

1 **Table 1**

2
3 Demographic characteristics, season of hospitalization, clinical features and hospitalization
4 course in children with necrotizing pneumonia before and after PCV13 implementation
5

6

	Pre-PCV13 (2005-2010) n = 18	Post-PCV13 (2011-2019) n = 25	p-value
10 Age, months, median (IQR)	42 (32-52)	46 (29-68)	0.588
11 Sex, male, n (%)	7 (39)	11 (44)	0.738
12 Autumn-winter season, n (%)	12 (67)	18 (72)	0.523
13 Comorbidity, n (%)	1 (6)	2 (8)	0.624
14 Empyema/parapneumonic effusion, n (%)	15 (83)	17 (68)	0.256
15 Haemolytic-uremic syndrome, n (%)	1 (6)	1 (4)	1.00
16 Hospital stay, days, median (IQR)	19.5 (16-28)	23 (19-29)	0.272
17 PICU admission, n (%)	7 (39)	12 (48)	0.553
18 PICU stay, days, median (IQR)	5 (4-27)	8.5 (3-15)	0.902
19 <i>Streptococcus pneumoniae</i> , n (%)	11 (61)	13 (52)	0.553
20 <i>Streptococcus pyogenes</i> , n (%)	1 (6)	4 (16)	0.380
21 <i>Staphylococcus aureus</i> , n (%)	0	3 (12)	0.252

22

23 *Abbreviations: IQR, interquartile range; PCV, pneumococcal conjugate vaccine; PICU, pediatric*
24 *intensive care unit.*

25

26
27
28
29
30
31

Table 2

Bacterial etiologies of necrotizing pneumonia during the study period (2005-2019), pre-PCV13 period (2005-2010) and post-PCV13 periods (2011-2019)

	2005-2019	Pre-PCV13	Early Post-PCV13	Intermediate Post-PCV13	Late Post-PCV13
Total of cases	43	18	14	3	8
<i>Streptococcus pneumoniae</i> , n (%)	24 (55.8%)	11 (61.1%)	8 (57.1%)	0	5 (62.5%)
Positive PCR on pleural fluid	15	5	6		4
Positive PCR on blood	12	7	3		2
Positive pleural culture	5	5	0		0
Positive blood culture	4	3	1		0
<i>Streptococcus pyogenes</i> , n (%)	5 (11.6%)	1 (5.6%)	2 (14.3%)	0	2 (25%)
Positive PCR on pleural fluid	4	0	2		2
Positive PCR on blood	1	1	0		0
Positive pleural culture	0	0	0		0
Positive blood culture	0	0	0		0
<i>Staphylococcus aureus</i> , n (%)	3 (7%)	0	2 (14.3%)	1 (33.3%)	0
Positive PCR on pleural fluid	2	0	1	1	
Positive PCR on blood	0	0	0	0	
Positive pleural culture	0	0	0	0	
Positive blood culture	1	0	1	0	
<i>Not identified</i> , n (%)	11 (25.6%)	6 (33.3%)	2 (14.3%)	2 (66.7%)	1 (12.5%)

32
33
34

Abbreviations: PCR, polymerase chain reaction; PCV, pneumococcal conjugate vaccine.

35

Table 3

36

37 Pneumococcal vaccine coverage in children with necrotizing pneumonia during the study

38 period (2005-2019), pre-PCV13 period (2005-2010) and post-PCV13 periods (2011-2019)

39

40

	2005-2019	Pre-PCV13	Early post-PCV13	Intermediate post-PCV13	Late post-PCV13
Vaccination/cases (n.)	37/43	14/18	13/14	2/3	8/8
PCV7/cases (n.)	27	14/18	11/14	2/3	0
PCV13/ cases (n.)	10	0	2	0	8

41

42 *Abbreviations:*43 *PCV7, 7-valent pneumococcal conjugate vaccine; PCV13, 13-valent pneumococcal conjugate*44 *vaccine*

45

46
47
48
49
50
51

Table 4

Serotypes of *Streptococcus pneumoniae* during the study period (2005-2019),
pre-PCV13 period (2005-2010) and post-PCV13 periods (2011-2019)

	2005-2019	Pre-PCV13	Early Post-PCV13	Intermediate Post-PCV13	Late Post-PCV13	Vaccinated with PCV13
Total of cases	24	11	8	0	5	5
Serotypes:						
1	4 (17%)	2 (18%)	2 (25%)		0	0
3	7 (29%)	3 (27%)	0		4 (80%)	4 (80%)
5	2 (8%)	1 (9%)	1 (12.5%)		0	0
7F	2 (8%)	1 (9%)	1 (12.5%)		0	0
12	1 (4%)	0	0		1 (20%)	1 (20%)
19A	1 (4%)	1 (9%)	0		0	0
Not available	7 (29%)	3 (27%)	4 (50%)		0	0

52

53 *Abbreviations: PCV, pneumococcal conjugate vaccine.*