STUDY ON YERSINIOSIS BY \textit{Y. pseudotuberculosis} IN WILD AND DOMESTIC ANIMALS FROM ITALY


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Introduction

\textit{Y. pseudotuberculosis} infection has been reported in various animals and in man: wild animals are considered as a reservoir but the epidemiology of this infection is not yet fully understood.

Pulsed Field Gel Electrophoresis (PFGE) has been shown as a suitable method for subtyping \textit{Y. pseudotuberculosis} strains: aim of the present work was the characterization of isolates from clinical cases of Yersiniosis in wild and domestic animals to improve the knowledge of epidemiological features of this infection.

Fig. 1: dendrogram of \textit{Y.pseudotuberculosis} isolates after PFGE (Nott): species, year and Region of origin are also indicated.

Materials and methods

Forty-four isolates of \textit{Y. pseudotuberculosis}, from cases of Yersiniosis (n 42) and from asymptomatic wild boars (n 2), were included in this study. The cases occurred from 1996 to 2011. In hares (28), sheep (10), eastern cottontail (1), roe (1), canary (1) and cat (1), from 6 different Italian regions; three isolates from sheep and two from hares respectively, derived from the same two outbreaks. All isolates were confirmed as inv - positive by PCR. PFGE was carried out, after digestion with Nott enzyme and cluster analysis was performed by Bio numerics software.

Results and Discussion

The obtained dendrogram described 40 different PFGE patterns, with a similarity coefficient ranging from 65% to 100% and grouped isolates from the same outbreak with a genetic similarity >95%; nevertheless, the same similarity was observed between two isolates from hares from Emilia Romagna (2010-2011), and between isolates from sheep and from hares, differing for region and year of isolation. Eight different groups were described with 85% similarity, including isolates from different areas, species and years but belonging to the same group. The study of Yersiniosis in animals can improve the knowledge of epidemiological features of this infection, necessary to prevent effectively outbreaks of Yersiniosis in animals and man.

References