

Background

Pertussis (whooping cough) is a respiratory disease usually caused by *Bordetella pertussis* and *B. parapertussis*. It may cause severe complications, mainly in children under 1 year. Despite of the high vaccination coverage, it has been observed an increased frequency of pertussis in last years as in other Regions.

Methods

Retrospective study in which included all pertussis cases notified to the Public Health Institute of Navarra (640.339 inhabitants) between 1/1/2011 and 31/10/2016.

In Navarra, DTPa vaccine is administered at 2, 4, 6, 18 months. Since April 2015, dTpa is administered to pregnant women at 27-36 gestational week.

Variables recorded: age, sex and vaccination status.

Complete vaccination status definition: administration of at least three doses. Microbiological diagnosis was done in nasopharyngeal aspirate or swab by RT-PCR (SmartBp/Bpp, Cepheid).

Conclusions

1. There was an increase in cases of whooping cough in our region during the study period.
2. The majority of cases, 66.8% occurred in younger than 15 years and most of them, in children with at least three doses of vaccine. The remaining cases occurred in adults.
3. There were 26 cases in babies < 2 months. It is necessary to include pertussis within differential diagnosis

Results

- 274 cases of pertussis were reported (Figure 1).
- 55.1% were male. Mean age 18.3 years (10 days-93 years).
- 69.3% cases were diagnosed by RT-PCR.
- **Seasonality:** most of cases, 133/274 (48.7%) occurred between May and August.

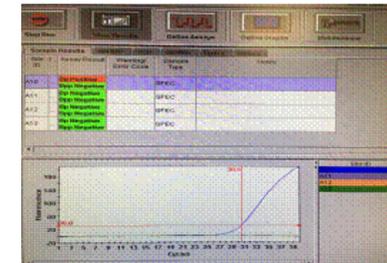


Figure 1.

Vaccination status:

- Out of 180 cases under 15 years, 108 (59%) received at least 3 doses of vaccine; there were 26 cases in babies < 2 months.
- Pertussis vaccination status by age was: 67% 6-12 months; 44% 12-18 months; 65% 18m-6 years and 74% 6- <15 years.
- Cases distribution by age: 20.8% (57) < 1 year (48 cases 0-6 months); 17.5% (45) 1-4 years; 28.5% (78) 5-14 years; 29.2% (80) 15-64 years and 4.7% (13) ≥65years (Figure 2).
- From April to October 2016, there were 8 babies <1 year diagnosed with pertussis. Information of maternal vaccination was available in 7 cases, 4 out of them (57.1%) the mother had been vaccinated with dTpa during pregnancy.

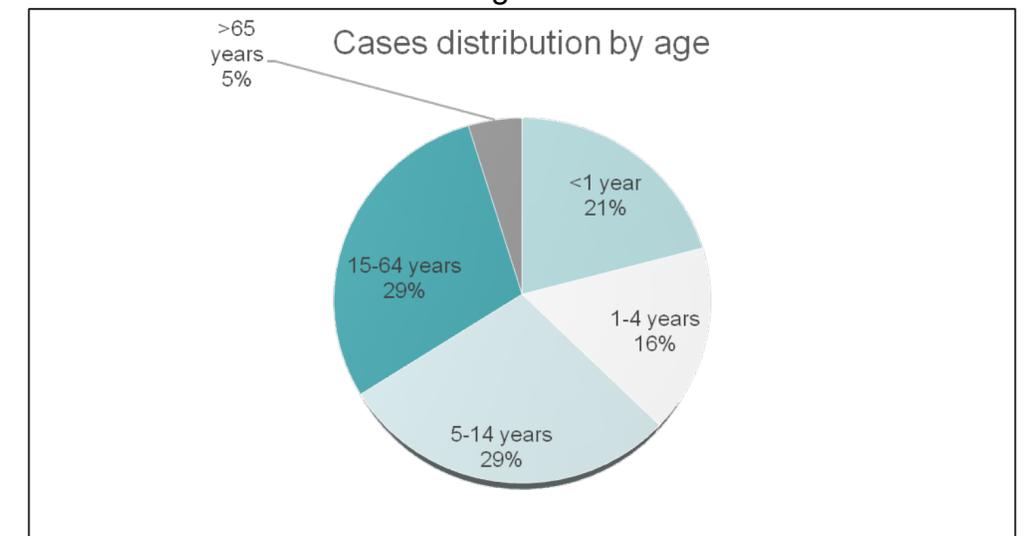


Figure 2.

Bibliography

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2. R. Solano, C. Rius, P. Simon, S. Manzaneres-Laya, M. Ros, D. Toledo, et al. *Int J Med Microbiol.* 2014;63:1688–1695.