

Antibiotics usage are preferred to be at least 4-5 days for non-severe community acquired pneumonia

가톨릭대학교 의과대학 내과학교실¹, 여의도성모병원 호흡기내과², 서울성모병원 직업환경의학과³

정윤식¹, 안태준², 이연희³, 명준표³, 윤형규²

Background/Aims: Duration of Antibiotic treatment is recommended variously. Especially in non-severe community acquired pneumonia, the duration of antibiotics use is debatable. American Thoracic Society(ATS) and Infectious Diseases Society of America(IDSA) recommend an antibiotic usage duration no less than 5 days, however, some trials have shown shorter usage of antibiotics resulting in better prognosis. In this study, the proper duration for non-severe community acquired pneumonia for inpatients has been evaluated.

Methods: Total amount of 14,575 patients were evaluated and 7366 patients were involved in the study. 161 patients who did not satisfy CURB-65 classification were excluded. 5109 patients with moderate to severe pneumonia were excluded. 136 patients who were sent to ICU were excluded. 766 patients who used antibiotics without beta lactam, quinolone, beta lactam and macrolide, beta lactam and quinolone were excluded. 475 patients with uncertain prognosis were excluded. 562 patients with duration of antibiotic treatment over 14 days were excluded. Patients were classified by Age, Sex, Size of hospital, Charlson Comorbidity Score(CCI), and Antibiotics choice. Each groups were analyzed by 30 day mortality rate as the duration of antibiotic treatment vary from 3 days up to 8~14 days.

Results: Group of patients using antibiotics for 3 days were used as reference for other groups, as choosing other duration of antibiotic treatment groups as reference did not show p-value under 0.05 through analysis. It has shown that group of patients using antibiotics for three days had the higher 30 day mortality rate than other groups. Among the groups of antibiotics usage duration, patients who used antibiotics for 4~5 days showed the lowest 30 day mortality rate among patient groups.

Conclusions: Duration of antibiotics for non-severe community acquired pneumonia in inpatients is recommended to be at least 4~5 days.

	OR	LCL	UCL	p-value
Age	1.08	1.05	1.12	< 0.001
Sex				
Male	REF	REF	REF	REF
Female	0.61	0.30	1.25	0.181
Hospital type				
Large	REF	REF	REF	REF
Medium	0.33	0.14	0.76	0.001
Small	0.49	0.19	1.27	0.143
CCI score				
CCI ≤1	REF	REF	REF	REF
CCI 2	2.97	0.80	10.99	0.103
CCI 3	4.52	1.25	16.35	0.022
CCI ≥4	1.90	0.50	7.13	0.343
Antibiotics				
β-lactam	REF	REF	REF	REF
β-lactam+Macrolide	0.25	0.03	1.99	0.193
β-lactam+Quinolone	1.95	0.90	4.22	0.089
Quinolone	0.35	0.08	1.52	0.160
Duration of antibiotics treatment				
≤ 3 days	REF	REF	REF	REF
4-5 days	0.13	0.04	0.48	0.002
6-7 days	0.28	0.10	0.77	0.014
8-14 days	0.16	0.06	0.04	< 0.001

Table. Logistic Regression analysis on '30-day mortality rate' for each variable
(CCI : Charlson Comorbidity Index)