Maitrise des campylobacter: l'expérience Europe du Sud (Italie)

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University of Pisa: a short presentation
Department of Veterinary Sciences

Two different structures (one in Pisa and one in San Piero a Grado (Veterinary teaching Hospital))

Research and training department involved in 19 different scientific-disciplinary sectors (SSD)
Campylobacter spp.: let’s take a look at EFSA data…
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Human campylobacteriosis is the most reported human food-borne illness in the EU.
Campylobacter spp.: actually, there is something else........

1) This number is UNDERESTIMATED

2) Poultry meat is of main importance in these cases
Campylobacter spp.: underreporting of human campylobacteriosis

There is considerable underascertainment and underreporting of campylobacteriosis and there may be not less than 2 million and possibly as high as 20 million cases of clinical campylobacteriosis per year in the EU (EFSA, 2010).

Approximately 9 million cases. Total annual costs are 2.4 billion euro (EFSA, 2011)
Campylobacter spp.: underreporting of human campylobacteriosis
Campylobacter spp.: underreporting of human campylobacteriosis also in Italy

The human data available are underestimated due to the lack of obligation in notifications in Italy.

In our country, data on cases of Campylobacter gastroenteritis are not different from those concerning other infections included in class IV of D.M. December 15, 1990 (Ministry of Health, 1991) and there are no official data on chronic complications.

The existing data derive from the ENTER-NET circuit which is voluntary and therefore absolutely not real.

Poultry production x 1,000 tonnes in 2015

Data from: Association of Poultry Processors and Poultry Trade in the EU Countries, Annual Report 2016
Campylobacter spp.: the role of poultry meat

In a survey carried out in 2008 on 10,132 broilers batches in 561 slaughterhouses in 26 EU MS the prevalence of contaminated broiler carcasses was 75.8%.
Campylobacter spp.: the role of poultry meat

Handling, preparation and consumption of broiler meat may account for 20 to 30% of human cases of campylobacteriosis, while 50 to 80% may be attributed to the chicken reservoir as a whole.
Campylobacter spp. in poultry meat in Italy

In 2008 in Italy the prevalence of Campylobacter-colonised broiler batches was 63.3%
Campylobacter spp. in poultry meat in Italy

To evaluate contamination and prevalence in breeding farms in order to understand the impact of the application of microbiological process criteria of Reg EU 2073/2005

.....monitoring plan 2010-2015 on:
• **5178** broiler flocks
• **35** slaughterhouses

90% of the Italian poultry production, which is located in the regions reported, in proportion to the respective productions.

(Dati Istituto Zooprofilattico Sperimentale Abruzzo e Molise «G. Caporale»)
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*Campylobacter* spp. in poultry meat in Italy

**Monitoring plan 2010-2015**

- Sampling on 450 groups of broilers;
- On each group 5 animals sampling of gut and carcasses after refrigeration (neck skin);
- For 63 groups also sampling of chest skin.

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Campylobacter spp. in poultry meat in Italy

Monitoring plan 2010-2015

Campylobacter spp. prevalence in carcasses:
55,6% (neck skin)
48,3% (chest skin)
74,1% (gut)

(Dati Istituto Zooprofilattico Sperimentale Abruzzo e Molise «G. Caporale»)
Campylobacter spp. in poultry meat in Italy

Monitoring plan 2010-2015

Campylobacter jejuni 63.86%
Campylobacter coli 36.07%
Campylobacter lari (0.05%).
Campylobacter spp. in poultry meat in Italy

Monitoring plan 2010-2015

Antibiotic resistance

*C. jejuni*: Ciprofloxacin 69,8%, Nalidixic Acid 65,1%, Tetracycline 54,4%

*C. Coli*: Ciprofloxacin 74,3%, Nalidixic Acid 69,5%, Tetracycline 59,6%

Erythromycin e Gentamicin: 5,9% and 0,9% for *C. jejuni*, 14,5% and 2,6% for *C. coli*.

(Dati Istituto Zooprofilattico Sperimentale Abruzzo e Molise «G. Caporale»)
Alimenti etnici: problematiche sanitarie

Contaminazione microbica

Presenza di microrganismi patogeni

Antibiotico-resistenza

Presenza di parassiti patogeni

Contaminazioni abiotiche