

Epidemiology and surveillance of meningococcal disease in Spain

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Background

Towards the end of 2000 meningococcal C conjugate (MCC) vaccine was included in the Spanish childhood vaccination schedule. During the 2000 and consecutive years, a catch-up campaign were addressed to cohorts under 20 years of age in all except two Regions. Reported cases of meningococcal serogroup C disease (MenC disease) have since declined continuously. The global effectiveness of the vaccine is 95% and coverage is approximately 98% in routine scheduled vaccination.

Methods

In Spain meningococcal disease is statutorily notifiable by all doctors, cases being reported on a weekly basis along with demographic, clinical and microbiological information. Regional Public Health Authorities receive, collate and analyse the information before sending it to the National Centre of Epidemiology. 73% of the total reported cases are confirmed. PCR as well as culture is used for confirmation.

Results

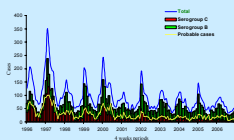
Meningococcal disease due to serogroup C have undergone a significant reduction since the introduction of conjugate vaccine compared to the season preceding the vaccination (overall reduction 81% and 90% in children under 10 year of age).

No substantial changes were observed for the other serogroups (including serogroup B).

CFR due to serogroup C was high (24%) in the 2005-06 epidemiological year.

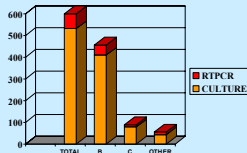
	Deaths		CFR	
	1999-00	2005-06	1999-00	2005-06
Serogroup B	45	50	7.3	10.8
Serogroup C	54	21	13.1	24.1
Total deaths	134	86	8.3	12.6

Meningococcal disease. Number of reported cases and main reported serogroups, Spain 1996 to 2006



Meningococcal disease, cases and incidence per 100,000 population Epidemiological years 199-2000 and 2006-2007 and change percentage

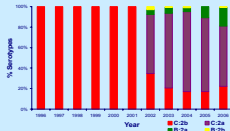
Case ascertainment	1999-2000		2005-2006		% Change
	Cases	Rates	Cases	Rates	
Total confirmed	1,085	2.72	599	1.37	-51.0
SG B	615	1.54	461	1.05	-31.6
SG C	411	1.03	87	0.20	-80.7
Non groupable	31	0.08	22	0.05	-67.6
Other SG	20	0.05	16	0.04	-27.0
SG unknown	8	0.02	13	0.03	69.6
Probable cases	541	1.35	221	0.51	-60.3
Total	1,626	4.07	820	1.88	-53.9



Distribution of the most frequent types/subtypes in group C strains.



Meningococcal disease. Percentage of serotypes 2a and 2b. Years 1996 to 2006



Conclusions

- Incidence of meningococcal disease was low in Spain in the epidemiological year 2005-06 (599 confirmed cases, rate 1.37/100,000)
- Meningococcal disease due to serogroup C has undergone a significant reduction since the introduction of conjugate vaccine.
- In spite of PCR implementation, a high percentage (27%) of non-confirmed cases is still present.
- Overall CFR (especially for serogroup C) was high in the 2005-06 epidemiological year.
- A change in serogroup C genotype has been detected in recent years.
- MCC vaccine displayed high effectiveness values. However, a loss of vaccine protection was in evidence when time elapsed since vaccination was taken into account. For this reason a booster dose of vaccine has been included in children at 18 months of age since 2006.

•There was an outbreak in a small town caused by B:2a:P1.5 strains.