venture a great success.

I hope that our regular CME article in the news letter is very useful to you. Your valuable suggestions are most welcome to improve content of this news letter.

Long live UAU

With Best Wishes

**Dr. A.K. Sanwal**
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# Postnatal Evaluation of Antenatally Detected Hydronephrosis:

**Anil Takvani**
Consultant Urologist, Honorary Urologist,
Gov. Civil Hospital (Medical College), Junagadh(Gujarat)

Antenatal Hydronephrosis is the dilatation of the collecting system of the foetal kidney. Dilatation of the ureter may be associated. It is estimated that foetal urinary tract dilatation is identified in 0.5 to 4% of all pregnancies. In more than 50% cases, the antenatal detected dilatation is transient and resolves spontaneously. Persistence of this hydronephrosis after birth is known as postnatal or neonatal hydronephrosis. Pelviureteric junction obstruction being the most common cause after the transient HN, accounts for 28 to 50 % in various series. Vesicoureteric reflux (VUR) is detected in 20-30% of such cases. In this article only evaluation protocol is discussed. Significant hydronephrosis and treatment will be discussed in next article. Following are differential diagnosis of antenatal HN.

Transient hydronephrosis (Resolves spontaneously with the time)

Nonobstructive hydronephrosis (may not completely resolves with time but physiological)

Ureteropelvic junction obstruction (UPJO)

Vesicoureteric reflux (VUR),

Ureterovesical junction obstruction (UVJO), Obstructive megaureter

Multicystic dysplastic kidney

Duplex kidneys (±ureterocele)

Posterior urethral valves (PUV)

Others: Ectopic ureter, megaureter, urethral atresia, urogenital sinus malformation, prune belly syndrome.

**The goal** of postnatal management of infants with antenatal hydronephrosis is to identify patients with significant renal and urinary tract abnormalities while avoiding unnecessary testing in patients with physiologic or clinically insignificant hydronephrosis. Evaluation includes physical examination and the use of radiologic studies to detect renal and urinary tract abnormalities, including obstructive uropathy or vesicoureteral reflux (VUR).

**Clinical examination includes proper history taking and examination:**

Flank/Renal Lump:

- MCDK,
- Sever UPJ-O,

Pelvic/Bladder Palpation:

- PUV,
- Urethral Stricture,
- Urethral atresia

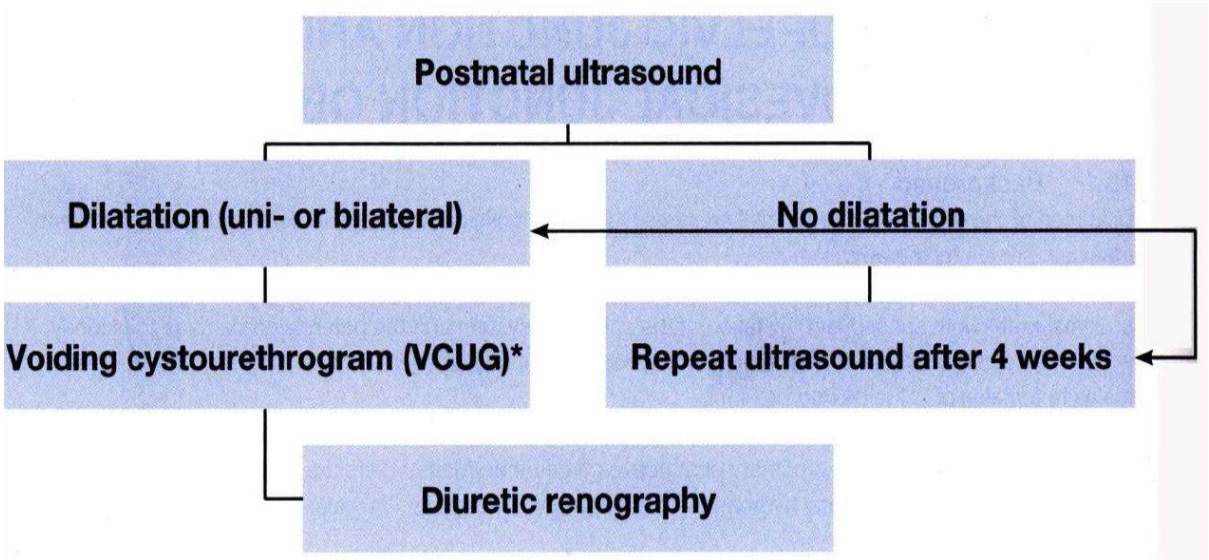
The deficiency of lower abdominal wall with bil. Undecended testis-PBS

Features of Potter sequence, above posted pictures are of

Palpable renal lump in case of severe PUJ Obstruction and

Palpable bladder in case of posterior urethral valve.

We have list of investigations to arrive on proper diagnosis. On imagining side, USG, VCUG, Diuretic renal scintigraphy and DMSA scan. On laboratory side we have, CBC, Renal Function Tests, Urine routine and Culture, Electrolytes, Blood gas studies and other markers. Based on this we can arrive on broad protocol for postnatal evaluation of antenatal HN




* VCUG in patients without ureteric dilatation is growing controversy it is possible that, even if reflux detected has absolute no clinical effect (Guidelines EAU 2015)

**Timing for postnatal sonography:**

As neonates are passing through early phase of dehydration and oliguria it is better to do USG after 48 hrs. USG done prior to that can give false interpretations because of oliguria. Still there are few indications for immediate USG after birth, these are: Suspected PU Valve, in severe bilateral dilatation, Solitary kidney and Inpatients with likely possibilities of potential loss of follow-up.

A complete evaluation of KUB sonography includes:

On affected Side evaluation of hydronephrosis includes:

- Renal pelvic antero-posterior diameter
- Caliectasis
- Cortical Thickness
- Renal echogenicity
- Ureteral dilatation

Contra lateral kidney: Site, size, dilatation and other details if there is HN.

- Bladder: size, thickness,& Bladder neck & ureterocele
- Posterior urethra: dilatation

**Grading or classification of HN:**


Based on findings of USG hydronephrosis can graded or classify to understand severity and to compare with follow up USG to see regression or progression of HN.

There are many systems or methods of grading; the most followed are discussed in next few lines.

The grading should be based on objective findings to avoid interobservational variations.

1) **Based on AP diameter of Renal Pelvis:**

| Mild | Moderate | Severe |
|---|---|---|
| 7 to 9 mm | 10 to 15 mm | >15 |

In this grading system APPD is more objective and is combined with subjective description of the degree of calyceal dilatation and quality of the parenchyma. In most of the European countries urologists follow this system of grading.

**Most commonly used grading system is one proposed by society for foetal urology (SFU):**

| Grade | SFU Grading |
|---|---|
| 0 | No Splitting |
| 1 | Urine in pelvis barely splits the sinus |
| 2 | Urine fills intrarenal pelvis, Urine fills extrarenal pelvis, Major calyces dilated |
| 3 | SFU grade 2, Minor calyces uniformly dilated, Parenchyma preserved |
| 4 | SFU grade 3, Parenchyma thin |

SFU grading is subjective assessments, so inter-observer variation especially for the higher grades of hydronephrosis is possible. This grading system is the most commonly followed in North America.

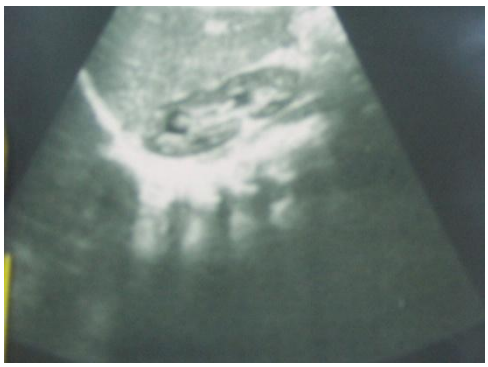
**Another grading system proposed by Onen (J.Pediatric Urology 2007):**

Appears more objective and also provides easy ideas of grade migration. That means it gives better idea of progression or regression of HN in serial sonography done postnatal. Problem with Onen's grading is reading parenchyma thinning which is very difficult even for very expert sinologist.

| Grade | Onen's AGS |
|---|---|
| 0 | No hydronephrosis |
| 1 | Dilatation of renal pelvis alone |
| 2 | Onen's grade 1 + Calyceal dilatation |
| 3 | Onen's grade 2 + <half (mild to moderate) Renal parenchymal loss |
| 4 | Onen's grade 3 + >half (severe) renal parenchymal loss |

**Hydronephrosis Index (Advances in Urology Volume 2009, Krishnan Venkatesan, Joel Green, Steven R. Shapiro)**

HI (percentage) = 100 (total area of the kidney minus area of dilated pelvis)/ (total area). HI represents the percentage of total kidney that is renal parenchyma. For normal non hydronephrotic kidney, HI is 100. While for more hydronephrosis, or renal pelvis dilation, translates to a larger renal pelvic area and thus, a lower HI.



Non hydronephrotic kidney of 3 months child, HI is 100%

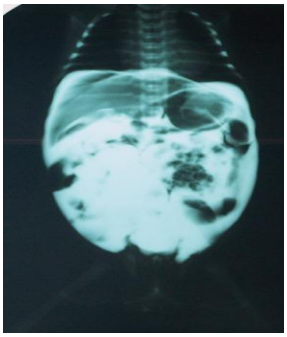

increasing pelvi-calceal dilatation HI is reducing

**C/P or P/C ratio:**

Additionally we can measure as proposed by Dewan Calyx: Parenchayma ratio, C/P ration ( Dewan et al) Or P/C ratio is calculated by dividing APPD with Cortical Thickness(Rameshbabu & Venkata sai, IJU 2010). All these measurements depend on

amount of dilatation and parenchyma gives objective idea of progression. These measurements and ratio can be done without adding coast.

**VCUG**: Fluoroscopic VCUG is recommended as it gives anatomical details of bladder, urethra and proper grading if reflux is suspected. It should be done under aseptic preparation, under antibiotic cover a water soluble contrast 20%(w/v) is instilled with slow gravity filling of normal saline under fluoroscopy control. Amount of bladder filling is judge by using calculating estimated bladder capacity.Estimated Bladder capacity = Neonates (<1mth) ; Infants (1mth-1yr.) = 7 X wt in kgs. For rest capacity = (Age+2)X30, capacity in mls. In neonates or infants rapid over filling or filling under pressure can lead to complication of bladder rupture though rare.



Bladder rupture and spillage of contrast and saline in to peritoneum in 7 days old child due to excessive and forceful instillation of saline

There are arguments in favor and against the routine use of VCUG in postnatal evaluation of antenatal HN. Pendulum is toward minimizing use of VCUG as it is invasive investigation.

Arguments in favor of routine use of VCUG are 20 to 25% association of reflux in cases of a hydronephrosis which can be missed and low specificity of USG in detecting dilatation of ureter (35 to 45). Arguments against routine use of VCUG are, in cases of severe dilatation of pelvis/calceal system (>20) less likely ureter dilation can be missed. VCUG has unknown significance in non-dilated ureter even if reflux is detected. Invasive investigation, radiation exposure and Psychological trauma to parents are issues of concern.

In my practice I recommend VCUG in following circumstance in evaluation of antenatal HN (recommend in EAU guidelines 2015):

- visualization of ureter or dilated ureter on USG
- Symptomatic with UTI
- Abnormal bladder ( PVR>30cc)
- PUJ obstruction in child with sibling history of high grade vur
- In bilateral Hydronephrosis
- Duplex kidney with or without Ureterocele/Ureteroceles

**Diuretic renography:**

It is better to avoid diuretic renography till child attains age of at least two months. Immature tubular function is the reason behind postponing renal scan till age of 2 months in patients with unilateral hydronephrosis.

**Standardize diuretic renography in neonates includes (Convey and Maizel 1992, Gordon et al. 2001):**

- Radioisotopes:99mTc-MAG3, 99Tc EC are-tubular & cortical extract preffered over glomerular extract 99mTc DTPA.
- Hydration: Oral feeds encouraged, I/V hydration only if necessary.
- Diuretic: Furosemide in dose of 1mg/kg/h, application –(F-15, F0, F+20 protocols)
- Bladder catheterization: only in cases of VUR, dysfunction voiding
- Delayed post void film in erect posture is necessary (Post micturation or PM films)

Major interpretations of diuretic renal scan are, pathological differential renal function is suggestive of obstructive nephropathy and pathological diuretic curve(T1/2>20minutes) is suggestive of onstructive uropathy (O' Reilly 2003, Eskild-Jensen et al. 2004).

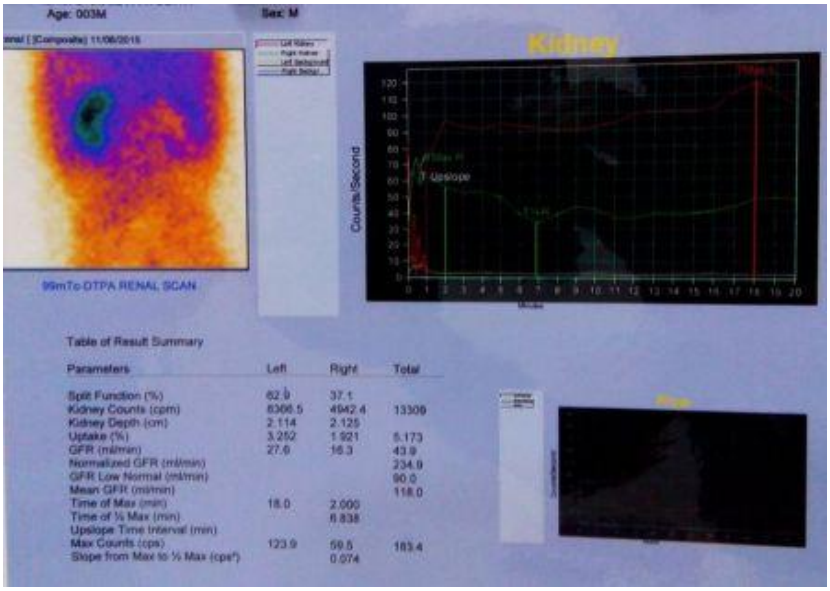
**Differential renal function(DRF)**

- Correspondence to the time interval when radionuclide localizes in the tubules .
- Relative function is reasonably accurate if assessed in first two min.
- Tubular extracts(MAG3, are good renal extracts with least background activity
- Background correction is particularly important in estimation of DRF when there is asymmetrical renal function or decreased overall function

**Diuretic curve: routine interpretation:**

Clearance of half of radionuclide (T½)

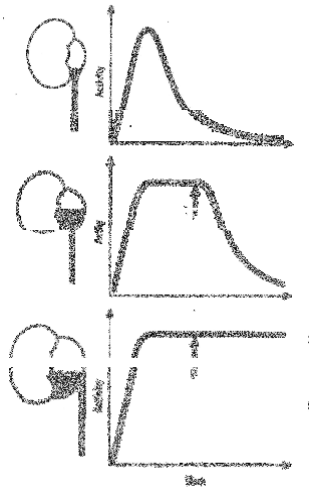
- > 20 min……obstruction
- 15-20 min…….indeterminate
- < 15 min…….normal




# Diuretic curve is influenced by

Renal Function
Renal pelvic size
gravity
fullness of the bladder
Residual activity
after micturation
(standards ??)

In the severely dilated pelvis drainage may not be detected

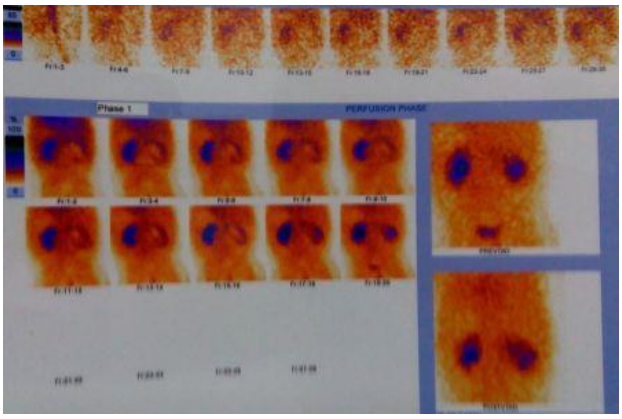


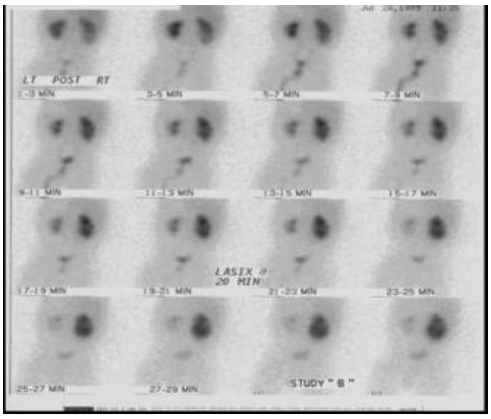
- If the function is poor then the curve is grossly inaccurate
- Renal pelvic size as demonstrated in above picture, even there is no obstruction in a case with severly dilated pelvis curve will so obstructive pattern
- Fullness of bladder
- Residual activity after micturation
- Dr.Philip Ransley condemns the T½ and the slope of the curve as useless calculations. He says both these values will vary with the patient lying down or standing up!!

**Cortical Transit Time(CTT) Or Tissue Transit Time(TTT) (Schlotmann et al (2009):**

- Time taken by isotope to transit the parenchyma and enter the renal pelvis.
- In a normal kidney a rapid transit with more or less homogenous kidney filling in about 2 min.
- A delay and inhomogeneous appearance suggests obstruction

In below posted picture of renal scan we can see delayed and inhomogenous appearance of radiopharmeceutical agent in first picture on right side and in second picture on left side are very much suggestive of obstruction. TTT can be relied and can be calculated without adding the costs.





**Individual conditions:** in this paper I have not discussed evaluation of reflux and posterior urethral valves. Evaluation of other common conditions are discussed in following section of write up.

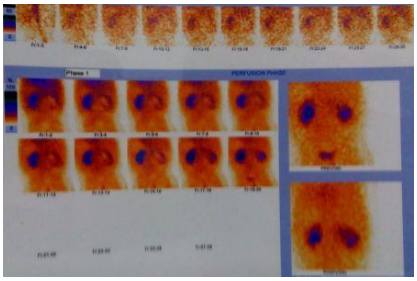
**Pelvi-ureteric junction obstruction(Unilateral):**

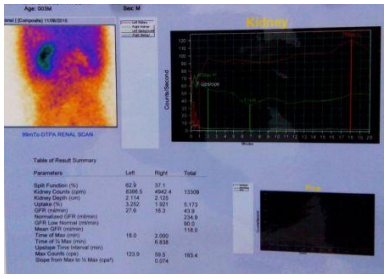
Serial USG is the corner stone for diagnosis of UPJ-O. Serial USG will exclude patients of trnsient HN and will give appropriate diagnosis of UPJ-O. Also it provised tool to see progression or regression of condition so appriate decision can be taken regarding need for surgical intervntion.

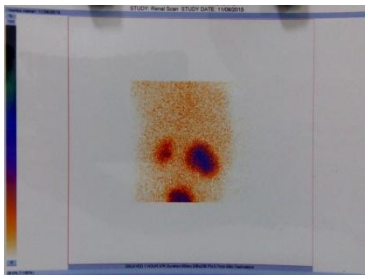
We can she following three picture increasing dilataion of pelvi-calceal system, thinness of renal parenchyma and reducing percentage of hydronephrosis index.


Antenatal USG-3rd trimester First week of birth at two months age

Serial USGs followed by Diuretic renal scan at or after 2 months age. In this scan we can see increased TTT or cortical transits time, Inhomogeneous appearance of radiopharmaceutical on obstructed (Rt. Side), Diuretic curve is going up and up, T1/2 is not reached and in delayed, erect posture(PM film) almost more than half radiopharmaceutical retained in obstructed Rt.kidney .

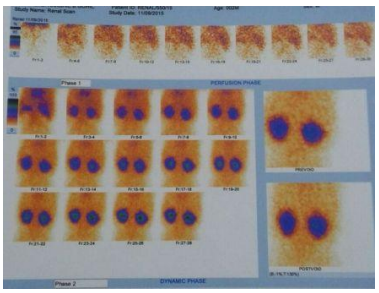


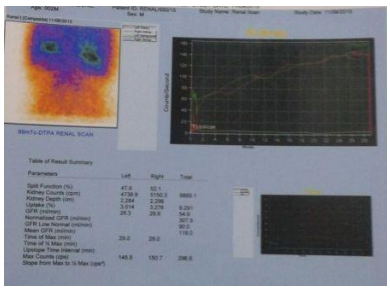


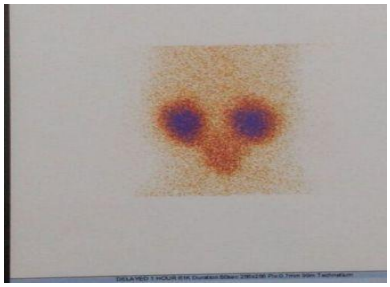


**Bilateral Hydronephrosis (Bilateral UPJ-O):**

A MCU should be done in the first few weeks of life to rule out urethral obstruction or VUR. PUJ obstruction may be bilateral in about 20% cases. Differential renal function is not very useful in the management of these patients. In patients with bilateral PUJ obstruction, early Pyeloplasty is recommended on the side with greater dilatation or lesser function. Most infants require contra-lateral Pyeloplasty and close follow-up. Diuretic renal scan pictures of 2 months child with USG suggestive of UPJ-O like changes (renal pelvic dilatation 25 to 30mm with dilatation of all calyces)

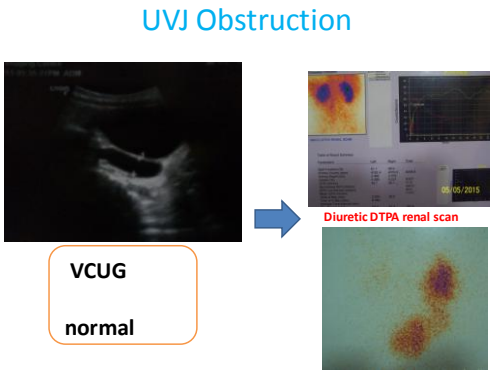






**Uretero-Vesical Junction Obstruction:**

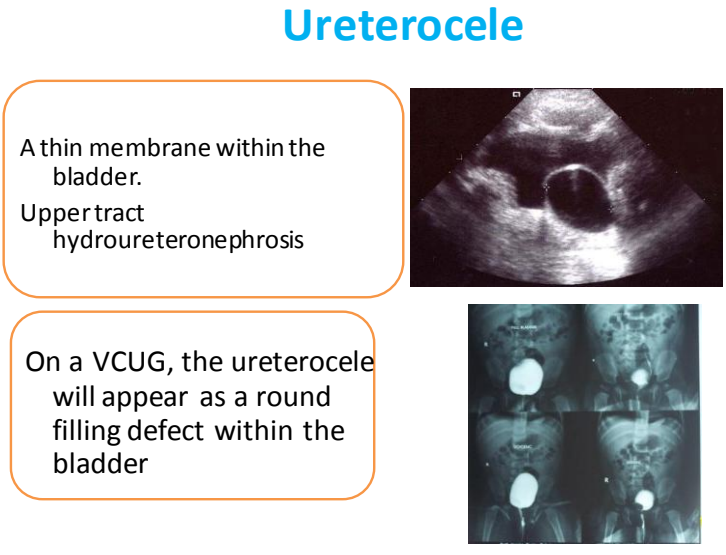
USG findings of VUJ-Obstruction are very much unique. Lower ureteric dilatation is generally in fusiform shape, lower ureter is dilated more than 10mm and it is proportionately more dilated in comparison to rest of the upper tract. At times lower narrow segment terminating in to the bladder can be demonstrated in USG. In this case if VCUG is negative for reflux diuretic renogram can clinch the diagnosis. An illustrative case scenario provided in next picture.




**Ureterocele (with or without duplex renal system):**

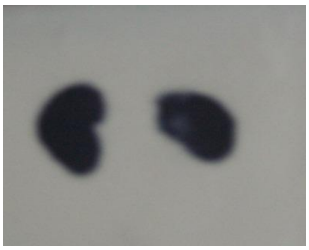
Ureterocoele is a cystic dilatation of the Intravesical portion of the ureter, which can cause obstruction either in a single system or the upper moiety of a duplex system. Typical USG finding of ureterocele is thin membrane within the bladder with upper tract hydroureteronephrosis. In patient suspected with duplex system renal scan (DMSA/MAG3/DTPA) can help in verifying existence of duplex system as well as functional capacity of upper moiety. Diuretic renal scan also provides drainage status of moiety with ureterocele.

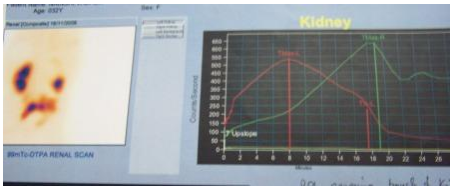
Illustrative case scenario is demonstrated in below picture:



## Ureterocele

- If a duplicated collecting system is suspected,
- Nuclear renography to determine the function of the upper renal pole.






**Multicystic Dysplastic Kidney (MCDK):**

Many a time it is difficult to differentiate MCDK from severe hydronephrosis. Lack of communication between various sizes cystic (dilated) areas is cardinal finding for MCDK. Also most of the time there is no identifiable parenchyma in cases of MCDK in USG. Recent evidences advocates DMSA renal scan only in cases with some parenchyma is seen in USG.

## Multicystic Dysplastic Kidney

Postnatal USG: classic findings:

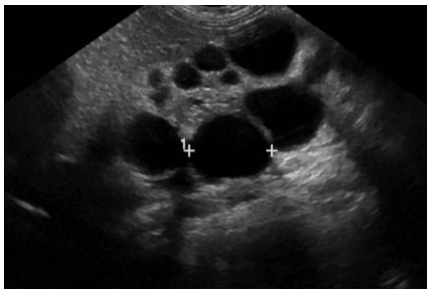
- Noncommunicating cysts of various sizes,
- lack of identifiable renal parenchyma,
- atretic proximal ureters

DMSA scan only if there is possible functional parenchayma

Almost 50% Chances VUR & UPJ-O in opposite unit

VCUG.

Diuretic renography

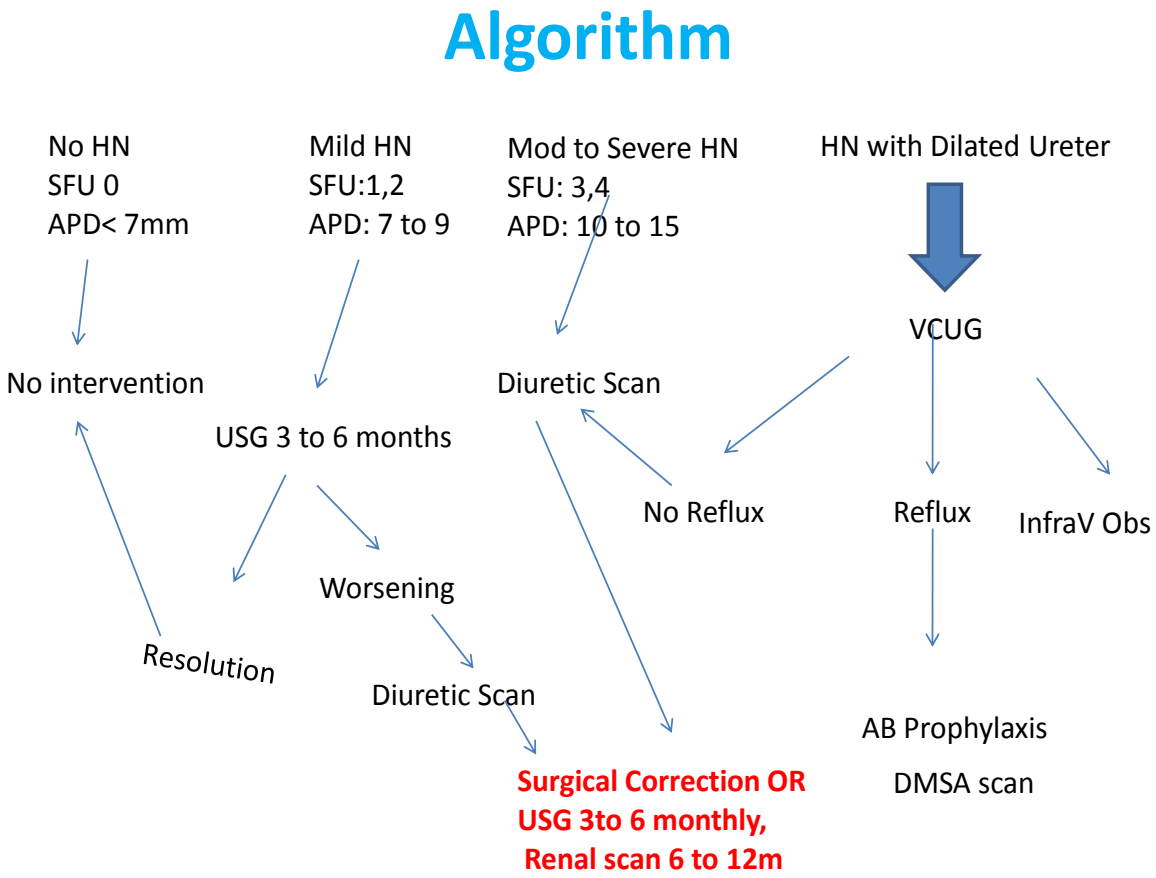


Postnatal management of antenatal HN is not discussed in this article as this write up is limited to evaluation of postnatal evaluation of antenatal HN.

**Modified Algorithm of postnatal evaluation of antenatal HN:**

A proper diagnosis can be reached and based on clinical presentations (UTI, lump), serial USG and renal scintigraphy.

There is no consensus on evaluation protocol of patients detected with antenatal HN. We need to arrive on reasonably accepted protocol for postnatal evaluation as we do not want to operate unnecessarily patient who has transient HN. Same time we do not want to delay operating those who are likely to loose nephrons if not evaluated properly.



References:

1. Blyth B, Snyder HM, Duckett JW. Antenatal diagnosis and subsequent management of hydronephrosis. J Urol 1993;149:693-8.

2. Livera LN, Brookfield DS, Egginton JA, *et al*. Antenatal ultrasonography to detect fetal renal abnormalities: a prospective screening programme. BMJ 1989;298:1421-3.

3. Sairam S, Al-Habib A, Sasson S, *et al*. Natural history of fetal hydronephrosis diagnosed on mid-trimester ultrasound. Ultrasound Obstet Gynecol 2001;17:191-6.

4. Estrada CR. Prenatal hydronephrosis: early evaluation. Curr Opin Urol 2008;18:401-3.

5. Corteville JE, Gray DL, Crane JP. Congenital hydronephrosis: correlation of fetal ultrasonographic findings with infant outcome. Am J Obstet Gynecol 1991;165:384-8.

6. Coelho GM, Bounada MCF, Pereire AK, Figueiredo BF. Outcome of isolated antenatal hydronephrosis: a prospective cohort study. Pediatr Nephrol 2007;22:1727-34.

7. Lee RS, Cendron M, Kinnamon DD, Nguyen NT. Antenatal hydronephrosis as a predictor of postnatal outcome: a meta analysis. Pediatrics 2006;118:586-93.

8. Thomas DF, Madden NP, Irving HC, Arthur RJ, Smith SE. Mild dilatation of the fetal kidney: a followup study. Br J Urol 1994;74:236-9.

9. Fugelseth D, Lindemann R, Sande HA, Ref - sum S, Nordshus T. Prenatal diagnosis of urinary tract anomalies. The value of two ultrasound examinations. Acta Obstet Gynecol Scand 1994;73:290-3.

10. Woodward M, Frank D. Postnatal management of antenatal hydronephrosis. BJU International 2002;89:149-56.

11. Aksu N, Yavascan O, Kungin M, *et al*. Postnatal management of infants with antenatally detected hydronephrosis. Pediatr Nephrol 2005;20:1253-9.

12. Babu R, Sai V. Postnatal outcome of fetal hydronephrosis: implications for prenatal counselling. Indian J Urol 2010;26:60-2.

13. Laing FC, Burke VD, Wing VW, Jeffrey RB, Hashimoto B. Postpartum evaluation of fetal hydronephrosis: optimal timing for follow-up sonography. Radiology 1984;152:423-4.

14. Harding LJ, Malone PS, Wellesley DG. Antenatal minimal hydronephrosis: is its follow-up an unnecessary cause of concern? Prenat Diagn1999;19:701-5.

# Report of Indo-Turkish Meet at Agra

Indo-Turkish Endo-Laproscopic urological meet “UROMASTERS 2015” was conducted at Global Rainbow Healthcare, NH-2, Mathura Road, Agra on 4th & 5th September 2015. Prof Madhu Sudan Agrawal, Head of department of Urology, was the convener of this workshop. In this workshop approximately 100 eminent urologist from India and Turkey participated and discussed various problems of urinary system common to both countries.

A team of 55 Urologist from Turkey participated in this workshop, led by Prof Tarik Esen and Prof Bedreddin Seckin who acted as moderators for the program. The Indian faculty included Prof Madhu Sudan Agrawal, Prof Rajesh Ahlawat and Dr Pawan Gupta. The scientific program included the common subjects of interest to the urologists from both continents, highlighting the advances in the fields of Endourology and Oncology. A live and interactive workshop was an important part of this stimulating scientific meeting, included live demonstration on Mini & Ultra-Mini PCNL, Flexible Ureteroscopy, Lap Adrenalectomy and Lap Ureterolithotomy.

The conduct and scientific content of the meeting was highly appreciated by the visiting guests and faculty, who were very impressed with the standard of urological care and advancement in India.

Global Rainbow Healthcare, a super specialty hospital in Agra, conducts super-specialty workshops, training and teaching programs on a regular basis for the benefit of doctors from Indian and abroad.

Welcome to Kanpur

UROLOGICAL ASSOCIATION OF UTTAR PRADESH

UAU

# UAUCON 2016

## 3rd Urological Association of Uttar Pradesh Conference

**9 - 10 April 2016**

**Venue: Hotel Landmark, The Mall, Kanpur**

# UAUCON 2016
# Hotel Landmark, Kanpur 9 - 10 April 2016

## Registration Form

Name: .....

Accompanying Person: .....

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**Please send Demand Draft / Multicity Cheques in favour of "UAUCON 2016" Payable at Kanpur to Conference Secretariat**

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# UROLOGICAL ASSOCIATION OF UTTAR PRADESH

## APPLICATION FORM FOR MEMBERSHIP

Please paste your recent passport size

USI Membership No. _____ NZ USI No. _____

**Category of Membership** applied for: Full / Associate / Trainee / Conversion / International

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| _____ | _____ | _____ |
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**Present Appointment & Designation:**

_____ _____ _____

**Sponsors** (Should be Full Members of the Urological Association of Uttar Pradesh)

1. Name: _____
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2. Name: _____
   Address: _____
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   _____

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   UAU No. : _____

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I declare that the information given by me as above is correct and if elected, I agree to abide by the constitution of the **Urological Association of Uttar Pradesh**.

Place _____

Date _____ Signature of the applicant

**Membership Fee:**

| | |
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| **Full Membership Fee** | **Rs. 4,000/-** |
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