INTRODUCTION

Cytology is the first step in thyroid nodules diagnosis in human medicine. The diagnostic accuracy of this technique has not been specifically evaluated in dogs, considered low in some publications due to frequent blood contamination. The objective of this retrospective study was to compare the diagnostic accuracy of cytology obtained by fine needle biopsy, as well as to evaluate the quality of the samples obtained with different techniques in dogs with thyroid neoplasia.

MATERIALS AND METHODS

Forty one dogs were included (graphic 1) with a histopathological diagnosis or a presumptive imaging diagnosis (CT/ultrasound) of a thyroid tumour (graphic 2) in which cytology samples had been obtained with 23G or 25G needles, by fine needle aspiration (FNNAC), fine needle with no aspiration (FNAC) or without occluding the needle hub were included (table 1). The quality of the samples was classified into three categories (I non-diagnostic, II diagnostic, III superior diagnosis) based on blood contamination, cellular quantity and cellular features (table 2). All samples were evaluated by the same person, Juan Borrego PhD, DACVIM (Onc)

RESULTS

The diagnostic accuracy in all cases (n=41), regardless of the technique used or the needle gauge, was 78%.

The highest diagnostic accuracy (92%) was achieved in the FNNAC occluding the needle hub group (n=26), with 54% of the samples being classified as type III quality (table 3). In the other groups FNNAC without occluding the needle hub (n=10) (table 4) and FNAC (n=5) (table 5) the diagnostic accuracy was lower, 60% and 40% respectively.

CONCLUSIONS

The results obtained in the present study suggest that cytology is a useful technique in the initial approach to the diagnosis of a patient with a thyroid mass (78% accuracy without taking into account the puncture technique used or the type of needle), and specifically the FNNAC occluding the needle hub with 95% accuracy and samples of higher diagnostic quality, results that should be evaluated in prospective studies.

BIBLIOGRAPHY