I Did Not Expect That; Surprises During the Daily Practice of Fine-Needle Aspiration

A Slide Seminar Co-Sponsored by American Society of Cytopathology & Papanicolaou Society of Cytopathology
Case 1

Dr. Ritu Nayar
Professor of Pathology, Northwestern University
Feinberg School of Medicine
Chicago, Illinois
CASE HISTORY

• 44 year old female
• 12 x 6 x 7 cm well defined mass in the head of the pancreas
• Patient sought a second opinion on FNA material at Northwestern Memorial Hospital, Chicago
• Cytopathology received one ThinPrep slide and cell block/immunostains for review
Cytologic Features
One Thin Prep slide
Cytology
Cell Block

Beta Catenin
Diagnosis ?
Case 2

Dr. Tarik Elsheikh

Staff Pathologist, Cleveland Clinic

Cleveland, Ohio
Case History

• Pleural fluid cytology (SurePath) from a 65 year old man. He presented with pleural thickening/mass two weeks earlier, at which time underwent a core biopsy that was diagnosed as “Mesothelioma”. The neoplasm was WT1 positive, and negative for CEA, TTF1, and Renal cell antigen. There is no previous history of other malignancies.
Diagnosis?
Case 3

Dr. Philippe Vielh
Département de Pathologie
Institut Gustave Roussy
Villejuif CEDEX
Clinical findings

- 67 yr old man
- 2003: incomplete surgery for prostatic carcinoma, Gleason 6
- 2009: right and painful inguinal adenopathy, 2 cm in diameter

Clinical examination
- isolated inguinal lymph node, no hepatosplenomegaly

Biology
- No blood abnormality
- No increase of PSA

Imaging:
- Suspicious echography
- Normal CT-Scan and scintigraphy
FNAC (1)
FNAC (2)
Diagnosis?
Case 4

Dr. David Chhieng
Professor of Pathology
Yale University
New Haven CT
History

- 43 year old female present with bilateral thyroid nodules on routine US examination
- The patient was asymptomatic
- Past history: a long standing history of Hashimoto’s thyroiditis with hypothyroidism
- Medication: Synthroid 30 mg qd
- Physical examination: Normal thyroid without palpable masses; no cervical adenopathy
- US thyroid: 1.2 cm nodule on the left side and 1 cm nodule on the right side
- FNA was performed on both nodules
- The following images were from the left nodules
- The right nodules showed similar cytologic and Flow cytometry findings
Direct smear, Diff Quik stain, x200
Direct Smear, Diff Quik stain, x600
ThinPrep preparation, Papanicolaou stain, x100
ThinPrep preparation, Papanicolaou stain, x400
ThinPrep preparation, Papanicolaou stain, x600
Flow cytometry results preformed on FNA specimen from the L nodule
Diagnosis?
CASE 5

Assist. Prof. Ika Kardum-Skelin, MD, PhD

Department of Clinical Cytology and Cytogenetics, Merkur University Hospital

University of Zagreb, School of Medicine, Zagreb, Croatia
CASE HISTORY

IN APRIL 2012, THE 11 YEAR OLD BOY PRESENTED WITH

- vomiting, which lasts three weeks
- fatigue
- fever (38.2°C)
- without night sweats or pain
CLINICAL FINDINGS

PHYSICAL EXAMINATION

- pale
- exhausted
- palpable lymph node in the right axilla
- the abdomen above the chest, tense and painful on palpation
IMAGING

LUNG X-RAY
- bilateral pleural effusion, without signs of secondary foci in lungs

ULTRASOUND (US) AND COMPUTED TOMOGRAPHY (CT) OF THE ABDOMEN
- tumor mass in the retroperitoneum with thrombosis of the inferior vena cava
- ascites

MAGNETIC RESONANCE IMAGING (MRI)
- secondary focal areas of the hypothalamus - pituitary
FOLLOW UP

CENTRAL DIABETES INSIPIDUS DEVELOPED

FINE NEEDLE ASPIRATION CYTOLOGY (FNAC) OF ASCITIC FLUID WAS PERFORMED
FNAC OF ASCITIC FLUID (5-1)
FNAC OF ASCITIC FLUID (5–2)
FNAC OF ASCITIC FLUID (5-3)
FNAC OF ASCITIC FLUID (5–4)
FNAC OF ASCITIC FLUID (5-5)
FNAC OF AXILLARY LYMPH NODE (5–6)
FNAC OF AXILLARY LYMPH NODE (5-7)
DIAGNOSIS?