Surveillance of invasive meningococcal disease in Portugal, 2016-2018

INTRODUCTION & OBJECTIVES

Since October 2002 the surveillance of Invasive Meningococcal Disease (IMD) in Portugal includes a mandatory laboratory notification in addition to the clinical notification, which had been mandatory since 1939. The Directorate-General of Health monitors the epidemiological information and interventions. The National Reference Laboratory (NRL) of Neisseria meningitidis at the National Institute of Health Dr. Ricardo Jorge, Lisbon (NH) conduct a hospital laboratory network implemented throughout the country in 2002, the Vglab-Lab, which supports the laboratory component of the surveillance. Meningococcal isolates and negative culture clinical samples are mandatory to be send do NRL, where lab confirmation and genotyping are proceed.

The incidence rate of IMD has been decreasing since it has been monitored through the laboratory based surveillance system. In the 3-year period 2016-2018 the incidence rate ranged from 0.41 to 0.59 /100,000 inhabitants (Fig 1). The vaccine MenC was introduced in the National Immunization Program in 2006. The vaccine MenB was introduced in the free market in 2014. The proportion of lab confirmed cases is annually monitored and is one parameter of the surveillance evaluation (Fig 2).

RESULTS

Genotypes – data from a 3-year period 2016-2018

The case definition of IMD is in accordance with ECDC guidelines. Suspected cases were confirmed by real time PCR targeting ctnA and sodC with Taqman probes [1]. Groups were identified by PCR (1), DNA characterization present in clinical samples included pирр, FeaA and MLST, was performed through amplicon-based Sanger sequencing (2.3). Isolates genotyping was done by Whole Genome Sequencing.

CONCLUSIONS

The incidence rate of IMD has been decreasing in Portugal since 2003. In the 3-year period from 2016 to 2018 the incidence rate was low (0.41-0.59) per 100,000 people (Fig 1) and under the average reported in the European countries (0.62-5.63 per 100,000 people).

The data quality from the lab based surveillance system has been improving, >90% of cases were laboratory confirmed in the last 5 years (Fig 2).

Group B has been the most frequent, mostly belonging to cc41/44 and cc123.

It has been observed an increasing number of cases due to MenW c11.

It is important to continue the IMD surveillance in order to evaluate the prevention and control policies implemented and improve them based on updated data.

REFERENCES

