Our Tigecycline Treatment Experiences in Three Newborns who had *Klebsiella* Pneumonia Sepsis

Dear Editor

Nosocomial infections are diagnosed at a prevalence of 7-24% in Newborn Intensive Care Units and are important reasons for morbidity. They are also among the reasons of mortality at a rate of 19-38%.[1,2] In recent years, it is known that nosocomial infections are observed more frequently. It is also known that Multidrug-Resistant (MDR) gram negative bacilli including *Pseudomona aeruginosa, Acinetobacter baumannii and Klebsiella pneumoniae* are responsible for this. Gram negative, immotile, capsuled *Klebsiella pneumoniae* is a facultative anaerobic basil from *Enterobacteriaceae* that are resistant to carbapenem and performs lactose fermentation. It has increased in number worldwide in the past two decades. Accompanied by meningitis, Nosocomial infection is among the frequent diseases in newborns.[3] Multiple drug resistance makes it limited for clinicians to prefer the agents to be used in efficient treatment.[4]

β-lactam/p-lactamase inhibitors, carbapenems, polymyxin, phosphomycine, aminoglycosides, rifampin and tetracyclines (including Tigecycline) have been used in in-vitro sensitivity tests. Tigecycline is an agent that is effective on gram-negative and gram-positive microorganisms with wide spectrums from the Glycylcycline family. It is accepted as a proper preference for MDR pathogens including *Enterobacteriaceae* producing carbapenemase.[5] In adult studies in the literature, it was reported that in addition to Tigecycline, treatments that are combined with other agents gave better clinical response, and the mortality rates were lower. However, although there are several studies in the form of case reports in the literature about Tigecycline, which does not have the FDA approval in children and infants, no experiences have been shared in the literature on infant group. We believe that in case there are no other options for treatment, it must be preferred after the consents of the families are received. We gave Tigecycline together with Colistin after receiving the consents of the families to our third-level NICU cases. On the 69th day of hospitalization, *Klebsiella pneumoniae*, which was only sensitive to Tigecycline and Colistin, reproduced in the blood and empty culture in the first patient who was 28-week old, 800 gr, who received ventriculoperitoneal shunt due to hydrocephaly, and who had a syndromic twin. On the 9th day of hospitalization, *Klebsiella pneumoniae*, which was only sensitive to Tigecycline and Colistin, reproduced in the blood of the second patient who was 26-week old and who was born as premature 890 gr in weight. Finally, *Klebsiella pneumoniae*, which was only sensitive to Tigecycline and Colistin, reproduced on the 13th day of hospitalization in the blood and peritoneal fluid of the 30-week-old patient who was born with a twin as 1450 gr. This patient had kidney failure due to bilateral renal vein thrombosis as of birth and received peritoneal dialysis. In our first case, the cultures were cleaned 7 days after the treatment was started, the patient had a reversible tubulopathy during the treatment, and was exitus on the 16th day of the treatment. The cultures of the second patient were cleaned 32 days after the treatment was started, the patient had peritoneal dialysis due to acute kidney failure for 15 days during the treatment period, and was discharged from hospital on the 124th day. Our third case was lost due to disseminated intravascular coagulopathy on the 5th day of the treatment.

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