

not conclusive, but in 2 cases it demonstrated cytomorphological features of probable ASC. We emphasize one case in which only the squamous component was valued by histology, but cytology provided clues that prompted immunohistochemical analysis which led to the diagnosis of probable ASC.

**Conclusion:** Cyto-histological correlation augments the diagnostic accuracy in ASC of the lung, emphasizing the complementarity of both procedures.

#### PS-02-006

**The impact of the Bethesda System for Reporting Thyroid Cytopathology (TBSRTC): A retrospective study of 828 aspirates with emphasis on the prior "indeterminate" category**

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**Objective:** We evaluated the impact of implementing TBSRTC in an academic community hospital.

**Method:** FNAs from Jan/2004 to Dec/2010 were reclassified in TBSRTC: nondiagnostic (ND), benign (B), atypia or follicular lesion of undetermined significance (AUS/FLUS), suspicious for follicular neoplasm (FN), suspicious for malignancy (S) and malignant (M). FLUS and FN were classified according to presence of Hürthle cells as HCLUS and FN-HC.

**Results:** A total of 828 FNAs (480 patients) were obtained: 46 ND (5.55 %), 682 B (82.4 %), 9 S (1.1 %) and 25 M (3.0 %). The 66 (8.0 %) indeterminate categories were reclassified: 1 ND (1.5 %), 8 B (12.1 %), 5 AUS (7.6 %), 34 FLUS (51.5 %), 5 HCLUS (7.6 %), 3 FN (4.5 %), 9 FN-HC (13.6 %) and 1 S (1.5 %). Thyroidectomies were performed in 125 patients (26 %): benign lesions in 83 (66.4 %), 7 (5.6 %) follicular adenoma and 2 (1.6 %) follicular carcinomas, 1 (0.8 %) medullary carcinoma, 21 (16.8 %) papillary carcinomas and 16 (12.8 %) papillary microcarcinomas (PMC). Risk of malignancy (RM) excluding PMC: B 1.4 %, AUS/FLUS/HCLUS 5 %, FN/FN-HC 11.1 %, SM 50 % and M 77.8 %.

**Conclusion:** TBSRTC criteria led to more specific diagnosis. FN/FN-HC category has a two-fold RM when compared to AUS/FLUS/HCLUS.

#### PS-02-007

**FNA of thyroid lesions: A brief report**

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**Objective:** The material of this study is consisted of selected FNA biopsies performed in the last 10 months period and followed by the Endocrinology Department.

**Method:** The Bethesda System of reporting thyroid cytopathology was used. Slides were stained with Papanicolaou preparations.

**Results:** Totally 380 cases were examined, 288 of which were female and 92 were male. Age of the patients varied between 5 and 88. 121 cases were diagnosed as nondiagnostic or non-satisfactory. 211 cases diagnosed as consistent with a benign follicular nodule. Only 4 cases were diagnosed as a consistent with lymphocytic thyroiditis in correlation with the clinical features. Only 1 case diagnosed as a granulomatous thyroiditis. Diagnosis as "Atypia of undetermined significance or follicular lesion of undetermined significance" was made only in 2 cases whereas "Follicular neoplasm or suspicious for a follicular neoplasm" was diagnosed in 1 case. "Suspicious for malignancy" diagnosed in 15 cases. 2 cases were diagnosed as malignant.

**Conclusion:** Although diagnostic terminology and morphologic criteria for cytologic diagnosis of thyroid lesions are well established in The Bethesda System, difficulty in categorizing the cases and underestimation or overdiagnosis are quite frequent issues. To solve this problem, retrospective studies which include surgical and cytopathologic reports, to examine slides by at least two different pathologists in different times will be helpful.

#### PS-02-008

**Metastatic pulmonary adenoid cystic carcinoma: Report of a case diagnosed by fine-needle aspiration cytology**

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**Objective:** A rare case of adenoid cystic carcinoma of ceruminal gland with pulmonary metastasis presented with characteristic cytological and histological findings.

**Method:** The biopsy specimen of the patient, a 45 year-old man with painful, growing mass in his external auditory canal was interpreted as an adenoid cystic carcinoma. He was treated surgically and received post-operative radiotherapy. After 8 years, a distant metastasis relapse was observed. Computed tomography (CT) of the chest depicted multiple spiculated masses suggestive of metastases throughout both lung fields, the diameter of the largest measuring 2 cm. CT guided percutaneous transthoracic fine needle aspiration biopsy was performed from the largest lesion.

**Results:** Cytological examination of the aspirates revealed large spherical hyaline globules representing basement membrane material surrounded by neoplastic cells. The cells were cohesive, closely packed, and had uniform round to oval hyperchromatic nuclei with scanty cytoplasm. These features were suggestive of an adenoid cystic carcinoma.

**Conclusion:** Patients with adenoid cystic carcinoma could be frequently encountered with disease recurrence confined to the lung. Fine-needle aspiration cytology provided a conclusive diagnosis of adenoid cystic carcinoma.



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(51.5 %) pulmonary adenocarcinomas and 17 (51.5 %) brain metastases-out of the 33 paired specimens have KRAS mutations, and only 16 (48.5 %) paired specimens were concordant between the primary and the metastasis.

**Conclusion:** The status of EGFR mutation is relatively consistent between primary and metastasis comparing to that of KRAS mutation in pulmonary adenocarcinomas. However, discordance for the mutation statuses does happen. Accordingly, repeat analysis is recommended if tissue from metastasis or recurrence is available.

#### PS-01-042

##### Morphologic analysis of pulmonary neuroendocrine tumors

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**Objective:** We tried to measure and analyze characteristics of neuroendocrine tumors in lung by image analysis and help to diagnose them.

**Method:** It was analysed that sixteen cases of typical carcinoid tumors, five cases of atypical carcinoid tumors, fifteen of small cell carcinomas, fifty one cases of large cell neuroendocrine carcinomas. We analyzed the nuclear area, perimeter, major axis and minor axis using i-solution image analyzer software package.

**Results:** The mean nuclear area was 488.00  $\mu\text{m}^2$  in the typical carcinoid tumors, 499.30  $\mu\text{m}^2$  in the atypical carcinoid tumors, 481.48  $\mu\text{m}^2$  in the small cell carcinomas, and 684.05  $\mu\text{m}^2$  in the large cell neuroendocrine carcinomas. After the statistical results, every method was effective to distinguish large cell neuroendocrine carcinoma from other tumors and the circumferences of nucleus was the most effective to distinguish among them.

**Conclusion:** Pulmonary neuroendocrine tumors were the nuclear morphologic differences of each tumors. Therefore, diagnosis that considers morphologic differences of pulmonary neuroendocrine tumors contributes to increase reproducibility and accuracy.

Sunday, 9 September 2012, 09.30 - 10.30, Congress Hall  
Foyer 3rd Floor

#### PS-02 Poster Session Cytopathology

#### PS-02-001

##### Cytolytic vaginosis: May cause infertility?

I. I. Akgun\*, L. E. Yazici Ensari

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**Objective:** Vagina is covered by the flora dominated by *Lactobacillus* spp. during the term from puberty to the menopause.

An abundant growth of lactobacilli may result in lysis of vaginal epithelial cells, named as Cytolytic Vaginosis. This cytolytic process may cause the symptoms as seen in candidiasis. We observed Pap smears to evaluate if cytolysis has a relationship with infertility.

**Method:** In the Pathology department of Mardin Maternity Hospital, 2011–2012 period, we examined Pap smear cases suffering from the similar symptoms as candidiasis. Of the 4672 smears, 82 were diagnosed as "Cytolytic Vaginosis". No growth was observed in cultures.

**Results:** The number of the cases suffering from the infertility was 261 (%5.58) among 4672 cases. In the cytolytic vaginosis group this ratio was %32.9 ( $n=27$ ). The ratio of the infertile cases of cytolytic vaginosis group over general population was significantly higher ( $p<0.05$ ).

**Conclusion:** Our results are in favour of supporting the hypothesis of the relation between cytolytic vaginosis and infertility. Lactobacilli are thought to have inhibitive role in fertility by changing the vaginal pH and adhering to the epithelial cells so inhibiting the sperm penetration.

#### PS-02-002

##### Penicillium and aspergillus spp. on pap smears from the surprising origin

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**Objective:** Fungal organisms are commonly seen on smears. Some unusual species as *Aspergillus* and *Penicillium* are so rare and generally seen via contamination. In this study, we investigated the origin of the many extraordinary fungal organisms seen on Pap smears in series in only a few months.

**Method:** In Pathology department of Mardin Maternity Hospital, we observed both smear and vaginal discharge materials, came from the same hospital but different clinicians, for 3 months.

**Results:** 149 smears came from clinician A and 335 smears from clinician B. Curious fungal organisms with huge branching hyphae and macroconidia were seen in 15 smears among 149 smears (2 *Aspergillus* and 4 *Penicillium* species were recognized morphologically). No growth was observed in cultures. Interestingly, among all 335 smears came from clinician B, there was no abnormal fungus. The smear samples with unusual fungal components all came from the same gynecologist. This made us strongly consider the probability of contamination.

**Conclusion:** *Penicillium* and *Aspergillus* spp. are extremely rare in vaginal smears. In our study, these fungi are thought to be airborne passed from the thick layer of the mold spreading on the ceiling of the office.



Volume 461 • Supplement 1 • September 2012

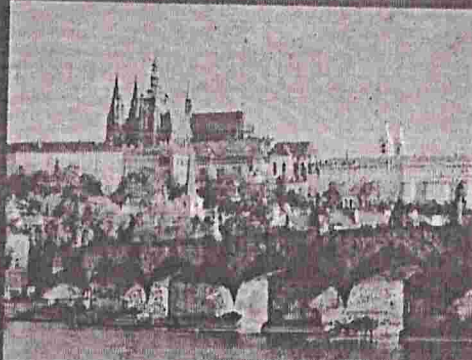
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ADONIS  
1359-6462(12)00000-0

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