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VAPM

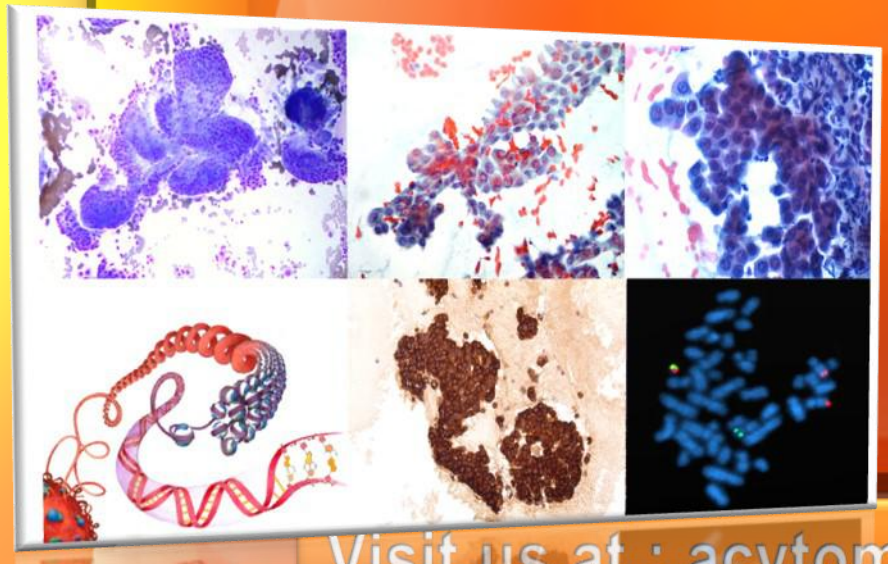
All India Institute of Medical Sciences Nagpur (AIIMS)

Vidarbha Association of Pathologists and Microbiologists

MACyCON 2020

3rd Annual Conference of

Association of Cytologists of Maharashtra (ACM)



8th and 9th Feb 2020
AIIMS, Mihan , Nagpur

Visit us at : acytomah.in, vapm.org.in

MACyCON 2020
3rd Annual Conference

MESSAGE

Dear Delegates and Faculty;
Macycon 2020

On behalf of organizing committee of MaCycon 2020 ,I extend a warm welcome to you. We were able to organize this conference due to encouragement and guidance from the Director Maj Gen. (Dr.) Vibha Dutta ,SM. Association of cytologists of Maharashtra is a chapter of India Academy of cytology and this is it's third annual conference. The as sociation was formed to provide opportunities for pathologists to hone skills in cytopa thology. The format of this conference is changed to more interactive one with problem oriented discussions and the hands on workshops. I hope everyone enjoys the academic feast that we have planned. I thank all ACM executives & members, Vidarbha Association of Pathologists and Microbiologists and all the faculty members including our guest international faculty, Dr Vinod Shidham and AIIMS faculty for their cooperation and help. I appeal and urge the delegates to become members of Association of Cytologists of Maharashtra and plan academic cytology training programs across Maharashtra .Wish everyone happy and enjoyable two days of learning from masters.

Dr Rasika Gadkari
Professor, Pathology,
AIIMS, Nagpur
Organizing chairperson and President ACM

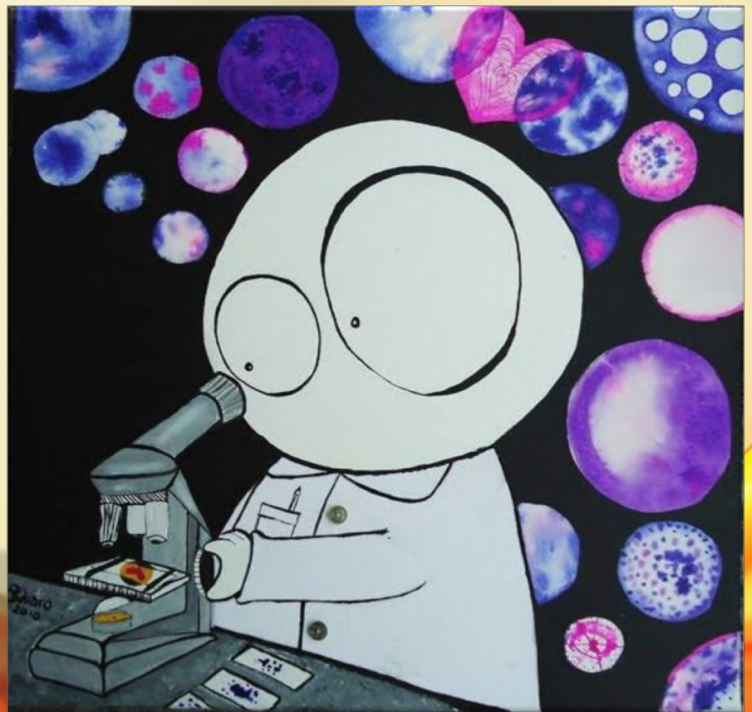
A very warm welcome to all the faculties & Delegates to the orange city.
It is a matter of great pleasure and pride for me to have got this opportunity to welcome you all to MACyCON 2020, the 3rd annual conference of association of cytologist of maharashta.
(ACM). Also this is the 1st State level conference to be organized at AIIMS, MIHAN Campus, and hence it is more special. I profusely thank our pillar of support and source of constant en couragement and guidance, our Director, Maj. Gen. (Dr)VibhaDatta, SM, who not only permitted to hold this conference but provided all the help. I also thank my Prof and head, and organising Chairperson, Dr RasikaGadk ari for providing me this opportunity and guid ing me throughout. Theme of the conference this year is " Defining the undetermined in cytology". The rising incidence of cancer is a great concern for everyone. Any lump is a cause of anxiety and need to be investigated properly. FNAC has distinct advantages and limitations. This CME and workshopwill be helful to solve our problem anout undetermined lesions. The conference has been made interactive with debates, panel discussions and hands on workshop. I hope it will be an enriching, rewarding & stimulating experience for all of you and will help "fine tuning" of your existing knowledge. We hope to live up to your expectation both in terms of academics & hospitality.
I thank all ACM members, VAPM Family and AIIMS family for their cooperation and support.

Warm regards,
Dr Nisha B Meshramm
Organizing secretary

ORGANISING COMMITTEE

Day 1: Feb 8th 2020

Registration and Breakfast	0800- 0900hrs
Inauguration	0900- 0930hrs
Solving what is "ASC"ed in Gynaec Cytology Dr Vinod B Shidham Director of Cytopathology,Cytotechnology school, Cytopathology fellowship & GI Pathology, Dept of Pathology Wayne State University School of Medicine & Detroit Medical Center, USA	0930- 1030 hrs
Atypia of Undetermined Significance: Case based Panel Discussion **Moderator**: Dr Rasika Gadkari, Prof and head, Pathology, AIIMS, Nagpur **Panelists**: Dr Shubhada Kane,Head, SRL Diagnostics,Center of Excellence, Dr Vinod Shidham, International Faculty Dr Bharat Rekhi, Professor, Pathology,TMH Mumbai Dr Leena Naik , Professor & Head, LTMMC Mumbai Dr M. M. Kamal, Professor, Pathology, GMC, Nagpur Dr R Ravi, Consultant Pathologist, Nagpur	1030-1145 hrs
Tea Break	1145-1200 hrs
Debates in Cytology	1200-1230 hrs
1) FNAC Vs Core biopsy: Dr Kamayani Deshpande And Dr Swati Khirwadkar	
2) Conventional Guided FNAC Vs Endoscopic Guided FNAC Dr Anne Wilkinson, Prof,Pathology,NKPSIMS, Nagpur Vs Dr Nikita Oza, SRL-COE, Mumbai	
Digital Cytology: Dr Shubhada Kane, Head, SRL Diagnostics, Center of Excellence, Mumbai	1230 – 1300 hrs
Lunch	1300-1400hrs
Post Lunch Session: Parallel workshops and Slide Viewing : **1.Demonstration of Cell Block and slide viewing**: **Dr Vinod Shidham** Venue: Pathology Practical hall, Aayush building **2. Cervical Cytology**: **Dr Jasvinder Kaur Bhatia, AFMC** Venue: Aayush Lecture hall, Ist Floor Slide Viewing: Microbiology Lecture hall, Aayush building	1400 -1700 hrs



Scientific Programme

Day 2: Feb 9th 2020

Conference	
Registration and Breakfast	0800- 0900hrs
Inauguration of Conference	0900- 0920hrs
Dr Shobha Grover Oration: Dr Vinod Shidham, MD, FRCPath, FIAC, Director of Cytopathology,Cytotechnology school, Cytopathology fellowship & GI Pathology, Dept of Pathology Wayne State University School of Medicine & Detroit Medical Center, USA	0920-1020 hrs
Tea break	1020-1030 hrs
PG Quiz: Dr Nisha B Meshramm, Assistant Prof, AIIMS, Nagpur	1030-1130 hrs
Look Alikes in cytology: Resolving Dilemmas Dr Shubhada Kane, Chief Consultant, SRL,Centre for Excellence,Mumbai Dr Sneha Hingeway Dr Chitra Madiwale	1130- 1200 hrs
Slide seminar: Dr Venkateshwaran Iyer, Professor, AIIMS, Delhi	1200-1300 hrs
Lunch Break	1300-1400hrs
Oral paper and Poster presentations- Venue: Aayush lecture hall	1400-1530hrs
Tea Break	1530-1545 hrs
Accessing the The hidden spaces: Venue: 4th Floor, OPD building **1.Pancreatico-biliary Cytology**: Dr Vikas Kavishwar, Addl Prof. TNMC & BYL Nair Hosp, Mumbai **2.Renal Tumors**: Dr Shyama Jain ,Prof Maulana Azad MC, New Delhi **3.Liquid Biopsy**: Dr Radhika Pagey, Consultant, National cancer Institute, Nagpur	1545-1645 hrs
Valedictory Function	1645-1700hrs

Dr. Vikas S. KavishwarM.D.(Path), D.N.B.(Path), D.P.B.
e-mail :
kavishwarvikas@gmail.com

Occupation *: Prof.(Addl) in Pathology,T.N.MedicalCollege,NairHospital,MumbaiSenior Consultant Histopathologist and Cytologist,MetropolisHealthcare,Mumbai*
Education *: M.B.B.S. from Seth G.S.Medical College, KEM Hospital,Mumbai (!990) M.D.(Path),D.N.B.(Path),D.P.B.,T.N.MedicalCollege,NairHospital,Mumbai (1994)*
M.M.C. reg. no*. : 66317*
Experience *: MUHS approved UG and PG Teacher in Pathology Lecturer – 6 yrs , Associate Professor – 9 yrs , Professor (Addl)– 10yrs*
SpecialInterest *:Pediatric Path., Dermatopathology, Cytology, Nephropathology*
Publications *(National and International) : 30*
Membership *: IAPM, IAP-ID, AMC, APPI, MAPI, BCG, IAC, ACM, MHG*
Executive committee *: Association of Cytologists of Maharashtra*
MMC accreditated speaker*(Code :MMC/MAS/07499/2019)*
Faculty *:various Conferences and CMEs at Regional, State, National Level.*

Assessing the hidden spaces :Pancreatico-biliary Cytology

Dr. Vikas S. Kavishwar
Prof.(Addl) Pathology, TNMC, Nair Hospital, Mumbai
Consultant surgical Pathologist, Metropolis Healthcare, Mumbai

Early detection of pancreatobiliary malignancies/diseases, though crucial, is challenging due to less accessibility anatomically and as it is asymptomatic in initial stages.

Endoscopy derived cytology(ERCP/ EUS-FNA)-has become an excellent diagnostic tool for detection of Pancreatobiliary lesions as it is minimally invasive, safe, has a high diagnostic accuracy and provides a prompt diagnosis. It obviates the need of invasive procedures like CT or USG guided biopsy .

This is especially significant considering technical difficulty in obtaining biopsy in this area.

Imaging Modalities for Pancreas and Biliary Tract Modality Primary Utility ERCP Relief of duct obstruction; sampling of stricture with brushing Abdominal USG Evaluation of liver and bile duct dilatation; insensitive for pancreatic masses and small lesions; least invasive; lowest cost Multidetector CT First line evaluation of PB lesions, eg "pancreas protocol CT"; high sensitivity and specificity MRI, MRCP Improved determination of cystic components and connection of BD-IPMN to MPD; best resolution for small lesions; used selectively due to low marginal improvement over MDCT and higher cost, but preferred for surveillance due to lack of radiation EUS FNA of pancreatic and periductal masses and cysts for diagnosis; better resolution for small lesions compared to CT; shortest trajectory to the lesion; multiple targets during single procedure (stage the patient); operator dependent Imaging appearance of Pancreatic neoplasms : Solid : Ductal adenocarcinoma, Neuroendocrine tumours , Acinar cell Carcinoma, Solid-pseudopapillary neoplasm, Pancreatiblastoma, Lymphoma, Plasmacytoma, Metastasis Cystic :Intraductal Papillary Mucinous neoplasm, Mucinous cystic neoplasm, Cystic Neuroendocrine tumours, Serous cystic neoplasms , Acinar cell cystadenocarcinoma Papanicolaou society guidelines of standardized terminology for Pancreatobiliary cytology Non-diagnostic, II Negative, III Atypical, IV Neoplastic benign(IV A) or others (IVB),V Suspicious (for malignancy), VI Positive/ Malignant . In our Institute, a study of cytology of Pancreatobiliary lesions, peripancreatic and peri-portal lymph nodes received over two and half years was performed . Out of total 202 cases ERCP brush from CBD strictures- 149 cases and EUS-FNA – 53 cases.

Mean age was 60.4 years and female preponderance. In our cases, distribution as per Papanicolaou society of cytopathology categories were - non diagnostic (6.4%), negative (23.26%), atypical (21.28%), benign(1.4%),suspicious (6.4%) and malignant (41%) We observed overall diagnostic accuracy- 97.22 % sensitivity 93.54% and specificity 85.71% We faced some problems and limitations. Cystic lesions with paucicellular aspirate are difficult to categorize. Malignancy with cystic change maybe missed (false negative) (possibility in our 2 cases of mucinous cystic neoplasms) Atypia in inflammatory and reactive conditions maybe over diagnosed as malignancy (false positive in biliary strictures) Correlation with clinical, radiological and tumour marker findings is necessary.

Serum CA19.9 levels and radiological findings are useful adjuncts in evaluation of pancreaticobiliary malignancy
Overall ,Papanicolaou system of cytopathology reporting for pancreaticobiliary lesions provides standardiztion of categories, facilitating communication between the interdisciplinary medical team and thus improving management of the patients.

REFERENCES:

1.Adriana N ,Lopez R ,Lidia F : Reclassification of lesions by fine needle aspiration of pancreas and biliary tract using papanicolau classification. J GastrointestOncol 2018;9(5):847-52.
2.Tummidi S, Kothari K, Sathe P et al. : Endoscopic ultrasound guided brush/ fine- needle aspiration cytology- A 15 month study. Diagnostic cytopathology 2018:1-12.
3.Pitman MB1, Layfield LJ : Guidelines for pancreaticobiliary cytology from the Papanicolaou Society of Cytopathology: A review. Cancer Cytopathol. 2014 Jun;122(6):399-411.
4. AbhaGoyal :Pancreaticobiliary cytopathology: an update. Diagnostic Histopathology mini-symposium: cytopathology| volume 24, issue 10, p397-408

Dr. RasikaGadkari, Professor, Pathology, AIIMS, Nagpur

Deciphering NILM

The Bethesda Category of Negative for Intraepithelial lesion or malignancy includes all smears where epithelial abnormality is absent . These include various infections of lower genital tract, changes of atrophy, repair . A diagnosis of infections helps in treatment and an understanding of various cellular changes associated with these infections prevents misdiagnosis.Bethesda classification has given a list of conditions included in NILM.

The cellular changes associated with these conditions that can mimic malignancy are

1. The denenerative changes associated with infection: The smudy clumped chromatin ,karyolysis and karyolysis is seen with denerative changes and such denegenerated cells should be interpreted with caution.
2. Keratinisation of squamous cells: This is seen in leukoplakia, chronic irritation of squamous mucosa as in prolapse and when such parakeratotic cells are present a careful attention to nuclear details is needed.
3. Perinuclear halo due to infection: This needs to be differentiated from a koilocyte and LSIL. The halo due to infections ,especiallyTrichomona and candida, often does not extend to the edge of cell. There is no cookie cutter edge to the vacuole and the nucleus does not show nuclear membrane irregularity or features of dysplasia. The nucleomegaly in dysplasia is more than three times nucleus of intermediate cells, has more dark and coarse chromatin and irregular nuclear membrane.
4. Atrophy with inflammation: The basal and parabasal cells are often seen in sheets, show pyknosis and with nucleomegaly due to inflammation, can mimic malignancy.The bland nature of nucleomegaly is the key.
5. Squamous metaplastic and reactive cells: Reactive cells show presence of nucleoli but are hypochromatic. Squamous metaplastic cells are often seen in groups and have uniform chromatin.

Follicular cervicitis: High N;C ratio of these cells may create problem . A plasm cell, histiocyte and lack of nuclear membrane abnormality help differentiate these. These cells form a small component of smear. There is no tumor diathesis. No squamous differentiation is seen in any of these cells. These cells are differentiated from other small cell malignancies by absence of tumourdiathesis ;Clinical correlation is needed.

However at times few cells in a smear showing inflammation can cause diagnostic difficulty. In atrophic smears repeat smear after application of hormonal creams that assist in maturation of epithelium are helpful. If an infectious agent is seen along with such cells causing diagnostic difficulty a repeat smear after treatment of infection is advised .

Dr S V Kane: Head – SRL- COE

DIGITAL CYTOLOGY

With the advent of 'New age Digital technology' and the increasing acceptance of smart phones in day-today activities, digital imaging has become the cornerstone in almost all aspects of our routine life.In keeping with the times, surgical pathologists have been quick to adapt this advanced technology in various areas of Pathology.

So, why should cytopathologistsbe left far behind? In this lecture, I would like to introduce the concept of "Digital Cytology" and how we may put it to better use in the near future.

The basic element of digital imaging is the 'pixel' (or 'picture element') that represents the smallest addressable element of the photograph on the display device. It is this tiny detail of the cells and background that helps us to arrive at accurate diagnoses.

The process of digital imaging consists of selecting a representative area to be captured for analysis, taking the series of images of interest and then analyzing it on a computer or transmitting it via the internet to a remote reviewer.

Digital imaging can be carried out by three means, viz., still imaging, dynamic imaging and the newly devised whole slide imaging (WSI).

Still and dynamic imaging have been around for quite some time and have their proponents and critics. It is WSI that combines the advantages of both these techniques and simulates the experience of viewing the entire slide in person comfortably on screen with minute details

Capturing the image by this technique involves tile-based (stitching of square frames in a mosaic pattern) and line-based (obtaining linear frames in uninterrupted strips) scanning. In cytology, the smears are multiplanar and images taken in only one plane do not emphasize the depth of these objects. To eliminate this, Z-stacking or multiplanar scanning is employed to get 3 dimensional view. The viewer, thus, receives an image akin to that seen in a glass slide under a microscope, eliminating the need of constant fine adjustment.

WSI requires high-end scanners and fast broadband connections to carry out the interactive process. The implementation is expensive and requires trained staff and cloud storage facility. However, once achieved, it can be used to prepare numerous and extensive 'virtual slide boxes' that can be easily archived and retrieved on-demand for various purposes. These include :

1. Consultation: Rendering of primary or second opinion on digitized images of stained smears . Expert opinion can be obtained from across the globe within few minutes through this technology.
2. Convenience of signing out reports : Primary opinion can be given on smart phones even when the consultant is not available at the center (on leave or while travelling)
3. Image Analysis: Various stains and IHC markers can be visualized on the same cell in a comprehensive digital panel for comparison. Images of previous cytology or biopsy can be easily visualized within no time.
4. Reduction of turn around time : Less time is required to screen the entire slide
5. Proficiency Testing: Use of standardized digital images to test individuals' ability to render correct diagnoses. Many members can see the cases simultaneously without the transfer of slides.
6. Continuing Education: Use of these images for teaching or for conducting slide seminars
7. Multicentre Tumor Board Meetings : To discuss cytology

Research Activities: Use of digitized archives to carry out further studies, especially development of Artificial Intelligence.

Introduction and adaptation of these modalities in our routine surgical pathology practice and quality assessment exercises will eliminate the numerous difficulties, logistical and otherwise, that we encounter due to the current paper and glass slide-centric methods. This assumes great importance in the field of cytology where the smear once made is the only available material to report on, unlike in surgical pathology where paraffin blocks are available as a back-up.

Optimal utilization of the digital scanner requires a revolutionary thought process and change of mindset amongst all the personnel involved in the chain of diagnostics – from technical staff to the consultants.

Another interesting development in our field is the advent of 'artificial intelligence (AI)'. By employing computers to carry out tedious tasks, such as, slide scanning and preliminary selection of 'fields of interest', we can reduce the burden on the staff, increase the efficacy and improve the quality of diagnosis while also decreasing the turnaround time (TAT).

This is already being achieved in the field of cervical cytology by well-known systems like PAPNET, ThinPrep™ Imaging System and Focal Point GS Imaging System used with SurePath™slides. A similar project is well underway at S R L Limited.

Perhaps with better neural networks and standardization, we may soon be able to introduce AI in all other challenging areas of Cytology reporting – urine cytology, effusion cytology and FNAC in lesions of thyroid, lung, pancreaticobiliary tree etc.

MACyCON 2020
3rd Annual Conference

Dr. Shyam Lata Jain, Director Professor and former Head of Pathology, Maulana Azad Medical College

Special achievement:

Teacher par excellence-38 years of academic, research, patient care &administrative experience
Publications – 163 (International, National journals)
Papers presented - 240 (International and national conferences)
Thesis and research projects - 98
Recipient of prestigious National Awards: 'Ernest Fernandes Award' and 'Dr PN Wahi Academy Oration' by 'Indian Academy of Cytologists',
'VishishtChikitsaRatnaAward' by Delhi Medical Council for the year 2019
Important portfolios: *Former Presidents-'Indian Academy of Cytologists', 'Delhi Chapter-IAPM', 'Editor-Newsletter', Executive-Member, currently Executive Member 'Delhi Chapter- IAC'*

- *Subject expert/ committee member: CSIR, UPSC, UGC, ESIC, DMC, NICPO, MCI, DNB & many state and central universities*

Invited as faculty speaker- national and international conferences, CME, workshops etc
Organized and chairperson for many CMEs, Workshops and state conferences.
Peer reviewer , Member Editorial Board: Many International, National Journals.

A Cytological Approach to Renal Tumors(Space Occupying Lesions)

Introduction:
There are several radiological investigations for the diagnosis of renal mass lesions; however, each has its own advantages and limitations.
Urine cytology is also not very effective in detecting renal lesions, since most renal lesions (neoplastic/nonneoplastic) do not shed cells regularly into urine.
Aspiration (FNAC) of renal cysts was started in the year 1939,published data is now available on FNAC of renal mass lesions from 1966 onwards
The most effective method of sampling renal lesions is FNAC, with the diagnostic accuracy upto 91 %, specificity 92-99 % and sensitivity upto 92%.
Indication for preoperative FNAC of renal mass: Cystic lesion: benign cyst / cystic neoplasm; Mass lesion (SOL): clinradiologically suspected of tumor/ tumor like lesion
(to know the precise nature of the mass lesion); If neoplastic lesion: histological type and grade of tumor (if possible); Renal metastases : to confirm the morphological type primary lesion; Non neoplastic, Infective lesions; Metastatic renal tumour to other sites: to confirm its renal origin
Contraindications & precautions:
As such there are no contraindications, but precautions need to be taken.
Bleeding diathesis- haematological parameters should be checked
Radiologically vascular lesion-rarely may lead to fatal haemorrhage post FNA
Radiologically suggestive of Hydatid cyst-post FNA anaphylactic shock
(*Although many times aspirated unknowingly without any complication)*
Complications: Rare reported complications are as follow:
Transient hematuria, severe pain; Hemorrhage, peri renal hemorrhage, A.V fistula; Pneumothorax, Post FNA infections; Urinoma ; Rarely cutaneuos seedling (Chiba's needle)
Technique of FNAC, processing of samples:
Consent to be taken; FNAC - through retroperitoneal approach; Localize the lesion under radiological imaging guidance (USG, CT); it helps to aspirate adequate and representative sample; 22'G' long LP needle- forward &backward movement, apply moderate suction; Cystic mass: cyst fluid- fluid cytology, cytospin; Solid mass: multiple smears: Giemsa stain, immunomarkers, EM; Tissue fragment/ large bloody aspirate-cell block, other ancillary tests
Renal Lesions:
A) Ectopic kidney
B) Non neoplastic:
I) Infections & inflammations:
Pyelonephritis: Ac, TB (with clico-radiological correlation); Perinephric abscess; Xanthogranulomatous PN (XPN)- (D/D & pitfall - RCC); Malakoplakia
II) Renal Infarcts: can present as necrotic lesion with cystic change
C) Cystic lesions of Kidney:
Renal cysts- congenital (single/ multiple e.g. polycystic kidney)
- acquired (e.g. infarct, shrinkage of renal parenchyma)
Complex /multilocular cysts:
Neoplastic Cystic lesion- Renal tumors with cystic degeneration
- Renal tumors with associated cysts
Cyst fluid - Bloody, debri, tissue fragments, atypical cells
Cystic Hamartoma of pelvis
D) Neoplastic Lesions of Kidney
I) *Pediatric Renal Tumors*:
i) Low risk tumors - Mesoblasticnephroma
Cystic partially differentiated Wilm's tumor; Cystic/multicysticnephroma; Completely necrotic WT
ii) Intermediate risk tumors - WT (epithelial, stromal rich, mixed regressive, with focal anaplasia)
iii) High risk tumors -WT(blastemal, diffuse anaplasia type)
- Clear cell sarcoma of the kidney (CCSK)
Renal Rhabdoid tumor (RT)
iv)Other rare tumors - RCC in childhood,
Metanephric tumors
-Neuroblastoma(NB) associated RCC
Primary renal tumors -IntrarenalNB, PNET, Desmoplastic SRCT
Synovial sarcoma, Anaplastic sarcoma of kidney
Intra renal Yolk sac tumor
Lymphoma/ leukemia
II) ***Renal cell tumors in adult*** (*Modified classification):*
i) Familial renal cancer
ii) Malignant renal cell tumors
RCC- Clear cell RCC, Papillary RCC, Chromophobe RCC
Carcinoma of collecting duct of Bellini ,Tubulocystic carcinoma
Renal Medullary Carcinoma
Renal carcinoma with Xp 11.2 translocation/TFE3 gene fusions
RCC in long term survivors after neuroblastoma
Mucinous tubular and spindle cell carcinoma
Thyroid follicular cell carcinoma like tumour of kidney
RCC unclassified
iii)) Renal cell neoplasm in end stage renal disease
RCC associated to acquired cystic disease
Clear cell papillary RCC
iv) Tumors of Low Malignant Potential
Multilocular cystic renal tumors (Multilocular clear cell RCC)
v) Benign Tumours:
Papillary Adenoma
Oncocytoma
Metanephric Adenoma, Adenofibroma
iv) Mixed renal stromal-epithelial tumours
Cystic/multicysticnephroma
Mixed stromal-epithelial tumour
III) Metastatic tumors to kidney
Role of Cytology : In recent yearsthere has been increasing pressure on the cytopathologist to provide an accurate preoperative diagnosis and type of renal tumors; thus it is important to be aware of the spectrum of the renal tumors and non neoplastic tumor like lesions since they pose diagnostic challenges.
Wilm's tumor (WT) is the most common pediatric renal tumor (90%) than other rare non WT(<10%). It is mandatory to correlate cytomorphology of renal lesions with clinico radiological details, histology, immuno-histochemistry and other ancillary tests if possible.
Cytology of some of these of the lesions including tumors are well described in published literature with emphasis on morphologic overlap and diagnostic pitfalls.

Differential Diagnoses of CommonRenalTumors&Tumor-like lesions:
a) Cystic mass lesion in kidney:
Cystic lesion of kidney (simple, polycystic kidney, cystic renal dysplasia)
Cystic / multicysticnephroma
WT- Cystic partially differentiated nephroblastoma,
Cystic WT
CCSK with cystic change
RCC with cystic change
b) MesoblasticNephroma (MBN):
Classic MBN- Mesenchymal WT
Cellular MBN plump cell pattern-Renal RT
-Infantile fibrosarcoma
c) WT: variable morphology-
i) Predominant blastemal component-Round cell morphology
(D/D- other Round cell tumor i.e.NB, RMS, RT, PNET, CCSK etc)
ii) Predominant epithelial component: RCC (Juvenile, papillary) etastatic carcinoma
iii) Predominant mesenchymal component:
Mesoblasticnephroma; Teratoid WT
Metastasis ?Sarcoma ; CCSK- spindle cell variant
iv) Marked anaplasia, necrotic background
Anaplastic WT, Anaplastic CCSK,HG primary renal/metastatic tumor
d) Renal Rhabdoid tumor: Metastatic Extrarenal RT
Embryonal RMS, CCSK
e) Clear cell sarcoma of kidney:
CCSK with prominent nucleoli - Renal Rhabdoid tumor
Spindle cell variant of CCSK- mesenchymal WT, MBN
Epithelioid variant of CCSK- predominant epithelial WT
Anaplastic CCSK- Anaplastic WT
Cystic CCSK- Cystic WT
Perivascular, storiform. palisading pattern of CCSK- Metanephric tumor
f) Renal Cell Carcinoma:
XGPN
Renal cell adenoma
Oncocytoma
Adrenal cortical Tumor (adenoma/ carcinoma)
Epithelioid variant of angiomyoliopma
Clear cell RCC/ Chromophobe / papillary RCC
Urothelial / transitional cell carcinoma

Faculty & Other Positions

Lecturer in dept. of Path., IGMC, 1985-1992.
Asso.Professor in dept. of Path. GMC, Nagpur, since 1992.
Founder Chairperson: Association of Cytologists of Maharashtra since 2017 -2019
President – Indian Academy of Cytologists – 2016
President Elect – Indian Academy of Cytologists – 2015
Co- ordinator for fellowship in Cytopathology – Maharashtra University of Health Sciences. Since 2015
Co-opted Fellow - International Clinical Epidemiological Network, Philadelphia, USA since 1995.
Honorary Secretary : Indian Academy of Cytologists. 2010-2012
Chairperson PG Quiz : Maharashtra Asso. of Pathologists and Microbiologists, 2010 – 2012
President VAPM: VidharbhaAsso. of Pathologists and Microbiologists, 2013- 14.
Convenor : Examination for Cytotechnician& Cytotechnologists, IAC , 2012.
Vice President , VAPM, 2003-2004
Secretary, (VAPM),1998 –2000.
Jt. Organising Secretary of National Conference of Indian Academy Of Cytologists 2000, Nagpur.
Quiz Master for the Intercollegiate Patho.Quiz Jointly Organized by VAPM & GMC, Nag. 1993, 2000, 2002.
Executive Member, Indian Academy of Cytologists - 3 years
Editorial Board - Journal of Cytology
Editorial Board - Indian Journal of Pathology and Microbiology

Teaching& Publications

35 years of teaching Undergraduate & Post Graduates of Pathology
Post Graduate Guide since 1992
Research Publications & Books:
Articles in Peer Reviewed Journals: International 18, National 18.
Invited Articles: MANY- in peer reviewed journal.
Published manuals: 3 - One in Marathi – for Paramedical Health Workers on Cancer Cervix
Contributed Chapter: Text book of 'Cytology and Colposcopy in Gynecological Practice'. JP Publishers, 2008,Edited by Usha B Saraiya&GovianniMiniello

Academic Awards

P. N. Wahi Oration Of Indian Academy of Cytogists –for year 2019. PGI Chandigarh.
Prof. Brigadier Monoj Mohan Roy Oration -West Bengal Chapter Cytology 2016.
Ernest Fernandes Award -Indian Academy of Cytologists -2014 Kota
Dr. SatyawatiMonga Oration - MP Cytology Chapter Meet of IAC, Ujjain, 2013
Dr. Winifred Fernandes Guest Lecture - Mumbai ,Asso. Of Medical Women of India, 2010.
Dr.Aptekar Oration - CAMA &Albless Hospital, Mumbai.2004
Nalini Bai Thakar Award of IAC -Research presentation - 2010
'Service above Self' - Rotary Club of Nagpur Ishanya , 2008
PhD Medicine -Nagpur University, 2008
Nominee-"K.C. BasuMallik Award" For lifetime research -IAPM, 2006.
"ShrimatiShatabdi" Award -Centennial Conf.of Rotary Dist. 3030, 2005
Prize for best paper "Review of 656 FNAC" -Maharashtra Regional conference, 1991.

Fellowships & Funded Research
1) Research Associate of ICMR - "Urine Cytology in Dye Workers". 1984-85
2) "IAC-Fellowship " -Indian Academy of Cytologists, AIIMS, Delhi. 1992
3) International Clin. Epidemiology Network Grant -Research in DownstagingCancer Cervix-1997 –99
4) Chitnavis trust Grant for Research - Rural Screening for Cancer Cervix by VI - 2002-2003

The Yokohama SystemOf The International Academy of Cytology

Dr. M. M. Kamal. MD, PhD.
GMC. Nagpur.

Fine needle aspiration biopsy (FNAB) of the breast has a long history of successful application, initially in palpable lesions and then in impalpable lesions using ultrasound guidance. For more than 50 years, FNAB of breast directed by palpation has provided an accurate diagnostic work up of breast lesions without necessarily any imaging, and this is particularly the case where clinical findings clearly correlate with the FNAB, for example, a cyst that completely drains with no palpable residual lesion, or a clinical abscess that yields purulent material, or a rounded mobile mass that has the characteristic cytological findings of a fibroadenoma, or a fixed gritty mass that has the findings of a carcinoma.

However, where imaging is available, best practice is: to perform pre-FNAB imaging, utilize ultrasound or other imaging to direct the FNAB. The use of ultrasound guidance assists in ensuring the target lesion has been sampled, and correlate the clinical, imaging and cytological findings in the **triple test**.

Correlation protocols:

1.Correlation is essential and a benign FNAB diagnosis that correlates with the clinical and imaging findings does not require any further biopsy and ***no specific recommendation is needed in the report.***

2. However, if the clinical or imaging assessment is indeterminate and not explained by the cytology, or if it is suspicious, the cytology should be reported as benign, and ***follow-up biopsy usually by CNB should be recommended.***

3.Conversely, indeterminate cases on imaging, such as an apparent fibroadenoma that may have some irregularities, when reported as benign on FNAB ***do not require further work up.***

4.Follow-up for a benign FNAB diagnosis varies with the nature of the benign lesion, for example, follow-up for an abscess may be after 2 weeks of antibiotics. Follow-up also varies between institutions and countries, but it is usually at 12–24 months, with the patient returned to routine screening in mammographic screening programs.In recent times, in many centers of well-resourced countries, FNAB has been largely replaced by core needle biopsy (CNB) because CNB is able to provide a more definitive answer in proliferative lesions and in diagnosing malignancy with lower insufficient or inadequate rate. **Despite these perceived benefits of CNB, and looking at the obvious advantages of FNAB** as a simple, rapid, and cost effective technique and its continued use in the diagnosis of palpable masses in women belonging to developing countries, the International Academy of Cytology (IAC) intends to promote:

the appropriate use of breast FNAB, improve the reporting of breast FNAB, facilitate the communication between the cytopathologist and the clinical management team, and to promote further research into breast disease utilizing FNAB to further benefit patient care.

To do this, the IAC System has established a clear categorization of **breast reports into five tiers,** each with a clear definition and description, and a specified risk of malignancy (ROM) on similar lines as the Bethesda System for reporting Thyroid FNAC and the Milan System for reporting Salivary lesions. The ROM is then linked with management recommendations. These recommendations include several options because it is recognized that the **management options available in well-resourced countries are often different to those in low- and middle-income countries**, most particularly in the availability of imaging and CNB.

The process of creating the reporting system was initiated by a core group of cytopathologists with considerable expertise and interest in reporting breast fine needle aspiration cytology, meeting under the auspices of the IAC in May 2016 at the International Congress of Cytology in Yokohama. At the inaugural meeting of the Breast Group members who attended the Yokohama International Congress of Cytology, the use of a 3- or 5-stage coding system was discussed. The IAC Yokohama System has five categories that can be stratified by their risk of malignancy (ROM) and coded as C1-C5:Insufficient/ inadequate; Benign Atypical; Suspicious of malignancy; Malignant. As this Panel discussion aims to resolve the dilemmas of Indeterminate Lesions or Atypia of Undetrmined Significance , without much ado, we are in need to know what this system has to say about Category 3 & 4 as these are the gray areas of reporting cytology of breast lesions. I will be able to describe only briefly and for more details and text we need to wait for the Atlas to be released in this March by IAC.

Category: Atypical*Definition:* The term atypical in breast FNAB cytology is defined as the presence of cytological features seen predominantly in benign processes or lesions, but with the addition of some features that are uncommon in benign lesions and which may be seen in malignant lesions.

The ROM of an atypical diagnosis varies in the literature from 22 to 39%, reflecting the variability of the definition and usage of the term "atypical" in the literature. Two more recent studies that looked atapplying the IAC Yokohama System had ROM of 13 and 15.7% . As the body of literature regarding theSystem grows, the ROM of an atypical cytologic diagnosis will be refined.

There are **three major causes for "atypical" diagnoses** on breast FNAB cytology, and in many cases these may all be contributing factors. Firstly, the **skill of the operator** is most important: low cellularity and obscuring blood or ultrasound gel, poor handling of the material -overly forceful smearing causing crush artefact and dispersal or air-drying artefact (*delay in immersing slides in alcohol for Papanicolaou-stained slides and slow drying artefact in wet slides* intended for Giemsa-stained slides*).*

All of these result in suboptimal smears making itepretation difficult.

Secondly, interpretative problems do occur, and are due to **overlapping cytological features** between proliferative breast lesions, such as usual epithelia hyperplasia, intraduta papillomas andfibroadenmas, and low-grade in situ or invasive carcinomas.

The specific diagnosis of low grade ductal carcinoma in situ (LGDCIS) and lobular carcinoma in situ (LCIS)

and the exclusion of invasive carcnoma in these cases is not possible in FNAB cytology. It is here that **expertise is required in the recognitionof their features**- that can suggest the diagno sis and help to distinguish in situ le sions from proliferative lesions prevent a false positive diagnosis as carcinoma And a false negative diagnosis as a proliferative lesion.CNB can be recom mended.Thirdly, the **degree of train ing, experience**, ongoing case load and expertise of the cytopathologist in interpreting the material **impact on Atypical rates**. Less experienced pa thologists may focus on dispersal or nuclear atypia and ignore the overall diagnostic features of the lesion, most typically, a fibroadenoma.

The key to the correct diagnosis of proliferative and lowgrade malignancies is the strict application of key cytological features diagnostic for spe cific lesions, including the assessment of smearing patterns, the architecture of tissue fragments and the degree of nuclear atypia.

Management Recommendations:

Repeat FNAB is recommended if the atypical diagnosis is considered primarily due to a technical problem.

When there is sufficient quality material for interpretation, the triple test should be applied.

If either or both the clinical and imaging findings are indeterminate or suspicious a repeat FNAB or, more commonly if available, CNB is mandatory. If neither clinical nor imaging findings are of concern, there is considerable variation in management dependent on the lesion and between breast care centers.The management options include either to repeat the FNAB or to perform a CNB, or to review the patient with imaging at 3–6 months, with subsequent repeat FNAB or CNB if the lesion has changed. If imaging and CNB are not available, repeat FNAB and close follow-up are recommended.

Category: Suspicious of Malignancy

Definition: The term "suspicious of malignancy" in breast FNAB is defined as the presence of some cytomorphological features, which are usually found in malignant lesions, but with **insufficient malignant features, either in number or quality,** to make a definitive diagnosis of malignancy. The type of malignancy suspected should be stated whenever possible.

The definition and use of the term "suspicious of malignancy" varies in similar fashion to the term "atypical" and this is reflected in the published range of PPV of a suspicious diagnosis from 60 to 95%. Two recent studies utilizing the IAC Yokohama System had ROM for a "suspicious of malignancy" diagnosis of 97.1 and 84.6%. The inclusion of a suspicious category helps maintain the high PPV of a malignant diagnosis while maintaining the sensitivity of FNAB cytology.

The causes of a "suspicious of malignancy" diagnosis are similar to those of the atypical category and include technical problems related to the skill of the operator performing the FNAB, making smears and handling the material, the experience of the interpreting cytopathologist, and the nature of the breast lesion .

The cytological features of proliferative lesions and low-grade in situ or invasive carcinomas overlap and great care has to be taken in assessing smear patterns and nuclear atypia. This mirrors the difficulties in surgical pathology in distinguishing atypical proliferative lesions from LGDCIS.LGDCIS includes a range of solid, cribriform, micropapillary, papillary and solid papillary subtypes, and although rarely producing a clinical or radiological mass it may be associated with microcalcifications. In surgical pathology, LGDCIS is often an incidental finding in association with both benign and malignant lesions, or a lesion that is found in the work up of mammographic calcifications . **FNAB cytology cannot specifically diagnose LGDCIS and at the same time exclude invasive carcinoma**.

In FNAB cytology, LGDCIS most typically produces highly cellular smears, a pattern of large tissue fragments showing cribriform, micropapillary or papillary architecture, a variable but often marked increase in dispersed single cells showing mild to moderate nuclear atypia, a greatly reduced number or total lack of myoepithelial cells associated with the epithelial tissue fragments, and scant or absent bare bipolar nuclei (WATCHMAN) in the background. Recognition of these features prevents under-calling LGDCIS as a proliferative lesion, and over-calling LGDCIS as invasive carcinoma. Although controversial in relation to the specific diagnosis of LGDCIS, the categorization of these lesions as "suspicious of malignancy" is recommended. Correlation with imaging is required, utilizing the triple test approach, and a more specific diagnosis in both cytology and imaging refines the triple test approach.

The diagnosis of high-grade ductal carcinoma in situ (HGDCIS) by FNAB is also controversial. FNAB cannot diagnose HGDCIS to the exclusion of invasive carcinoma. HGDCIS is often associated with casting pleomorphic calcifications on mammography, and occasionally may produce a palpable or imaging mass lesion in the absence of invasive carcinoma.

In FNAB cytology smears, HGDCIS has been reported to be associated with extensive necrosis, calcifications and high-grade nuclear atypia in dispersed single epithelial cells and both small and larger crowded epithelial tissue fragments. Such smears are often low in cellularity reflecting the small volume of cancer cells in ducts relative to breast tissue. These findings cannot exclude high grade invasive carcinomas, particularly those of no special type and metaplastic carcinomas, which can also show necrosis. It is highly debated as to whether "suggesting that there is an HGDCIS component" assists management. Few institutions and cytopathologists have attempted to diagnose the presence of HGDCIS "with or without an invasive component" or to use the "suspicious of malignancy" category for these cases.

In the past an outright malignant breast FNAB could lead to a full axillary clearance only to find just HGDCIS in the mastectomy. Currently, axillary dissection at the time of resection of the breast primary is guided by positive cytology of a sentinel lymph node either by CNB/or biopsy.

Furthermore, the use of sentinel lymph node biopsy and surgical management of HGDCIS and invasive carcinoma are similar in many institutions.

A highly dispersed pattern of large atypical cells may also raise the differential diagnosis of lymphoma, and a "suspicious of malignancy" categorization may be prudent to avoid unnecessary surgery. If lymphoma is suspected based on ROSE, material may be triaged for flow cytometry if available and/or cell block for immunohistochemistry.

Management Recommendations

A "suspicious of malignancy" FNAB cytology diagnosis should lead to review of the imaging findings, but further biopsy is an absolute requirement and most commonly this will be a CNB.

If CNB is not available, then surgical excision biopsy is required before specific treatment in almost all cases.

When the "suspicious of malignancy" diagnosis is made at ROSE, immediate CNB is ideal.

Reference: The International Academy of Cytology Yokohama System for Reporting Breast Fine-Needle Aspiration Biopsy Cytopathology:
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Abstract

Effectiveness of FNAC at diagnosis and subclassification of NHL.

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Introduction:
The Fine Needle Aspiration is a favoured entry level diagnostic modality at evaluation of Lymphadenopathy. One of the area often that often meets the difficulty is Non Hodgkins Lymphoma for its cytodiagnosis and typing.There are for and against opinions at offering diagnosis and type of NHL by FNAC. Pathologist and oncologist by now are in favour of FNACs to be used in diagnosis of NHL. Though the lymph node biopsy remains a gold standard of diagnosis and for appropriate therapeutic strategies.
There are studies which favours the Fine needle aspiration cytology as a diagnostic and dependable tool for NHL when NHL is suspected clinically.
Trend has been set by oncologist in favour of FNAC as an alternative,adequately representative, diagnostic and treatment friendly evaluator mode in lymphadenopathy suspected cases of NHL. The diagnostic disparity between biopsy and FNAC that is cytology versus histopathology is because of the numerous subclasses of NHL in classification which is immunophenotypic, therapy oriented and based to microanatomical relationship of cells and related structures.
The present paper addresses the dilemma of reliability of diagnosis of NHL on FNA through a clinical cytological audit in the Department of Pathology of past two and half year period.

OBJECTIVES:To compare the cytodiagnosis of NHL and its type with histopathological diagnosis and typing.
To study the utility of retaining NHL classification of International Working Formulation for actionable diagnosis on FNAC.
To study Limitations and advantages of FNAC in NHL diagnosis and cytomorphological discreteness.

MATERIAL AND METHOD:
The 47 cases included within the present study were clinically suspected of NHL with either cervical, axillary, or both lymphadenopathy.
Complete blood counts were recorded.
FNAC and staining was carried out by standard methodology as described in text.
The diagnosis ofNHL was carried by standard text and reference over the topic.
International Working Formulation was adopted to diagnose and subclassify the NHL which utilizes cell types, its combination nuclear grade as its basis of cytologic preparation.
The comparisons as depicted in objective were carried out.

Results
Of 47 cases clinically suspected Lymphoma Lymphadenop thy , 41 were concluded to be NHL cytological preparation of FNA aspirates.
Of 41 cases, 35 cases were available for histological compare sion (LN Biopsy).
Of the 35 cases excepting 02 all matched NHL pathology.
Two cases were correct for diagnostic of process but were incorrect for typing of lymphoma where florid Lymphoid hyperplasia of lymphocyte predominant HL was misinte preted as NHL in paediatric patient.The working formulation revealed the following distribution of NHL in 33 cases as follows:
Low grade:06
Intermediate grade:20
High Grade:07
The classification of international working formulation the actionable subclassification (details of which are presented in paper).
The Limitation at misinterpretation of lymphocyte predom nant HL as NHL in 02 cases was observed due to paucicell larity and non representation of RS cell in the aspirate.
Of 41 cases, 06 cases were such which could be diagnose as recurrence of NHL on FNAC and who had received a chemo therapy earlier. No biopsies were carried out in these cases.
CONCLUSIONS:
The cytological audit of past three and half years of NHL diagnose on FNAC revealed high concordance for the diagnosis and subtypes of NHL.
The application of International working formulation on cytologic preparation offers actionable diagnosis of NHL.
The recurrence of NHL can be diagnosed with high efficiency on FNAC.
With oncologist, resorting to a quick and reliable diagnostic modality FNAC finds favour amongst them not only at diagnosis but for appropriate therapeutic strategies, knowing the recurrence and disease extension.

Key words: NHL, FNAC, Working formulation.

Epithelial membrane antigen,vimentin,Desmin,calretinin,E-cadherin on cell block preparations to distinguish well-differentiated adenocarcinoma and benign reactive atypical mesothelial cells

Epithelial membrane antigen,vimentin,Desmin,calretinin,E-cadherin on cell block preparations to distinguish well-differentiated adenocarcinoma and benign reactive atypical mesothelial cells.

Authors:Dr Neha Jaiswal , Dr.Arvind Bhake Sir

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Introduction

The common difficulty encountered in cytology of fluids is the inability to separate the exfoliated atypical benign mesothelial cells from the metastatic cells of well-differentiated adenocarcinoma .Cell blocks are particularly useful when the conventional cytological abnormalities are indetermined for definite diagnosis.Such dicey situation of morphological interpretation can be resolved by immunocytochemistry on cell blocks.A panel of EMA,desmin,E-cadherin,Calretinin and vimentin has been reported to be useful at resolving the dilemma of well-differentiated adenocarcinoma versus atypical mesothelial cells

Objectives

1.To compare the morphological diagnosis of conventional cytology and cell block.
2.To interpret the results of immunocytochemistry of Epithelial membrane antigen,calretinin,desmin,E-cadherin,vimentin on cell block at distinguishing well-differentiated adenocarcinoma from atypical mesothelial cells

Methods

Prospective study comprizing of 35 cases.Fluids were conventionally processed and stained.Cytomorphology was assessed by standard text available on topic.Cell blocks of fluid were made by clot method.Patient were divided as follows:
Group 1 - Adenocarcinoma patients(15cases)
Group 2 - Benign reactive mesothelial cell reaction(12 cases)
Group 3- had patients with overlapping cytomorphological features of well-differentiated adenocarcinoma and benign mesothelial cell with atypia(8 cases).
Immunocytochemistry was performed by standard protocol over cell blocks. Intrepretation of immunostaining in mesothelial and adenocarcinoma cells were graded semi-quantatively for Epithelial membrane antigen,Vimentin,Desmin,E-cadherin and Calretinin.

Results

Epithelial membrane antigen has 100% sensitivity with 97.3% specificity for adenocarcinoma while calretinin shows 100% sensitivity and 92.3% specificity in reactive meothelial cells . Desmin showed positivity in 84 % cases of reactive mesothelial hyperplasia.Vimentin showed 70 % positivity in reactive mesothelial cells while 2% in adenocarcinoma.E-cadherin showed 100 % positivity in adenocarcinoma.

Conclusion

The study concluded that morphological features are better appreciated in cell block than conventional smear.

It can be concluded in the light of observation that improved immunomarkers are able to distinguish the reactive atypical benign mesothelial cells with atypia from well-differentiate adenocarcinoma cells if the combination of the ICC panels are used.

Keywords-Immunocytochemistry,Cell block,Epithelial Membrane Antigen,Vimentin,Desmin,E-cadherin,Calretinin.

Field Cancerisation

Author: Dr.Madhuri N.Gawande, MDS, Professor, SPDC, Sawangi, Meghe, Wardha

Introduction: Oral squamous cell carcinoma ranks 6th most common cancer worldwide. It is the second most common cause of mortality after cardiovascular diseases in developing countries like India. India is known as 'cancer capital' and every second case diagnosed as cancer is oral cancer. Field cancerisation is the constellation of locoregional change triggered by longterm exposure of a field of tissue to a carcinogens; induces carcinoma or dysplasia, which can be recognised histologically;the remaining 'field', despite adequate resection, is grossly normal but more susceptible to future carcinomas. Oral squamous cell carcinoma is multicentric in origin. Multicentric origin through a process of field cancerisation would seem to be an important factor in the persistence or recurrence of oral squamous cell carcinoma following therapy.

The possibility of occurrence of second primary tumor make the clinician alert and such patients who have undergone surgical treatment for malignancy should be kept under long term follow up so that occurrence of second primary tumor is detected as early as possible and suitable treatment is instituted.

Key words: Oral cancer, Field cancerisation

Metaplastic Breast Carcinoma - A Diagnostic Challenge for Cytopathologists

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INTRODUCTION- Metaplastic carcinoma refers to highly heterogeneous group of neoplasm characterised by admixture of adenocarcinoma with metaplastic areas typically of spindle, squamous, osseous or chondroid differentiation.

Metaplastic carcinoma of breast(MCB) is rare type of breast cancer that accounts for 1% of all cases of invasive breast cancer.

The diagnosis of MCB is quite difficult on cytology and even with core needle biopsy. MCB tends to present at more advanced stage, increased risk of tumour recurrence and worse prognosis.

MATERIALS AND METHODS- 50 year old female presented with hard lump of size 6*5 cm in right upper inner and retroareolar quadrant since 1 year with no axillary lymphadenopathy.

FNAC smears showed spindle to pleomorphic cells, multinucleated giant cells with polygonal squamous cells and foci of heterogeneous elements like chondroid in background of poorly differentiated carcinomatous cells.

Histopathology sections showed uncapsulated biphasic tumour mass consisting of epithelial and stromal component. Stromal component showed spindle cells. Polygonal cells also seen. Epithelial Component showed small cells. Tumour also showed giant cells and myxoid cartilagenous and osteoid formation along with areas of necrosis and hemorrhage.

RESULT - FNAC diagnosis of Metaplastic breast carcinoma was confirmed on Histopathology.

CONCLUSION- The case is presented for it's rarity and also of diagnostic challenge especially if tumour is composed of mainly sarcomatous element with extensive chondroid differentiation. Accurate preoperative diagnosis is important since MCB doesn't respond to anticancer drugs and hence surgery is preferred as initial treatment over preoperative anticancer drugs. We should extensively search for heterologous components (like chondromyxoid , chondroid or osseous) to arrive at diagnosis.

KEYWORDS-Metaplastic, breast, chondroid.

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Fine needle Aspiration Cytology Of Breast lesions Using the International Academy Of Cytology Of Yokohama system- A Single Institute Retrospective Analysis

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Type Of Presentation: Oral paper

INTRODUCTION

Breast cancer is the most frequent cancer among Indian women, having recently overtaken cervical cancer. Fine needle aspiration cytology(FNAC) is a simple, inexpensive, OPD procedure which is an integral component of triple testing. It helps in avoiding unnecessary biopsies in benign breast lesions and confirms preoperative diagnosis in malignant lesions. FNACs of 1147 breast lesions were categorized as per the newly proposed Yokohama reporting system and risk of malignancy(ROM), predictive values were assessed for each category.

Material And Methods: This is a retrospective study from 1st Sept 2016 to 31st Dec2018. FNAC slides of 1147 cases were retrieved and categorized as per the newly proposed IAC Yokohama reporting system. Demographic details, radiologic findings and local examination findings were taken from cytology records. FNAC was performed by the standard procedure, routine cytology stains Giemsa and Papanicolaou stain were done. Adequacy was assessed using Toluidine blue in some cases. Special stains Immunocytochemistry were reviewed whenever available. Cytologic diagnoses was compared to histologic diagnoses, where available.

RESULT: Out of 1147 cases, 1110 were females and 37 were males. Mean age was 35.9 years. Samples were categorized as category 1 (insufficient material 4.9%), category 2 (benign) 64.86%, category 3 (atypical) 8.28%, category 4 (suspicious for malignancy) 3.3% and category 5 (malignant) 18.7%. ROM was 20% for category 1, 0.34% for category 2, 28.5% for category 3, 91.4% for category 4 and 98% for category 5.

CONCLUSION:

The IAC Yokohama System standardizes reporting and effectively stratifies breast lesions by their ROM. It is likely to bring uniformity in reporting as well as help in planning appropriate management.

Keywords:

Breast FNAC. Yokohama reporting system. Predictive values and Risk of malignancy

SOLITARY PLASMACYTOMA IN STERNUM: A RARE PRESENTATION

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INTRODUCTION : Solitary plasmacytoma is a localized neoplastic proliferation of B cells occurring in bone and characterized by absence of systemic involvement attributing to myeloma. Solitary plasmacytoma represents <5% of all plasma cell neoplasms and mostly occur in spine, pelvis, ribs but very rarely in sternum. Overall incidence is 0.7/ 100000 population. Primary tumours of sternum are generally malignant and metastatic , and solitary plasmacytomas of sternum are very rare tumours and very few cases have been reported.

MATERIALS AND METHODS :65 year old male patient came with complaint of back pain and on examination demonstrated firm to hard, 4*5 cm ,nontender mass on anterior chest wall in midline and attached to underlying bone. FNA was performed which showed uniformly distributed plasma cells with abundant cytoplasm , eccentric nucleus and speckled cartwheel chromatin at places. CT thorax, full body MRI scan ,Bone marrow aspiration and biopsy , serum and urine electrophoresis and all other necessary investigations were carried out . Also CT guided biopsy was done for histopathology correlation.

RESULT : In conjunction with radiological, biochemical , cytomorphological findings diagnosis of plasmacytoma was made.

CONCLUSION : Solitary plasmacytoma is a rare and radiosensitive tumour. Also majority of patients progress to multiple myeloma over a period of 2-4 years. Hence ,timely diagnosis is of utmost importance.

KEYWORDS : Plasmacytoma, sternum, solitary.

MAST CELL COUNT IN ATOPIC AND CONTACT DERMATITIS.

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Introduction: Mast cells are the major effector cells in immediate hypersensitivity through activation via the high affinity IgE receptor and FcƐRI. Given the broad array of proinflammatory mediators secreted from FcƐRI – activated mast cells and IgE elevation is seen in a majority of atopic dermatitis patients. Mast cells are believed to be involved in the pathogenesis of atopic dermatitis.

Aims and objectives: To assess mast cell count in skin biopsies from patients with atopic and contact dermatitis.

Materials and methods: The study will include a total of 50 skin biopsies. The tissues will be fixed in 10% formalin, processed by routine paraffin embedding technique. The sections will be stained with freshly prepared toluidine blue stain. The toluidine blue stained sections will be evaluated for qualitative and quantitative aspects of mast cells. Mast cells will be counted per field at 100 X magnification. Suitable statistical tests would be applied .

Key words: mast cells, atopic dermatitis, contact dermatitis


Thank You