Urological Association of Uttar Pradesh

UAU

UAU Newsletter

July 2015

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President's Message

Dear Friends

June has been a busy month for most of us, with the seasonal deluge of patients along with holidays for Urologists with school going kids and also a number of activities which took place.

We have the privilege of not one but two reports of the 'Mecca' of all urology meets – AUA. One of them comes from a very bright young urologist currently busy with his MCh examination; Dr Sohrab Arora was attending the meet as a USI-AUA travel fellow and provides a ring side view while the second report comes from one of our senior most members, Dr M S Agarwal who again had the special role of operating for the AUA workshop from India.

Some of us also had the pleasure of attending the excellent meeting organized by the Board of Education, USI on Cancer Prostate at Kolkata. I must compliment the BOE and USI council for this excellent initiative which has a pure academic pursuit. I would like to incorporate some features of it in our own forthcoming programs.

And finally we had the first of our Workshops. Dr V K Mishra and Dr Anil Jain provided UAU with its first stand alone workshop on Urethroplasty at Kanpur. Dr Sanjay Kulkarni was the pivot on whom the entire program was planned and he enthralled the sizeable audience with a masterly display of almost the entire gamut of Urethral Reconstructive Procedures. The success of this meet encourages us to plan for such focused meets in the future.

I am happy to announce the first event of UAU in Uttarakhand. Dr S Goel and Dr V Pathak are organizing a video workshop in Dehradun and have started preparation for this event.

I would also request members to communicate frequently with council of UAU and give suggestions and feedback for improving our efforts. I seek reports from various city groups of activities conducted by them and also tricky patients which not only enlighten others but also get additional inputs regarding their management.

Thanks

Anil Elhence
President UAU
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Hon. Secretary's Message

Dear Friends,

Once again greetings from UAU. July edition of news letter is circulated for you. I congratulate, on behalf of UAU , Dr. V. K. Mishra our President Elect, Dr. Anil Jain and Kanpur Urology Club for organizing an excellent and interactive workshop on urethroplasty with Dr. Sanjay Kulkarni as a chief faculty. Number of cases of all variety has been operated with active discussion. Large number of young urologists and senior faculty members participated in the workshop.

Our next midterm CME / Workshop is in Dehradun on 24 & 25 October, first in Uttarakhand region, for which preparation are going on in full swing. I invite you all to come in great strength and made this venture successful.

I hope the article from an expert section is found useful. I also request all the members to send their interesting case reports to me for publications in our next monthly newsletter. Your regular feedback is required to improve the newsletter

With Best Wishes

Dr. A.K. Sanwal
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TRUS Biopsy Evolution & Current Status

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Introduction:
Trans rectal ultrasound (TRUS) guided prostatic biopsy is the centerpiece in diagnosis of carcinoma prostate today. It was in late 1960's that Watanabe et al described the use of endorectalultrasound[1]. Prostate specific antigen (PSA) came into use in 1980's and by this time Radical retro pubic prostatectomy had also been described, this led to great interest in early diagnosis of carcinoma prostate[2,3].With the invention of high frequency transducers and spring-loaded biopsy gun TRUS guided biopsy started gaining popularity[4,5].

There has been radical change in the way the biopsies were planned and done then and now. In the beginning it was only lesion directed biopsies, and then came the sextant followed by extended core, 12 core and saturation biopsies. In the following text we shall discuss the evolution of the TRUS biopsy what is current status.

Evolution of TRUS biopsy to the present day:

Directed biopsies:
With TRUS available at surgeons disposal he started doing TRUS directed biopsies i.e lesions which were seen of transrectal ultrasound or palpable on DRE (digital rectal examination) were biopsied. This approach was a definite improvement over the blind finger guided biopsies. Carcinoma prostate was detected in 53% of the patient in whom finger guided biopsy was negative earlier[6]. Though this was great improvement, it was soon realized that directed biopsies miss a significant number of carcinoma prostate. Then came the concept of Sextant biopsy.

Sextant Biopsy:
Concept of sextant biopsy was proposed to improve the chances of picking up clinically unapparent tumor. Biopsies were performed at Midgland, apex and base parasagitally[7]. As the time passed investigators realized that laterally directed biopsies gave a higher yield as compared to parasagital[7,8].Chang et al in their study concluded that lesion directed biopsies were not required when proper laterally directed sextant biopsies were taken even if apparent lesion was seen[9].Sextant protocol has a false negative rate of 15-34% [10-13]. In patients with normal DRE and elevated PSA sensitivity and specificity of Sextant was 60 and 100% respectively[14]. For a peripheral zone tumor sensitivity and specificity of sextant biopsy was 83.3% and 97.3% respectively, sensitivity dropped to 33.3% incases with a transitional zone tumor.

12 core Prostate Biopsy:
Investigators realized that a sextant biopsy was inadequately diagnosing CaP (carcinoma prostate) and missing significant number of diseased patients. Laterally directed biopsies increased the yield by 5-35%[17,18]. Apex and base of peripheral zone were high yield sites.

Laterally directed 12 cores PB (prostate biopsy) is now considered standard of care for detection of CaP. It has a positive biopsy rate of 25-50%[19,20]. A large number of studies have detected higher yield of cancer detection by 12 core biopsy as compared to sextant biopsy without increase in detection of insignificant cancer. Most of the increase in the cancer detection was due to identification of cancer in anterior apical and lateral mid lobar region. Contrary to earlier belief parasagittal biopsies have a low yield and should be abandoned[21]. Most unique site for cancer identification is anterior apex and 17% of cancers are missed if this site is not sampled[22].

With 12 core biopsy rates of concordance with radical prostatectomy specimen increased from 63 to 72%[23]and gleasonupgradation at the final histopathology also decreased[24]. Many investigators have suggested that initial 12 core PB is appropriate course of action and taking greater than 12 cores initially does not give any advantage and may increase complications[25,26].

Several investigators have suggested that number of core should be adjusted according to the gland size. A standard 12 core PB is adequate for a gland size less than 55cc or a TZ volume less than 30cc. prostate size of less than 30 may require less cores and gland size greater than 55cc may require more cores.

Repeat PB:
Clinicians are yet to find a balance between morbidity of a repeat biopsy and identification of a clinically significant cancer. Prior research has suggested that CaP on repeat biopsy is lower in stage, grade and volume but Clinically significant CaP has been found even after 4th or 5th repeat biopsy. Rate of detection of CaP in 2nd, 3rd and 4th biopsy is 10%,5%,4% respectively as per European prostate cancer detection study and 10% each as per another study.

Indications of a repeat biopsy include:
1. Inadequate 1st biopsy (sextant)
2. ASAP- biopsy to be done 3-6 months and 40-50% patients will have CaP
3. Patients with low <10% free PSA/total PSA
4. HGPIN at multiple sites: 23% patient may have CaP and biopsy can be done after 6 months
5. Persistently elevated PSA > 10 ng/ml
6. In PSA range 4-10 ng/ml: free PSA/Total PSA,25%, PSA velocity >0.75ng/ml/year, PSAD<0.15ng/cc
7. PCA3 – positive
8. Commercially available biomarkers: PHI(prostate health index) Kallikrein panel may be used for decision-making.

Whenever repeat biopsy is done, it should be at least 14 cores, out of which 12 should be directed laterally and 2 directed anteriorly.

Extensive Core protocol and Saturation Biopsy:
Saturation PB is a term generally used when greater than 20 cores are taken during PB. It is universally agreed that using saturation biopsy as a first line has no added advantage and may increase complications of procedure. Saturation biopsy after initial biopsy may increase detection rate 30-34% but risk of detecting clinically insignificant cancer does not decrease.

It can be used as a tool in protocol once the first repeat biopsy fails to pick up CaP and clinical suspicion persists. It can be performed TRUS guided or transperineally.

General guiding principles of doing a TRUS guided PB:
Pre biopsy evaluation and instructions:

1. History and physical examination
2. Urine analysis, culture if indicated
3. Is patient on Oral anticoagulants
4. Has enema been administered or rectum empty
5. Has he taken antibiotics

If the patient is taking only low dose aspirin one can go ahead with the biopsy but if dual antiplatelet drugs are going on they have to be stopped for 5 days. Use of bowel enema is contentious. About 81% urologists were found to be using enema prior to PB[27]. In a Korean study enema significantly decreased the post biopsy sepsis 1.3% vs 9.5%[28] this was not confirmed by other studies. A study also showed use of povidone iodine suppository to decrease infection post PB[29]. As routine practice, if rectum is not loaded & patient had good motion in the morning, then enema can be avoided.

Antibiotic prophylaxis significantly decreases post PB sepsis and UTI as proven by many studies [30,31,32,33]. Fluroquinolones are the antibiotics of choice and 85% of the urologist uses it though increasing resistance is a growing concern. Combination of Ciprofloxacin &Tinidazole is standard.

Technique:
Anesthesia: Many patients tolerate biopsy without much pain. However if multiple cores – more than 12 or saturation biopsy is planned it is better to do procedure under anesthesia. 1% lignocaine is used as a local anesthetic and is infiltrated using long spinal needle or PCN needle. Generally 5 ml lignocain is injected on each side. Mouteverest sign is identified by side firing probe – located at base between prostate & Seminal vesicles. At that point injection is done.
Lateral directed biopsies are best done by side firing probe. However in repeat biopsies, where anterior horn or TZ biopsies are required, end firing probe is better.
A spring loaded 18 G needle is used for biopsy. The needle passes through the biopsy guide attached to ultrasound probe. After doing a transrectal ultrasound biplanar view is taken, Puncture line is adjusted –from where biopsy is to be taken. Biopsy is always taken inssagital section. Prostate is compressed with the probe and needle is kept just outside the capsule and fired. The biopsy gun advances 0.5cm and samples subsequent 1.5cm; the needle extends 0.5cm further thereafter. Each location core should be properly labeled & sent separately in each bottle.

Image guided enhancement for PB:
Doppler: prostatic cancer is associated with neovascularization and angiogenesis, this can be picked as increased vascularity on Doppler and targeted biopsy can be performed.

Contrast enhanced Ultrasound guided PB:
Encapsulated bubbles that can be administered IV (intravenous) are used, this contrast increases the reflectivity. Due to neovascularisation vascular density increases and local reflectivity enhanced.This area of increased reflectivity can be targeted for prostatic biopsy. This technique increases the yield and helps identify significant prostate cancer. Two studies have demonstrated that the rate of cancer detection is same as standard technique even when

half the number of core are taken[34,35]. Nelson and collegues[36] showed a sensitivity of 29% and specificity of 80%.

Elastography:
There is a significant difference between the elastic properties of benign and malignant tissue. Change in reflection of sound waves when manual compression is applied to tissue is used for identification of target lesion.

Studies suggest that real time elastography can detect the same lesions by taking only half the number of cores[37]. Targeted lesion on elastography are twice as likely to yield cancer diagnosis. One of the drawbacks of this technique is that it is operator dependent. Shearwaveelastography is less operator dependent and does not require manual application of pressure.

MRI guided biopsy and MRI and transrectal ultrasound fusion:
MRI has a high accuracy in detection of malignant lesions in prostate and it had been proven that lesion detected on MRI of prostate correspond to site of disease on radical prostectomy specimen[38].

Various techniques used in MRI are Dynamic contrast enhancement, spectroscopy and diffusion weighted imaging.

MRI guided prostate biopsy can be done in following ways:

1. In Magnet (inside the MRI machine): costly, time consuming and ergonomically poor – so not practiced.
2. Outside the magnet
    a. Free hand using a TRUS to localize the same lesion or are which is seen on MRI
    b. MRI and TRUS fusion biopsy

MRI and transrectal ultrasound fusion:
Advantages of TRUS Is ease of biopsy however it is poor is sensitivity & specificity. MRI advantage is that it can accurately diagnosed cancer location to the tune of 93 % sensitivity (especially when it is multiparametric MRI) however biopsy can be done under MRI control. Hence fusion biopsy has come in. Different platforms are available, in principle MRI images are acquired and real time TRUS is done. Computer software reads the MRI images and merges it with the real time TRUS and biopsy of the suspicious areas seen on MRI can be translated on TRUS & accordingly biopsies can be taken. Advantages of fusion is with less cores yield is more.

Histoscan guided Biopsy:
HistoScan™ is a technological advancement in ultrasound. Transrectal ultrasound acquires data about the tissue characteristics; complex computer algorithms process this data. Different areas of prostate are color coded as per this risk of them harboring cancer. Hence the high-risk areas can be biopsied using real time ultrasound.

To watch Dr. Divakar Dalela's video on **How to acquire skills for making the illustrations in exams for our students.** Pl visit the link: https://youtu.be/nmrGLf_L7-0 on Youtube

Best Practices in Carcinoma Prostate

BOARD OF EDUCATION – USI
Kolkata 6-7th June 2015

This meet was attended by a galaxy of national stalwarts along with ***Prof. John Davis*** of M. D. Cancer Institute, Houston and Prof. Prokar Dasgupta, Editor BJUI, Chief Urologist Guys Hospital, London.

The program was based on real patients of all stages and grades of disease and their responses to therapies offered were discussed threadbare.

Among the salient points highlighted during the meet – (i) Surge in disease in areas especially those with Robots. (ii) Optimizing prostatic biopsy with 12 cores with TZ biopsy. (iii) C.T. guided perineal biopsy, a new horizon in biopsy of prostate especially for anterior tumors. (iv) Patient to choose from the basket of treatment available RP / RT / Watchful Waiting /ADT. (v) Role of Surgery in Advanced CAP and also in post RT / ADT. (vi) < 3mm +ve surgical margin to be considered non specific. (vii) RP in node positive disease - if unilateral node of less than 1 cm. (viii) Gleason grading requires a relook. (ix) Multimodality approach to be followed in management. (x) Antagonist better than agonist, cost being main constraint.

Dr. Anil Elhence, Meerut

AUA Report

It was a privilege to attend the AUA annual meeting in New Orleans, USA as a part of the USI-AUA travel fellowship. It gave me a chance to interact with urologists from around the world and hear pioneers and stalwarts in the field talk about their experience.

One of the highlights was the proud feeling of sitting in the hall watching a live transmission of mini perc by Dr Madhu Agarwal, ultra-mini PCNL by Dr Janak Desai, and micro perc by Dr Ravindra Sabnis from India. It was a flawless show.

Representing India at the residents bowl, wearing a lapel pin having the Indian flag on my blazer was a feeling I would probably not be able to put into words. The Science and Technology hall at the AUA meeting showcased the best innovations and advances in urology and provided an opportunity to have a hands-on with it. You could spend all day in that hall. I almost did!

I also had the opportunity to observe Dr. Inderbir Gill, Dr. Monish Aron and Dr. Mihir Desai at the University of Southern California. I observed procedures like robotic radical cystectomy/ONB, robotic partial nephrectomy and robotic prostatectomy at the Keck medical centre of USC. Observing Dr. Gill in the OPD and OT still feels like a dream and I thank the Urological Society of India for making this dream come true.

I also attended the "Urologic Oncology and Robotic Surgery on the Beach" conference

organized at Miami by Dr. Dipen Parekh of the University of Miami Miller school of Medicine. At the AUA meeting, I also attended the Indian American Urological Association session and the dinner afterwards. Having Indian food with Indian urologists was a relief. I felt at home! The IAUA is doing a great job of bringing the urologists of Indian origin together on a common platform.
The opportunity provided by the USI has widened my horizons. I will always be thankful to the society and the board of education for it. I also take this opportunity to express my gratitude towards my outstanding teachers at SGPGI and my awesome colleagues for all the support they provided.

I thank the executive council of Urological Association of Uttar Pradesh and Uttrakhand, especially Dr Anil Elhence for motivating me, providing necessary guidance for my career, and giving me the opportunity to write this report.

Dr. Sohrab Arora, SGPGIMS Lucknow

Live Operative Workshop on Urethroplasty, Kanpur

The CME & workshop on Urethroplasy was organized by Kanpur Urology Centre under the aegis of UAU on 27th and 28th June 2015 at Malik Regency Hotel, Kanpur.

A total of 90 Registrations were done including 8 P.G. students. On 27th morning the pre lunch session was dedicated to the basic science of Urethra which included didactic lectures on Anatomy by Prof. Apul Goel of KGMU, Lucknow and Prof. M. S. Ansari of SGPGIMS, Lucknow . The diagnostic evaluation and update was dealt by Dr. Neeraj Agarwal, a senior Urologist from Bareilly. Prof. Divakar Dalela of KGMU, Lucknow not only moderated the entire session but spoke on the current role of DVIU and dilatation in the management of stricture urethra. Prof Aneesh Srivastava of SGPGIMS, Lucknow spoke on the current status of substitution urethroplasty and compared pedicle flaps with mucosal lining as of now.

In the operative video session, both male and female urethral stricture was dealt wherein Dr. Subhash Yadav of Meerut presented two original videos and techniques of Urethroplasty. Prof. Divakar and Prof. Apul presented their craftmanship in both male and female urethral urethroplasty.

In the post lunch session Dr. Sanjay B. Kulkarni & Dr. Vikram Shah Batra from Pune performed three urethroplasy namely redo posterior urethral (post traumatic), dorsal onlay and buccal mucosal urethroplasty for pan anterior urethral stricture.

In the late evening a Guest Oration was done by Dr. Sanjay Kulkarni in which he discussed the treatment algorithm of Urethal stricture disease. The session was chaired by Prof. Rakesh kapoor, Director SGPGIMS ,Lucknow, Dr. Anil Elhence, Meerut, Dr. A. K. Sanwal, Jhansi and Prof. S. N. Sankhwar, Lucknow. In addition, various Faculty members of Kanpur, Allahabad and other Medical Colleges interacted with the Chair and learned Speaker.

On 28th June, 2015, a transpubic urethroplasty with corporal seperation was done in a redo urethroplasty followed by ventral onlay urethroplasty and a lay open urethroplasty for mid penile urethral stricture in three patients.

The vote of thanks was given by Dr. V. K. Mishra, Organising Chairman wherein he thanked all faculty members, UAU council, organising Committee and Delegates not only from Uttar Pradesh but also from Delhi, Bihar and Haryana. He also praised Theatre staff, Pharma companies, audiovisual persons and all those who worked untiredly to make this workshop interactive, educative and for the better care of patients.

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

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UROLOGICAL ASSOCIATION OF UTTAR PRADESH

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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:

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