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RETROSPECTIVE DATA ANALYSIS ON *SALMONELLA* SEROTYPES IN ANIMALS AND ANIMAL PRODUCTS IN SOUTH AFRICA FROM 2007 TO 2014

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Introduction:

Salmonella species are a major cause of salmonellosis in both humans and animals in many countries worldwide. Serotype determination of *Salmonella* species is important for disease assessment, infection control, and epidemiological surveillance.

Aim:

In this review, the laboratory data were collated, analyzed and interpreted to demonstrate the prevalence and distribution of the various *Salmonella* serovars from different host species.

Materials and Methods:

The laboratory record books were reviewed and Salmonella serotyping data from 2007 to 2014 were transferred onto dedicated excel spread sheet. The data were cleaned and analyzed using descriptive statistics. Results were presented in table formats.

Result and Discussion:

In the current study, a total of 1293 cases of animal salmonellosis caused by 94 different serotypes were recorded from 2007-2014 inclusive at Agricultural Research Council-Onderstepoort Veterinary Institute, (ARC-OVI), South Africa. The three most common serotypes were *Salmonella enterica* subspecies *enterica* serovar Heidelberg (n=239), *Salmonella enterica* subspecies *enterica* serovar Enteritidis (n=170) and *Salmonella enterica* subspecies *enterica* serovar Typhimurium (142). These were followed by *Salmonella enterica* subspecies *enterica* serovar Anatum (n=72), *Salmonella enterica* subspecies *enterica* serovar Infantis (n=57). *Salmonella enterica* subspecies enterica serovar Schwarzengrund and Salmonella *enterica* subspecies *enterica* serovar Newport were recovered in 50 and 22 cases each, respectively.

Of the total cases recorded during the period under review, 210 (16.2%) occurred due to host adapted serotypes; viz, *Salmonella enterica* subspecies *enterica* serovar Enteritidis (n=170) and *Salmonella enterica* subspecies *enterica* serovar Dublin (n=40). *Salmonella enterica* subspecies *enterica* serovar Choleraesuis was not isolated. Of the total of 1293 incidents recorded during the period of the survey, 69.8 % (n=903) occurred in poultry and other birds, 13.1 % (n=169) in horses and 10.5 % (n=136) in cattle. Thirty four (2.6%) isolates were obtained from pigs and sheep. Thirty six (2.7 %) isolates were found from wild animals that include leopard (n=6), rhino (n=22) and crocodile (n=8).

Conclusion: Isolation of different *Salmonella* serovars from various host highlights the clinical significance of these bacteria. Moreover, it also highlights the potential zoonotic and health risk implications of the detected *Salmonella* serovars.