ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2012 – Cytology

Case #4
Signalment: Dog, briard, M, 10yrs
Sample: skin

Description of cytological findings

Adequacy of the slide is variable in terms of staining and air bubbles under the coverslip.
The smear is moderately to highly cellular (depending on slides) with abundant, finely granular pigment (melanin) dispersed in the background. Masses made of large amount of mostly amorphous, light blue material containing variably sized black granules (keratinized pigmented debris) is present.
There is a mixed population of cells with prevalence of variably sized groups of cohesive cells. Cells are of medium size (15-20 microns), indistinct cell borders inside groups, very high N/C ratio, and light blue cytoplasm sometime containing fine black granules (melanin). Nuclei are round to oval, with finely granular chromatin and no evident nucleoli. Occasionally, single cells have a moderate amount of a glassy light blue cytoplasm (keratinization). Mitotic figures are rare. Anisocytosis and anisokaryosis are mild to moderate.
Large macrophages with variable sized, black cytoplasmic granules (melanophages) are sometimes present.
Spindle to stellate cell with abundant fine cytoplasmic black granules (melanocytes) are free or associated to the cohesive groups above described.
Erythrocytes (mild blood contamination), naked nuclei, spindle mesenchymal cells (fibroblasts) and some aggregate of purple extracellular matrix (ECM) are present.

Score

Design	(2 points)
Adequacy	(1 point)
Cellularity	(1 point)
Keratinized pigmented debris	(2 points)
Mixed population	(1 point)
Prevalence of cohesive cells	(1 point)
High N/C ratio	(1 point)
Nuclear features	(2 points)
Cytoplasmic features	(2 points)
Mitosis	(1 point)
Anisocytosis/anisokaryosis	(1 point)
Melanophages	(1 point)
Melanocytes	(1 point)
Blood contamination/naked nuclei/mesenchymal cells/ECM	(1 point)

MD

Skin – pigmented follicular malignant tumor	(2 points)