

ETIOLOGY OF CHILDHOOD PNEUMONIA

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Background: Pneumonia is an important cause of hospitalization. We purposed to verify pneumonia etiology, correlation with length of stay (LOS), and contribution to hospitalizations in a single pediatric ward.

Material and methods: In 2013-2018 period 12.832 patients were hospitalized, with mean LOS of 4.74 days (+/-3.38). The etiology of pneumonia was confirmed with rapid antigen test/PCR in nasopharyngeal swab, serological tests, or blood/pleural fluid culture/PCR.

Results: 1.066 pneumonia cases (8.32% of all hospitalizations) caused 12.5% of the total number of person/days (7.590/60.817). Mean LOS was longer in pneumonia (7.1 versus 4.53 days, $p<0.01$). The age-distribution was following: <3mo-7.2%(n=77/1066), 3-12mo-15.6%(n=166/1066), 13-59 mo-56.1%(n=598/1066), >5yo-21.1%(n=225/1066).

Bacterial/potentially bacterial pneumonia (BP) was diagnosed in 77.6%(827/1066), viral/potentially viral pneumonia (VP) in 17.8% (190/1066), atypical pneumonia (AP) in 4.6%(49/1066). VP was most frequent in <3mo children (42%), while AP in children >5yo(12.9%). Mean LOS was the longest in VP (7.85 days, +/- 3.93), statistically longer than in BP (6.96, +/- 3.44, $p<0.01$), with no difference with AP (7.61, +/- 3.67, $p=0.54$), nor between BP and AP ($p=0.31$).

The etiology was confirmed in 20%(211/1066): influenza (38.9%, 82/211), RSV (34.1%, 72/211), atypical (23.2%, 49/211), bacterial (3.8%, 8/211). LOS in cases of pneumococcal pneumonia (median 13 days, 95%CI: 10-16) was longer than in RSV (9 days, 95%CI: 5-11) or influenza (7 days, 95%CI: 5-10) pneumonia.

Conclusions: Pneumonia plays an important role in pediatric hospitalization causes, and special emphasis should be put on etiological factors which vary according to patients' age, influencing LOS.