"Time and tide wait for none". Another six months have rolled by and it is time to release yet another newsletter from the department. Our department is blessed with a team of highly enthusiastic and energetic faculty and post-graduate students. Their untiring efforts have borne fruits in the form of introduction of improvised modalities in undergraduate and post-graduate teaching, research publications and a facelift to the entire department. Besides the academic events, department of pathology has been a forerunner in organizing periodic cultural events in the college.

All our ventures, academic and otherwise have been possible only because of the constant support and encouragement of our dynamic Principal Dr. M.G. Shivaramu who has played a pivotal role in all our endeavours.

The current issue highlights all the interesting happenings in the department that are mention worthy.

Regards

Dr. Vijay Shankar S
THE BETHESDA SYSTEM FOR REPORTING THYROID CYTOPATHOLOGY – A STEP TOWARDS UNIFORMITY IN REPORTING OF THYROID FNAC

The thyroid Fine needle aspiration cytology (FNAC) has an important role in decision making as to treat the patient medically or opt for surgical management. Advent of FNAC practice has increased the number of surgeries being done for thyroid nodules that are malignant from 14 % to 50%. However, the routine reporting of thyroid cytology have several limitations which include subjective variability among different pathologist encompassing inter laboratory variation. However with the aim to add objectivity to the reporting of thyroid cytology the National Cancer Institute (NCI) hosted the “the NCI Thyroid Fine Needle Aspiration State of the Science conference” at Bethesda ,Maryand on 22\textsuperscript{nd} and 23\textsuperscript{rd} October 2007. This led to the recommendations for a standard reporting format which aimed at facilitating communication among pathologist, physician, surgeon, endocrinologist and radiologist. Consequently the Bethesda System of Reporting Thyroid Cytopathology came into existence. The two key features of this included:

1. Placing each FNAC into one of the six categories
2. It provides risk of malignancy for individual category in order to guide clinician in selecting appropriate treatment modality.

The Bethesda System for Reporting Thyroid Cytopathology: Recommended Diagnostic Categories*

I. Nondiagnostic or Unsatisfactory
   Cyst fluid only
   Virtually acellular specimen
   Other (obscuring blood, clotting artifact, etc)

II. Benign
   Consistent with a benign follicular nodule (includes adenomatoid nodule, colloid nodule, etc)
   Consistent with lymphocytic (Hashimoto) thyroiditis in the proper clinical context
   Consistent with granulomatous (subacute) thyroiditis
   Other

III. Atypia of Undetermined Significance or Follicular Lesion of Undetermined Significance

IV. Follicular Neoplasm or Suspicious for a Follicular Neoplasm
   Specify if Hürthle cell (oncocytic) type

V. Suspicious for Malignancy
   Suspicious for papillary carcinoma
   Suspicious for medullary carcinoma
   Suspicious for metastatic carcinoma
   Suspicious for lymphoma
   Other

VI. Malignant
   Papillary thyroid carcinoma
   Poorly differentiated carcinoma
   Medullary thyroid carcinoma
   Undifferentiated (anaplastic) carcinoma
   Squamous cell carcinoma

INTERESTING CASE FROM THE FILES OF CYTOPATHOLOGY
Carcinoma with mixed features (specify)
Metastatic carcinoma
Non-Hodgkin lymphoma

**The Bethesda System for Reporting Thyroid Cytopathology: Implied Risk of Malignancy and Recommended Clinical Management**

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Risk of Malignancy (%)</th>
<th>Usual Management†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nondiagnostic or Unsatisfactory</td>
<td>1-4</td>
<td>Repeat FNA with ultrasound guidance</td>
</tr>
<tr>
<td>Benign</td>
<td>0-3</td>
<td>Clinical follow-up</td>
</tr>
<tr>
<td>Atypia of Undetermined Significance or Follicular Lesion of Undetermined Significance</td>
<td>~5-15‡</td>
<td>Repeat FNA</td>
</tr>
<tr>
<td>Follicular Neoplasm or Suspicious for a Follicular Neoplasm</td>
<td>15-30</td>
<td>Surgical lobectomy</td>
</tr>
<tr>
<td>Suspicious for Malignancy</td>
<td>60-75</td>
<td>Near-total thyroidectomy or surgical Lobectomy §</td>
</tr>
<tr>
<td>Malignant</td>
<td>97-99</td>
<td>Near-total thyroidectomy §</td>
</tr>
</tbody>
</table>

FNA, fine-needle aspiration.

† Actual management may depend on other factors (eg, clinical, sonographic) besides the FNA interpretation.

‡ Estimate extrapolated from histopathologic data from patients with “repeated atypicals.”

§ In the case of “Suspicious for metastatic tumor” or a “Malignant” interpretation indicating metastatic tumor rather than a primary thyroid malignancy, surgery may not be indicated.

**Authors:** Dr. Amita K,  
Associate prof,  
Department Of Pathology
“Patau Syndrome”-Most Severe Viable Autosomal Trisomy

Authors: Dr. Swati Sahni, Dr. Amita K, Dr. Vijay Shankar S.

Department Of Pathology
Adichunchanagiri Institute Of Medical Sciences

INTRODUCTION:
‘Patau Syndrome’, synonymous with trisomy 13 is a rare chromosomal abnormality which affects approximately 1 in 15000 live births and is associated with multisystemic abnormalities. Amongst the three trisomies compatible with extra-uterine life namely, Patau, Down & Edward Syndromes, Patau Syndrome is the most severe and has the least incidence.

AIMS AND OBJECTIVES: To study its diagnostic features on Perinatal autopsy with brief review of literature.

MATERIAL & METHODS: A 24 year old primi with 19 weeks’ gestation, radiologically diagnosed with an anomalous baby underwent termination. Perinatal autopsy was conducted through a linear midline incision from symphysis mentii to symphysis pubis circumventing the umbilicus. Thoracic and abdominal organs removed enmasse revealed multiple abnormalities.

RESULTS:

Autopsy findings:
1. Gross examination:
  a) Weight : 400grams
  b) Crown heel length : 24.5 cms
  c) Crown rump length : 17 cms
  d) Left foot : 2 cms
  e) Head circumference : 14 cms
  f) Chest circumference : 10.5 cms

2. External abnormalities:
  a) Cleft lip/Cleft palate
  c) Short webbed neck with cystic hygroma
  d) Lowset ears
  e) Coarctation of aorta
  f) Absent forearm bones, Agenesis of fingers
  g) Omphalocele with protrusion of liver and intestinal coils
  h) One umbilical artery and one umbilical vein

Figure 1- Cleft Lip & Palate
Figure 2- short webbed neck
3. Microscopy:
1) Sponge like neck swelling: Thin walled endothelium lined channels filled with RBCs. Smooth muscle bundles were noted. Features suggestive of Cystic hygroma.
2) Congestive changes in bilateral kidneys, adrenals, liver, spleen & Intestine.

**Impression:** Patau syndrome

**Conclusion:** Perinatal autopsy is the gold standard for diagnosis since ultrasonography may not provide a conclusive opinion as in the present case. Genetic counseling is mandatory once the diagnosis is confirmed by cytogenetic studies.

**References:**


AWARDS AND ACCOLADES

Dr. Vijay Shankar - Re-elected as secretary of Karnataka Chapter of Indian Association of Pathologists and Microbiologists for 2\textsuperscript{nd} consecutive term

WORKSHOPS/ TRAINING ATTENDED

- Short course in Educational methodology conducted by RGUHS- Dr. Abhishek.M.G, Dr. Amita K, Dr. Shobha.S.N

- Workshop on “Healthcare And Environmental Ethics” conducted at Adichunchanagiri institute of Medical Sciences, in association with Asia Pacific Chair, International Network of the UNESCO Chair in Bioethics (Haifa). Dr. Vijay Shankar.S, Dr. Amita K

- Participated as delegate in Preconference workshop on “Ways To Engage Learners” at National conference in Medical Education (MECon-2016) held on at JSS Medical college Mysuru. Dr. Vijay Shankar Dr. Abhishek.M.G, Dr. Amita K.

- Participated as delegate in Preconference workshop on “ICT Enabled Teaching” at National conference in Medical Education (MECon-2016) at JSS Medical college Mysuru. Dr. Vijay Shankar Dr. Abhishek.M.G, Dr. Amita K.

Poster presentation by Dr. Tony Joe Peechatt 1\textsuperscript{st} year post-graduate student at the 42\textsuperscript{nd} Annual KCIAPM State Conference in Mangalore

Poster presentation by Dr. Swati Sahni, 2\textsuperscript{nd} year post-graduate student at the 42\textsuperscript{nd} Annual KCIAPM State Conference in Mangalore
PUBLICATIONS BY FACULTY & PGs


5. Amita K, Nitin Kumar H, Shobha SN, Vijay Shankar S. The Role Of Platelet Parameters As A Biomarker In The Diagnosis And In Predicting The Severity Of Preeclampsia. Indian Journal of Pathology and Oncology, April-June 2015;2(2);57-60


11. Vijay Shankar S, Nanjundaswamy D, Amita K, Raghuveer CR. Primary Papillary Thyroid Carcinoma in Thyroglossal Duct Cyst in an Adolescent Girl: A Rare Case Report and Literature Review. Indian Journal of Pathology and Oncology, July September 2015;2(3);175-78.


13. M.G. Abhishek, and Sarvesh, BM ,”Study of association between perinatal asphyxia and Nucleated red blood cell count in umblical cord blood”. International journal of advance case reports,2015;2(16):1003-1006,

<table>
<thead>
<tr>
<th>No.</th>
<th>Event Description</th>
<th>Date</th>
<th>Location</th>
<th>Speakers</th>
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<tr>
<td>1.</td>
<td>Labour analgesia and Critical Care workshop</td>
<td>26th August 2015</td>
<td>AIMS, B.G.Nagara</td>
<td>Dr.A.L.Hemalatha, Dr. C.S Indira</td>
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<tr>
<td>2.</td>
<td>Recent advances in Head and Neck cancers. State level CME on 11th September 2015</td>
<td>11th September 2015</td>
<td>AIMS, B.G.Nagara</td>
<td>Dr.A.L.Hemalatha, Dr. C.S Indira</td>
</tr>
<tr>
<td>3.</td>
<td>Vascular surgery – An Update 25th August 2015, AIMS, B.G.Nagara</td>
<td>25th August 2015</td>
<td>AIMS, B.G.Nagara</td>
<td>Dr.A.L.Hemalatha, Dr. C.S Indira</td>
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<td>5.</td>
<td>Anemias revisited Understanding the Pathodynamics in Clinical &amp; Laboratory Practice CME on 7th August 2015</td>
<td>7th August 2015</td>
<td>AIMS, B.G.Nagara</td>
<td>Dr. C.S Indira</td>
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<td>6.</td>
<td>42nd Annual state KCIAPM conference, 11th &amp; 13th September 2015</td>
<td>11th &amp; 13th September 2015</td>
<td>A.J.Institute of Medical Sciences, Mangaluru</td>
<td>Dr.Vijay Shankar.S, Dr. Sarvesh.B.m, Dr.Sanjay.M &amp; Dr. Ashok.K.P</td>
</tr>
<tr>
<td>9.</td>
<td>“Patho Insight – Current Perspectives In Diagnostic Pathology”</td>
<td>20th November 2015</td>
<td>AIMS, B.G.Nagara</td>
<td>Dr. A.L.Hemalatha, Dr. Vijay Shankar.S, Dr.Abhishek.M.G Dr.Amitha.K, Dr. Sanjay.M, Dr. Shobha.S.N, Dr. Nanjundaswamy.D, Dr. Prakash Dr. Indira.C.S, Dr. Naganna M L, Dr. Anoosha.K, Dr.Ashok.K.P, Dr. Swati, Dr. Raghuveer, Dr. Amita Kumari, Dr.Tony Joe Peechatt, Dr. Sachin Kumar Dixit</td>
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**STAFF & PGs - Department of Pathology**

*Sitting (L to R):* Dr. Naganna.M.L, Dr.Amita.K, Dr. Vijay Shankar.S, Dr. A.L.Hemalatha, Dr. Abhishek.M.G, Dr. Shobha.S.N, Dr. Nanjundaswamy.D

*Standing (L to R):* Dr. Prakash.B.V, Dr. Sanjay.M, Dr. Amita Kumari, Dr. Tony Joe Peechat, Dr. Ashok.K.P, Dr. Anoosha.K, Dr. Sarvesh.B.M, Dr. Sachin Dixit

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