

P1393 **The ambiguous definition of hypervirulent *K. pneumoniae*: the discrepancy of hypermucoviscous phenotype and hypervirulent associated genes**

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Background: Hypermucoviscosity is a usually known as phenotypic feature of hypervirulent *K. pneumoniae*. But recent reports suggest aerobactin is more important than hypermucoviscosity for defining the hypervirulent *K. pneumoniae*.

Materials/methods: The study was performed on 414 *K. pneumoniae* isolates recovered from different specimens collected from Keimyung university of Dongsan medical center from December 2013 through November 2015. The hypermucoviscous phenotype was confirmed by string test. We compared hypermucoviscous phenotype and hypervirulent associated genes.

Results: The hypermucoviscous phenotype was found in 155 isolates (37.4%) among the 414 isolates. Among the hypermucoviscous phenotype, aerobactin positive strains are only 100 isolates (64.5%). Aerobactin was detected in 177 isolates (42.7%) among the 414 isolates. Among these hypermucoviscous phenotype is 100 isolates (56.6%). Hypermucoviscous phenotype strains showed higher presentation of *rmpA* and *magA* genes. And K1 and K2 serotype was 105 isolates (67.8%).

Conclusions: In our study only 100 (56.6%) isolates has hypermucoviscous phenotype among the aerobactin positive strains. The K1 and K2 serotype and *rmpA*, *magA* gene were more correlated with hypermucoviscous phenotype than aerobactin. The hypermucoviscous and hypervirulence were used synonymously. Recently there are some researchers using their own definition of hypervirulent *K. pneumoniae* with virulence genes. But, hypermucoviscosity and aerobactin genes expressed quite differently. Therefore, we need more studies for consensus of defining hypervirulent *K. pneumoniae*.

	String test (+) n=155	String test (-) n=259	<i>p</i>	Aerobactin (+) n=177	Aerobactin (-) n=236	<i>p</i>
serotype						
K1	61(39.4%)	16(6.2%)	0.0001	57(32.2%)	20(8.5%)	0.0001
K2	44(28.4%)	15(5.8%)	0.0001	34(19.2%)	25(10.6%)	0.015
virulence genes						
<i>rmpA</i>	121(79.1%)	24(9.6%)	0.001	104(58.8%)	41(17.4%)	0.0001
<i>magA</i>	62(40.3%)	15(5.8%)	0.001	57(32.2%)	20(8.5%)	0.0001

aerobactin	100(64.5%)	77(29.8%)	0.001			
String test				100(56.5%)	55(23.3%)	0.0001
