MATERIAL AND METHODS
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The present study has been conducted on the patients attending the out patient department and admitted patients in M.L.B. Medical College Hospital, Jhansi. Detailed clinical findings, history and examination findings has been recorded on a working proforma (Appendix - I).

Fine Needle Aspiration Cytology (FNAC) of thyroid has been done and fixed in alcohol and ether then stain by Papanicolaou's staining method.

On follow up thyroid tissue is collected and fixed in formalin and after routine fixation stain by Haematoxylin and Eosin staining.

MATERIAl FOR FNAC:

1- Spirit swabs to clean the skin
2- Fine needle 21-23 gauge
3- Syringe 10 or 20 ml
4- Fixative
5- Slide with labels

METHOD FOR FNAC:

1- Cleaning of skin
2- Introduction of needle
3- Needle manuovers under negative pressure
Vacuum created by retraction of plunger, the needle is moved back and forth in stabbing motion. Negative pressure (vacuum) is maintained until the needle is withdrawn to subcutis.

4- Withdrawal of needle
5- Immediate slide preparation and fixation

Specimen almost entirely contained with in the needle lumen is forcibly ejected on slide. Detach the needle to introduce air into the syringe and then reattaching it, enhance cellular expulsion. The aspirate is spread thinly and evenly by a second slide.

6- Smear fixed for Papanicolaou's staining in alcohol and ether.

7- Staining of slide by Papanicolaou's stain

**Papanicolaou's Staining Method:**

Fixed smears of FNAC were subjected to following processing:

1- 80% Ethyl Alcohol ----- 5 (dips) --- 8-10 second
2- 70% Ethyl Alcohol ----- 5 (dips) --- 8-10 second
3- 50% Ethyl Alcohol ----- 5 (dips) --- 8-10 second
4- Distilled water ------ 10 (dips) --- 16-20 second
5- Harris Hematoxylin without acetic acid --- 6 minute
6- 0.5% aqueous solution of HCl. -- 3-5 (dips) -- 5-10 second
7- Running water -- -- 6 minute
8- Dehydration in ethyl alcohol (50% - 95%) -- 5 (dips each) -- 8-10 second
9- Orange G- 6 -- -- 2 minute
10- 95% Ethyl Alcohol (3 times) -- 5 (dips) -- 8-10 second
11- EA - 50 -- -- 2-3 minute
12- 95% Ethyl Alcohol -- 5 (dips) -- 8-10 second
13- 95% Ethyl Alcohol -- 5 (dips) -- 8-10 second
14- Absolute Ethyl Alcohol -- 5 (dips) -- 8-10 second
15- Alcohol + Xylene -- 5 (dips) -- 8-10 second
16- Xylene (5 times) -- 10 (dips) -- 16-20 second
17- Mount in D.P.X.

Staining method for tissue section (H & E Stain):

(E.C. CLAYDEN, 1971)

1- Absolute Alcohol ---- ---- 10-15 second
2- 95% Alcohol ---- ---- 10-15 second
3- 95% Alcohol ---- ---- 10-15 second
4- Tap water ---- ---- 10-15 second
5- Stain with Haematoxylin ---- ---- 10-20 minute
6- Tap water ---- ---- 15-30 second
7- Differentiate with 1% acid alcohol. ---- ---- 10-20 second
8- Tap water ---- ---- 10-20 second
9- Tap water ---- ---- 5 minute
10- Counter stain with 1% eosin ---- ---- 1-5 minute
11- Tap water  
12- 95% Alcohol  
13- 95% Alcohol  
14- Absolute Alcohol  
15- Absolute Alcohol  
16- Xylene  
17- Mount in D.P.X.
PROFORMA

TITLE: FINE NEEDLE ASPIRATION CYTOLOGY ITS CORRELATION WITH BIOPATHOLOGY IN THYROID TUMOURS.

I. CLINICAL DATA

Case No. ______

1. Patient's Name ____________________________ Age/Sex __________

2. Address ____________________________________________

3. Clinical Diagnosis ________________________________________

4. History of present illness:

   a) Duration ____________________________
   b) Pain : Present/Absent
   c) Anhydroses : Present/Absent
   d) History of : Present/Absent
      trauma.
   e) Presentation : Unilateral/
      Bilateral
   f) Rate of : Slow/Gradual
      Rapid
   g) Mode of : Thyroxine/
      treatment Iodine/Drugs
   h) Physiological : Pregnancy/
      state. Puberty/
      Adult
   i) Pressure : Dysphagia/
      symptoms Dysnoea/Hoarseness of voice

5. Family history ____________________________________________

6. History of past illness ____________________________________

7. General Examination:

   Pulse   BP   Resp   Tremor
   Temp.   Oedema   Lymphnode

8. Local Examination:

   1. Number : Single/Multiple
   2. Size :
   3. Surface : Smooth/Nodular
   4. Mobility: Movile/Fixed
   5. Consistency : Cystic/
      Soft/Firm
   6. Overlying skin : Normal/affected
   7. Tenderness : Present/Absent
   8. Exophthalmos : Present/Absent
   9. Myosis : Present/Absent
   10. Pulsation : Present/Absent
   11. Movement of : Present/Absent
deglution
II. PATHOLOGICAL DATA

1. FNAC Findings (No.______) Diagnosis _____________

<table>
<thead>
<tr>
<th>PAP Stain</th>
<th>Remarks</th>
<th>MGG Stain</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1. Follicular cells</td>
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<tr>
<td>2. Colloid</td>
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<tr>
<td>3. Inflammatory cells</td>
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<tr>
<td>4. Malignant cells</td>
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<td>5. Any other findings</td>
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2. Histopathological Findings (No._______)

(1)
(2)
(3)
(4)

DIAGNOSIS: