THE HIDDEN TRUTH BEHIND INVASIVE PNEUMOCOCCAL DISEASE

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BACKGROUND

- **Pneumococcus disease** is a **major cause of mortality and morbidity** in the world
- *Streptococcus pneumoniae* can cause many types of disease, some of those can be life threatening, known as invasive pneumococcal disease (IND) and include bloodstream infections, pneumonia, meningitis.
- IND incidence seems to be related to age: < 2 years old and >65 years old.
- Pneumococcal conjugate vaccines (PCV) have reduced the incidence of IND. However, there are **vaccinated children who develop IND**, some of whom suffer from an undiagnosed immunodeficiency.
- The aim of this study was to **describe immune disorders** in children with IND in our hospital.

METHODS

Retrospective, descriptive, single-center study (2003-2015), at Madrid, Spain. All children <14 years of age that suffered from IND (confirmed by culture/PCR of sterile body fluid samples) were included.

RESULTS

n: 127

Types of IND

Median age at IND 33 months (IQR 12-59).

≥2 VACCINE DOSES 7V OR 13V

■ YES ■ NO

IND DUE TO INCLUDED SEROTYPES

■ YES ■ NO

- Pneumococcal vaccine response test hadn't been performed in any patient

Immunological tests were performed in 36 patients (28%).

Underlying conditions

- Complement deficiency: C2 deficiency (1/15); CD4/CD8 inverted (1/16: VIH+); Spleen ultrasound: 1 asplenia y 3 polysplenias.

CONCLUSIONS

- A **high percentage** of patients who suffer from **IND can associate other immune disorders**.
- **Past medical history** could alert and immune tests may had helped.
- **Spleen ultrasounds, together with a basic immunological study** are **advisable** in children with IND, moreover in severe IND.