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Antimicrobial sensitivity patterns of UK chicken *E. coli* isolates

D.G.S. BURCH

Octagon Services Ltd, Old Windsor, Berks, UK, SL4 2NR

Introduction

The development of resistance to antimicrobials used in veterinary medicine and the threat of resistance transference to man, especially of the fluoroquinolones (FQs), is a very important issue in the EU. The need for a baseline is essential from which monitoring of resistance can be implemented, if new guidelines under consideration are introduced.

Materials and Method

Antimicrobial sensitivity data on *Escherichia coli* isolated from chickens during 1999 by two centres of the Veterinary Laboratories Agency (VLA) were analysed. Lasswade provided data on 286 isolates mainly from Scotland Jan-Dec and Shrewsbury supplied data on 198 isolates from England and Wales from all VLA labs Jan-July and Shrewsbury alone Jan-Oct 1999. The isolates were from clinical cases, which may have been exposed to antimicrobial therapy previously.

Results (Ref.table1)

Enrofloxacin was consistently the most active (99%) of the systemically active antimicrobials, with difloxacin, another FQ, giving similar results (95%). These were followed by trimethoprim/sulpha (76%) and ampicillin (62%) but amoxycillin was low (15%). Tetracycline (52%) and doxycycline (56%) were quite similar. Of the gut active compounds, apramycin (98%) was most active followed by lincomycin/ spectinomycin (91%), spectinomycin (88%) and neomycin (83%)

Discussion

The high level of sensitivity to the FQs is very positive, as enrofloxacin has been used in poultry in the UK for over 7 years. The low level of sensitivity to amoxicillin is of concern but is probably associated with the low strength disc (2mcg) used, as ampicillin's result was much higher (10mcg). This highlights the need for standardization of testing.

Table 1. Antimicrobial sensitivity pattern of UK chicken *E. coli* isolates

Antimicrobial Disc conc. (mcg)	Lasswade (%) (n = 286)	Shrewsbury (n = 198)	Overall (%)
Apramycin (15)	9 8	9 8	9 8
Neomycin (10)	7 9	8 9	8 3
Spectinomyc. (25)	-	8 8	8 8
Linco/spect* (150)	9 1	-	9 1
Amoxicillin (2)	1 5	-	1 5
Ampicillin (10)	-	6 2	6 2
Doxycycline (30)	5 6	-	5 6
Tetracycline (10)	4 6	6 1	5 2
Trimeth/Sul. (25)	7 2	8 2	7 6
Enrofloxacin (5)	9 9	9 8	9 9
Difloxacin** (10)	9 5	-	9 5

*Lincomycin/spectinomycin – 239 isolates

**Difloxacin – 71 isolates

[See the slides used by the author for the presentation \(HTM only\)](#)