Concomitant Rhinosinusitis is a Risk Factor for Refractory Acute Otitis Media in Children

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We evaluated the risk factors for refractory otitis media in children and factors related to the clinical efficacy of antimicrobial treatment using tebipenem pivoxil (TBPM-PI). Multivariate logistic regression analysis revealed that “group living” (adjusted odds ratio; 6.2, 95%CI; 1.6-24.7, P=0.010), “age under 2 years old” (adjusted odds ratio; 4.2, 95%CI; 1.5-11.3, P=0.005), and “concomitant rhinosinusitis” (adjusted odds ratio; 2.9, 95%CI; 1.1-8.1, P=0.039) were significant risk factors for refractory otitis media. In 96 cases of acute otitis media (AOM) with the risk factors of refractoriness, TBPM-PI showed clinical efficacies with 100% for patients with one of the three risk factors and with 85% for patients with two or more of the risk factors. Multivariate logistic regression analysis revealed that “concomitant rhinosinusitis” (adjusted odds ratio; 4.4, 95%CI; 1.5-13.1, P=0.008) was a significant factor related with the poor clinical efficacy of TBPM-PI treatment for AOM.

Based on the results clinicians providing medical care for pediatric AOM should keep the risk factors of refractoriness in mind when selecting an appropriate treatment strategy.

Keywords: acute otitis media, tebipenem pivoxil, risk factors of refractoriness

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Study design
We evaluated the risk factors for refractory otitis media in children and factors related to the clinical efficacy of antimicrobial treatment using tebipenem pivoxil (TBPM-PI). The study group consisted of 103 children with otitis media (OM), simple OM, 68 cases and refractory OM, 35 cases.

Risk factors of refractory otitis media
Multivariate logistic regression analysis revealed that “group living”, “age under 2 years old” and “concomitant rhinosinusitis” were significant risk factors for refractory otitis media.

Factors related with refractoriness to TBPM-PI treatment
Multivariate logistic regression analysis revealed that “concomitant rhinosinusitis” was a significant factor related with refractoriness TBPM-PI treatment of AOM.

Clinical efficacy of TBPM-PI related with risk factors of refractory otitis media
TBPM-PI showed 100% clinical efficacy in patients with one of the three risk factors and 85% clinical efficacy in patients with two or more of the risk factors.