

EARLY DIAGNOSIS OF ENZOOTIC NASAL ADENOCARCINOMA (ENA) IN GOATS. A PRELIMINARY STUDY

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Objectives

To assess the efficacy of nostril thermography and RT-PCR from nasal swabs for the early detection of enzootic nasal adenocarcinoma (ENA) in goats.

Introduction

Enzootic nasal adenocarcinoma (ENA) of goats, also known as an enzootic nasal tumour, is a contagious neoplasm of the nasal mucosal glands aetiologically associated with the betaretrovirus ENTV-2. Clinical signs are absent in the early stages when the tumour is small, but as the disease progresses, symptoms such as dyspnea, seromucous nasal discharge, snoring, coughing, exophthalmos, and skull deformities are observed. There is no effective treatment or vaccine, and disease control on affected farms is challenging due to the apparent lack of humoral immune response, making detecting preclinically affected goats difficult.

Materials and Methods

The experimental protocol was approved by the Ethics Committee for Animal Experiments from the University of Zaragoza (reference PD29/24 NE).

Twenty-nine Murciano-Granadina milk goats from a herd in Spain with a high prevalence of ENA were included in the study. Each animal underwent a clinical examination, and thermographic images of the nostrils were taken. Nasal swabs were collected for the specific detection of ENTV-2 via RT-PCR using the EXOone Caprine Enzootic Nasal Tumour Kit (Exopol, Spain). Post-mortem examination of the heads was conducted, and tissue samples were taken for histopathological analysis.

Results

Positive thermographic images were obtained in 13/29 goats, of which 10 were confirmed to be ENA-positive by histopathology. The RT-PCR test was positive in 17/29 goats, with thermography showing positive results in 11 of them. Histological confirmation was obtained in 11/17 PCR-positive goats.

Conclusions

These preliminary results suggest that thermography and RT-PCR may be valuable tools for the early *in vivo* detection of goats affected by ENA, which would allow for improved disease control.