

Correlation of ultrasonographic features and cytologic or histologic diagnoses in splenic lesions from dogs: 60 cases (2002 to 2008)

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Purpose: To describe and evaluate ultrasonographic characteristics of splenic disorders and to pursue any relationship with cytologic or histologic diagnoses

Materials and Methods: Medical records were reviewed for patients that had undergone both abdominal ultrasonographic procedure and ultrasound-guided fine-needle aspiration (FNA) or surgical biopsy of splenic lesions from January 2002 to February 2008 at Seoul National University Hospital for Animals. Sixty dogs, 32 cases with FNA alone, 17 cases biopsy, and 11 cases both FNA and biopsy, were available for this investigation.

Results: The dogs ranged from 2 to 15 years old (mean, 9.5 years), and gender distribution was 31 females (9 spayed) and 29 males (13 neutered). Seventeen breeds were presented with 55 small breeds. The ultrasonographic appearance of splenic disorders could be classified into 10 types including normal appearance, depending on the distribution, echogenicity and echotexture of splenic lesions. Twelve of 32 cases had multiple small hypoechoic nodules/masses lesion, at the highest frequency, in cases with FNA alone; 8 of 17 cases hypoechoic nodules/masses, in cases with biopsy alone; and 7 of 11 cases hypoechoic nodules/masses in cases with FNA and biopsy. Thus, hypoechoic nodules/masses were identified in total 20 of 60 (33.3%) cases at the highest frequency. The correlation between FNA and biopsy results showed 36.3% in cases with both procedures. Fifteen of 28 cases with histologic diagnosis showed malignancies including all 3 cases with diffuse heterogeneous appearance (1 hemangiosarcoma, 1 round cell tumor, 1 spindle cell tumor); and 9 cases of 15 hypoechoic nodules/masses (3 hemangiosarcomas, 3 malignant fibrous histiocytomas, 2 lymphomas, 1 spindle cell tumor); and 3 lymphomas in case with diffuse hypoechoic, diffuse hyperechoic, and hyperechoic nodules/masses lesion, respectively.

Conclusions: Ultrasonographic examination is a superior and sensitive modality for detection of splenic lesions. Although exploiting any significant correlation between ultrasonographic features and specific splenic disorders using above criterion-based ultrasonographic appearance has failed, it is considered that splenic ultrasonography could at least provide helpful guideline for differentiating between malignant and benign lesions.

Key words: spleen, ultrasonography, fine needle aspiration, biopsy, cytology, histopathology, dog

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