

**P1979 Renal adverse effects of intravenous colistin are associated with loading doses**

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**Background:** The increase of infections produced by multiresistant gram-negative microorganisms together with the absence of therapeutic alternatives has led to the use of colistin in the usual clinical practice. However, its use has been associated with renal toxicity. We describe the renal effects of colistin in a group of patients diagnosed with multidrug-resistant gram-negative infections.

**Materials/methods:** Retrospective observational study on adult patients treated with colistin alone or associated with other drugs during the year 2017 in the Hospital Universitario de Cabueñes, Spain. We classified nephrotoxicity using the RIFLE criteria.

**Results:** Thirty patients were included, 53.3% men, mean age: 67.5 years. The most frequent underlying diseases were neoplasms (43,3%), respiratory diseases (16,7%), granulocytopenia (16,7%), diabetes (13,3%), transplant (6,7%). Sixteen patients had undergone a surgical procedure. Twenty-four patients had a catheter that in 2 cases was used for parenteral nutrition, sixteen had a bladder catheter and 8 had mechanical ventilation. *Pseudomonas aeruginosa* was isolated in 15 patients, *Acinetobacter baumannii* in 14 and pan-resistant *Klebsiella pneumoniae* in one. Thirteen patients had positive blood cultures. The most frequent foci were: urinary (40%), respiratory (20%), surgical (16.7%), catheter (6,7%). Six patients (20%) died because of the infection. Seventeen patients intravenous colistin in monotherapy, 6 combined with aminoglycosides, 3 with tigecycline and another 4 with meropenem. Eleven cases received a loading dose of 9 million. Ten patients (33.3%) experienced a deterioration of renal function after the start of treatment, which in one case needed dialysis. The deterioration of renal function was significantly higher in patients with loading doses ( $p = 0.018$ , OR 9,333 [1,465-59,477]) and combined treatment with aminoglycosides ( $p=0,023$  OR 14 [1,299-150,899]). There were no differences in sex, age, total dose, previous renal function between both groups. Multivariable analysis confirmed the association between loading dose (0,040) and treatment with aminoglycosides ( $p=0,042$ ) and renal disease.

**Conclusions:** Intravenous colistin causes deterioration of renal function in more than 20% of patients. This adverse effect seems to be related to a loading dose and co treatment with aminoglycosides. The use of new antibiotics without adverse renal effects should be considered a priority in these patients.