



BACKGROUND

In 2021 in Andalucía (Spain), incidence rate of pneumococcal invasive disease was 2.4 cases per 100.000 habitants. However, in Granada region the incidence rate was 3.8. Most frequent pneumococcal serotypes detected were 8, 3, 16F. In 2022, pneumococcal conjugate vaccination coverage was from 20.1% in 60 years old adults to 70.2% in 71 years old.

OBJECTIVES

- To identify the demographic risk factors, which serotypes produced invasive disease, outcome of infection and vaccination coverage related.

METHODS

- Design:** retrospective descriptive study, from 2021 to 2022.
- Inclusion criteria:** patients from our hospital in Granada, with blood cultures positive for *pneumococcus* whose samples were sent to the Microbiology National Center.
- Main variables:** “pneumococcal serotype” and “vaccination coverage”.
- Analysis:** Frequency distribution study of the variables.

RESULTS

Table 1. Age factor, quantitative and qualitative analysis.

Age		
Mean	sd	n
57.91	25.03	33
Age Group	n	%
0-20	4	12.12
21-40	1	3.03
41-60	11	33.33
61-80	11	33.33
>80	6	18.18

Table 3. Protection from vaccines against serotypes circulating at the time of the period of this study.

Pneumococcal polysaccharide conjugate vaccine (13-valent)	18.7%
Pneumococcal polysaccharide vaccine (23-valent)	43.7%
Pneumococcal polysaccharide conjugate vaccine (20-valent)	37.5%

Table 2. Frequency distribution table: sex factor, pneumococcal invasive disease and outcome, serotypes and vaccination coverage by year of the study.

	Year n (%)		
	2021	2022	TOTAL
Sex	n (%)		
Women	5 (35.7)	9 (64.3)	14
Men	9 (47.4)	10 (52.6)	19
Clinical Features	n (%)		
Bacteremia	9 (6.3)	5 (35.7)	14
Pneumonia	4 (25.0)	12 (75.0)	16
Meningitis	1 (33.3)	2 (66.7)	3
Outcome	n (%)		
Discharge	14 (46.7)	16 (53.3)	30
Death	0 (0.0)	3 (100.0)	33
Serotypes	n (%)		
8	1 (16.7)	5 (83.3)	6
22F	3 (75.0)	1 (25.0)	4
3	0 (0.0)	3 (100.0)	3
11A	1 (33.3)	2 (66.7)	3
23B	2 (66.7)	1 (33.3)	3
9N	2 (100.0)	0 (0.0)	2
24F	0 (0.0)	2 (100.0)	2
Vaccinated with Prevenar13	n (%)		
Yes	2 (15.4)	11 (84.6)	13
No	6 (50.0)	6 (50.0)	12
Birth Schedule	3 (75.0)	1 (25.0)	4

CONCLUSIONS

- In 2022, pneumococcal serotypes differed from 2021, and pneumonia cases and lethality were higher than in 2021.
- Vaccination coverage was acceptably high, however almost half of the hospitalized patients were under 60, who do not have financed indication to get vaccination with no risk factors.
- Higher protection from vaccination to pneumococcal invasive disease and more studies with evaluation of multiple risk factors are needed to continue monitoring pneumococcus alongside new vaccines.