Interesting Case Conference

10/29/2012
HISTORY

• 31 year old female with hyperparathyroidism

• Thyroid ultrasound
  ▪ Peripherally calcified nodule 1.1 x 0.9 x 1.1 cm in the right lobe.
  ▪ Enlarged parathyroids: 2.3 x 1.1 x 4.8 cm and 0.9 x 0.4 x 1.3 cm
  ▪ US-guided thyroid FNA: 3 passes
Diff-Quik: Low Power
Very cellular
Diff-Quik: Low Power
Flat sheets
Diff-Quik: Cells don’t look that bad
DIFFERENTIAL DIAGNOSIS

I see a cellular specimen but also ...

- Flat sheets
- Not much overlapping
- Nuclei don’t look bad – not that irregular

Preliminary diagnosis: Nodular hyperplasia?
Attending says: Papillary thyroid carcinoma (PTC)?
Fellow then says: Uh oh.
Let’s look at the Diff-Quik again

- The follicular cells are HUGE compared to the size of the lymphocytes & red blood cells.
- Pseudoinclusions.
Diff-Quik: Pseudoinclusions galore
Diff-Quik: More pseudoinclusions
Pap stain: Grooves, powdery chromatin, & marginally placed micronucleoli

Also, compare the size of the lymphocyte to the size of the follicular cells
Pap stain:
Grooves, powdery chromatin, & pseudoinclusions
FINAL DIAGNOSIS

• Right thyroid, nodule, FNA:
  ▪ Positive for papillary thyroid carcinoma.
LESSONS

• When you see a very cellular thyroid aspirate, look for pseudoinclusions.

• With PTC, you may not see the papillary fragments.

• With PTC, you can have flat sheets.
  ▪ It mimics those of macrofollicle fragments seen in benign follicular nodules.
  ▪ When see monolayered sheets, check the cell arrangement and nuclear features.

• Not seeing much colloid should have also raised a red flag.

• The nuclear enlargement and pleomorphism should have raised a red flag.