Quinolone resistance in campylobacter isolated from man and poultry following the introduction of fluoroquinolones in veterinary medicine

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Eight hundred and eighty-three strains of Campylobacter spp. isolated between 1982 and 1989 from human stools and poultry products were screened for quinolone resistance. In this period the prevalence of resistant strains isolated from poultry products increased from 0% to 14%. During the same period the prevalence in man increased from 0% to 11%. The emergence of quinolone resistance has implications for the identification of campylobacter up to species level: the susceptibility for nalidixic acid can no longer be used as a criterion for identification in the laboratory. The rapid emergence of resistant campylobacter may also have important implications for the treatment and prophylaxis of diarrhoeal disease. The increase of quinolone resistance coincides with the increasing use of fluoroquinolones in human and veterinary medicine. Extensive use of enrofloxacin in poultry and the almost exclusive transmission route of campylobacter from chicken to man, in The Netherlands, suggests that the resistance observed is mainly due to the use of enrofloxacin in the poultry industry.