Introduction

Salmonella is among the most important meat pathogen worldwide. The prevalence and the level of contamination are essential for an efficient risk assessment program but all the different serovars have not the same virulence potentiality. In 1998, the Belgian zoonosis surveillance program has assessed the contamination with Salmonella in a panel of meat.

Material and Methods

The surveillance plan was designed to detect a contamination rate of 2% in the sample population, with a probability of 95%.

Several matrices of pork and poultry were sampled and all samples were investigated two times (sample itself and a dilution of it, see Table 1)

The analytical method used was a preenrichment in buffered peptone water (18h, 37°C), enrichment on Diassal plate (24h, 42°C), isolation on xylose-lysin-desoxycholate agar (24h, 37°C), followed by biochemical characterisations (Api 20E).

Isolates were then serotyped and tested for antimicrobial resistance by MIC method, some of them (S. Typhimurium, S. Enteritidis, S. Hadar and S. Virchow) were also lysotyped.

Results and discussion

Salmonella is frequently isolated from pork and poultry even in a little quantity of matrix (Figure 1 and 2).

In pork, S. Typhimurium (with 17.5% of DT104, Table 2) and S. Derby represents more than half of the isolates (Figure 3). In Layers (Figure 4), S. Enteritidis (with 49.2% of PT4, Table 2) is isolated in at least 50% of the cases. In broilers (Figure 5), S. Hadar appears as the major serotype just before S. Typhimurium. All isolates of turkeys belonged to S. Enteritidis (6 strains).

As shown in Table 2-4, the results of serotyping, lysotyping and resistance to antimicrobials are similar to those obtained in animals.

Conclusion

Salmonella is a common pathogen found in pork and poultry. Isolated strains belong to same serotypes, lysotypes and have similar antibiotic resistance profiles that those isolated in human and animals.

An advanced analyze of results is needed in order to precise the sources of human salmonellosis.

The rate and the level, and thus the risk, is very higher in poultry than in pork.

These results should be used to take preventive measures in order to lower the contamination rate and the resistance to antimicrobials of Salmonella.

These results should be compared with those of others European countries (1).

Bibliography

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