

## Chapter VII

### Review of French data on bacterial resistance published in 2004 (for AFSSAPS)

**F**rench data generated by the ONERBA member networks can be completed by data published in the literature and especially data on:

- antimicrobials not on the standard list, as established by the French Committee for Antibiogram (CA-SFM);
- bacterial species that are not frequently isolated.

The partnership convention signed with the AFSSAPS in 2001 foresees the development of synthesis cards based on the analysis of the literature.

A group in charge of bibliographical analysis, placed under the direction of Pr Jean-Didier Cavallo (Hôpitaux des Armées) was created for this purpose.

1

#### Criteria of selection

- French multicenter study or european multicenter study including France.
- Published in the last 5 years.

The studies will be described using predefined variables (period of the study, population studied, method used for susceptibility tests, etc.).

2

#### Worksheet

In order to standardise the procedure of analysis, a standardised questionnaire was developed for each bacterial species (or groups of species).

The questionnaires allow the collection of statistical data generated by each study:

- mean percentages (and range) of strains Susceptible, Intermediate, or Resistant to the tested antimicrobials;
- MIC<sub>50</sub>, MIC<sub>90</sub> and range.

Eleven other variables are also systematically collected during the analysis process.

3

#### Sources of publications

Sources used to collect data are:

- the major journals devoted to clinical microbiology (*Antimicrob Agents Chemother*, *J Antimicrob Chemother*, *J Clin Microbiol*, *Eur J Clin Microbiol Inf Dis*, *Clin Microbiol Inf*, *Clin Inf Dis*, *Med Mal Inf*);
- proceedings of meetings: ICAAC, RICA, ECCMID;
- Medline (keywords: resistance, antibiotic, antimicrobial, multicenter, Europe, France).

For the year 2004, 15 publications responding to the predefined criteria have been selected and analysed, and results of analysis have been posted on ONERBA's website library with controlled accessed reserved for the AFSSAPS.

■ **Publications analysées/Analysis of the literature**

1. Muller-Serieys C, Drugeon HB, Etienne J, Lascols C, Leclercq R, Nguyen J, Soussy CJ. Activity of linezolid against Gram-positive cocci isolated in french hospitals as determined by three in-vitro susceptibility testing methods. *Clin Microbiol Infect* 2004;10:242-6.

■ Étude multicentrique française incluant 6 centres et qui concerne la sensibilité au linézolide de 844 cocci à Gram positif: 296 *Staphylococcus aureus*, 200 staphylocoques à coagulase négative, 200 entérocoque et 118 *Streptococcus pneumoniae*.

■ French multicenter study including 6 centres and evaluating the susceptibility to linezolid of 844 gram-positive cocci (296 *S. aureus*, 200 coagulase-negative staphylococci, 200 enterococci, and 118 *S. pneumoniae*).

2. Quentin C, Arpin C, Dubois V, André C, Lagrange I, Fischer I, Brochet JP, Grobost F, Jullin J, Dutilh B, Larribet G, Noury P. Antibiotic resistance rates and phenotypes among isolates of Enterobacteriaceae in french extra-hospital practice. *Eur J Clin Microbiol Infect Dis* 2004;23:185-93.

■ Étude multicentrique française incluant 8 centres situés en région Aquitaine et qui concerne la sensibilité aux antibiotiques des entérobactéries isolées dans les laboratoires de ville.

■ French multicenter study including 8 centres in the Aquitaine region of France and evaluating the antibiotics susceptibility of enterobacteria isolated in the community.

3. Loulergue J, Couhé C, Grasmick C, Laudat P, Quentin R. Sensibilité aux antibiotiques des souches de streptocoque du groupe B de portage vaginal, isolées en France, 2003. *BEH* 2004;18:69-70.

■ Étude multicentrique française incluant 28 centres et qui concerne la sensibilité à 8 antibiotiques de *Streptococcus agalactiae* isolées de portage vaginal.

■ French multicenter study including 28 centres and evaluating the susceptibility to 8 antibiotics of *S. agalactiae* from vaginal carriers.

4. Talon D, Lallemand-De-Conto S, Thouverez M, Bertrand X. *Escherichia coli* : résistance aux quinolones et aux  $\beta$ -lactamines des souches cliniques isolées en Franche-Comté. *Med Mal Infect* 2004;35:76-81.

■ Étude multicentrique française incluant 17 centres situés en Franche-Comté et qui concerne la sensibilité aux antibiotiques de *Escherichia coli*.

■ French multicenter study including 17 centres in the Franche-Comté region of France, and evaluating the susceptibility of *E. coli* to antibiotics.

5. Herida M, Sednaoui P, Goulet V. Gonorrhoea surveillance system in France: 1986-2000. *Sex Transm Dis* 2004;31:209-14.

■ Étude du centre national de référence reprenant l'évolution des résistances aux antibiotiques des souches de *N. gonorrhoeae* isolées dans le cadre du réseau RENAGO.

■ Study of the french national reference center for *N. gonorrhoeae* evaluating trends in antibiotic resistance of *N. gonorrhoeae* isolated in the RENAGO network from 1986 to 2000.

6. Dabernat H, Seguy M, Faucon G, Delmas C. Épidémiologie et évaluation de la sensibilité aux  $\beta$ -lactamines des souches de *Haemophilus influenzae* isolées en 2001 en France. *Méd Mal Infect* 2004;34:97-101.

■ Étude publiée par le centre de référence de *Haemophilus influenzae* et qui concerne la sensibilité aux  $\beta$ -lactamines de *Haemophilus influenzae*.

■ Study conducted by the french national reference center for *H. influenzae* evaluating  $\beta$ -lactams susceptibility of *H. influenzae* in 2001.

7. Decusser JW, Ovetchkine P, Collignon A, Chaplain C, Estrangin E, Fremaux A, Reinert P, Foucaud P, Ghnassia JC, Cohen R, Gaudelus J, Allouch PY. Multicentre study of molecular epidemiology, serotypes and antimicrobial susceptibility patterns of *Streptococcus pneumoniae* isolated from infections in children in the Île-de-France area. *Eur J Clin Microbiol Infect Dis* 2004;23:27-33.

■ Étude multicentrique française incluant 4 centres et qui concerne la sensibilité à 8 antibiotiques de 73 *Streptococcus pneumoniae* isolés d'infections invasives en pédiatrie.

■ French multicenter study including 4 centres and evaluating the susceptibility to 8 antibiotics of 73 *S. pneumoniae* strains isolated from invasive pediatric infections.

8. Jones ME, Karlowky JA, Draghi DC, Thornsberry C, Sahn DF, Bradley JS. Rates of antimicrobial resistance among common bacterial pathogens causing respiratory, blood, urine, and skin and soft tissue infections in pediatric patients. *Eur J Clin Microbiol Infect Dis* 2004;23:445-55.

■ Étude multicentrique qui collige de nombreuses données françaises pour *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*.

■ Multicenter study reviewing numerous studies on the susceptibility of *S. pneumoniae*, *H. influenzae*, *E. coli*, *K. pneumoniae*, *P. aeruginosa*, *S. aureus* isolated from pediatric patients.

9. Demachy MC, Faibis F, Artigou A, Benoit C, Cambau E, Cecille A, Chachaty E, Chaplain C, Cormier P, Cousinard F, Decotte JC, Demontrond D, Dublanquet A, Dupeyron C,

Farges A, Ferre B, Fremaux AP, Galanti MJ, Gallet C, Guiet P, Hacquard B, Hornstein M, Legrand P, Le Manach F, Lucet N, Malbrunot C, Mangeol A, Mathieu D, Otterbein G, Pateyron F, Poilane I, Pollet J, Rabenja T, Spicq C. *Epidemiology and antimicrobial resistance of Streptococcus pneumoniae strains isolated in the Île-de-France area during 2001. Med Mal Infect. 2004;34:303-9.*

■ Étude multicentrique (32 laboratoires de microbiologie) en Île-de-France sur la sensibilité de 632 souches cliniques de *S. pneumoniae* isolées en 2001 chez les adultes et les enfants.

■ Multicenter study including 32 centres of the Île-de-France region in France on the susceptibility of 632 *S. pneumoniae* strains isolated in 2001.

10. Desmots MH, Dufour-Gesbert F, Avrain L, Kempf I. *Antimicrobial resistance in Campylobacter strains isolated from french broilers before and after antimicrobial growth promoter bans. J Antimicrob Chemother. 2004;54:1025-30.*

■ Étude multicentrique française sur la sensibilité des souches de *C. coli* et *C. jejuni* isolés chez les volailles entre 1992-1996 et 2001-2002 et qui montre une baisse de sensibilité aux antibiotiques des souches de *C. coli* entre ces deux périodes.

■ French multicenter study on the susceptibility of *C. coli* and *C. jejuni* isolated during two periods (1992-1996 and 2001-2002) reporting a decrease in antibiotic susceptibility of *C. coli* between these two periods.

11. Decousser JW, Pina P, Viguier F, Picot F, Courvalin P, Allouch P, Col BVH Study Group. *Invasive Streptococcus pneumoniae in France: antimicrobial resistance, serotype, and molecular epidemiology findings from a monthly national study in 2000 to 2002. Antimicrob Agents Chemother 2004;48:3636-9.*

■ Étude multicentrique française (150 hôpitaux du Col BVH) portant sur la sensibilité de 257 souches invasives de pneumocoques isolés sur un mois pendant les années 2000, 2001 et 2003.

■ French multicenter study on the susceptibility of 257 *S pneumoniae* strains isolated from invasive infections during a 1-month period in 2000, 2001, 2003.

12. Ducki S, Blech MF. *Surveillance of multi-resistant bacteria in Lorraine: a three-year multicentre incidence study. Med Mal Infect 2004;34:70-5.*

■ Étude multicentrique française (30 établissements de santé lorrains) sur l'incidence des bactéries multi-résistantes (SARM et entérobactéries productrices de  $\beta$ -lactamases à spectre élargi) de 2001 à 2003.

■ French multicenter study in 30 health-care institutions of the Lorraine region of France reporting on the incidence of multidrug-resistant bacteria during the 2000-2003 period.

13. Payot S, Dridi S, Laroche M, Federighi M, Magras C. *Prevalence and antimicrobial resistance of Campylobacter coli isolated from food-producing swine in France. Vet Microbiol 2004;101:91-9.*

■ Étude multicentrique française entre mars 1998 et juin 1999 (24 fermes réparties dans différentes régions) sur la prévalence et les taux de résistance aux antibiotiques des souches de *Campylobacter coli* isolées de porcs destinés à la charcuterie.

■ French multicenter study conducted between 1998 and 1999 in 24 animal farms throughout France and evaluating the antibiotic susceptibility of *C. coli* isolated from food-producing swine.

14. Bywater R, Deluyker H, Deroover E, de Jong A, Marion H, McConville M, Rowan T, Shryock T, Shuster D, Thomas V, Valle M, Walters J. *A european survey of antimicrobial susceptibility among zoonotic and commensal bacteria isolated from food-producing animals. J Antimicrob Chemother 2004;54:744-54.*

■ Étude multicentrique européenne (8 pays dont la France) portant sur la sensibilité aux antibiotiques de souches de *E. coli*, *Salmonella* spp. et *Campylobacter* spp. isolées de volailles, bovins et porcs de 1999 à 2001.

■ European multicenter study conducted between 1999 and 2001 in 8 European countries (including France) and evaluating the antibiotic susceptibility of *E. coli*, *Salmonella* spp. and *Campylobacter* spp isolated from food-producing animals.

15. Meunier D, Acar JF, Martel JL, Kroemer S, Valle M. *Seven-year survey of susceptibility to marbofloxacin of bovine pathogenic strains from eight european countries. Int J Antimicrob Agents 2004;24(3):268-78.*

■ Étude multicentrique européenne (8 pays dont la France) portant sur la sensibilité à la marbofloxacine de 3 751 bactéries pathogènes isolées de bovins entre 1994 et 2004.

■ European multicenter study conducted between 1994 and 2004 in 8 European countries (including France) and evaluating susceptibility to marbofloxacin of pathogenic bacteria isolated from bovines.

