Feline calicivirus strains isolated in Italy

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Abstract

Feline Calicivirus (FCV) has been recognised as major oral and respiratory pathogen of cats. The high correlation among the field viruses and FCV-F9 serotype has represented the immunological bases for the employ of FCV-F9 serotype as a vaccine for calicivirosis in cats. The aim of this paper was to evaluate, by in vitro neutralization assays, the antigenic correlation among the vaccine F9 and FCV field strains isolated in Sicily (Italy) from cats showing clinical forms referable to calicivirus infection. The results confirm the low correlation between FCV-F9 strain and calicivirus strains spread in the feline population.

Key words: feline calicivirus, cats, serum neutralization test

Introduction

Feline Calicivirus (FCV) has been recognised as major oral and respiratory pathogen in cats. Notwithstanding the vaccination is widely performed since many years, FCV is still widely spread. The high correlation among the field viruses and FCV-F9 serotype has represented immunological bases for the employ of FCV-F9 serotype as a vaccine for calicivirosis in cats; the widespread of FCV strains antigenically different from F9 strain have caused outbreaks of “vaccine breakdowns” (Pedersen et al. 1983a, b, Harbour et al. 1991, Laurizen et al. 1997). The aim of this paper is to evaluate, by in vitro serum neutralization test, the antigenic relationship among the F9 vaccine strain and FCV field strain isolated in Sicily from cats showing clinical forms referable to calicivirosis.

Materials and Methods

Field isolates

The study was carried out on 22 cats coming from Messina province, showing symptoms referable to calicivirus infection (rhinotracheitis, conjunctivitis, ulcers on the tongue, stomatitis). Oropharyngeal and ocular swabs were taken from each specimen.

Virus isolation

The swabs were collected into 2 ml of RPMI and sent to our laboratory. For virus isolation, the Crandell Feline Kidney (CrFK) cells in RPMI, supplemented with L-glutamine, antibiotics and 10% of fetal calf serum (Sigma) were used.