Introduction:
Polymyxin B, though available since 1950s, was side-lined due to availability of safer antimicrobials. However, surge of multi-drug resistant gram negative infections has triggered resurgence of these older antimicrobials, despite paucity of available clinical data.[1] This paper reports clinical experience of determinants and outcomes associated with Polymyxin B therapy at our institute.

Methods:
This study prospectively captures clinical and drug usage profile of patients receiving Polymyxin B, from their medical records, at our tertiary care hospital in Pune, India. The analysis of first 28 completed patients has been summarized here.

Results:
The analysed patients (n=28) included 78.6% males, with mean age of 45.7 (±19.9) years. Polymyxin B was most commonly used in sepsis involving Respiratory (63%) and abdominal (37%) systems. All the patients were treated in intensive care setup, among which 96.4% required mechanical ventilation. Most of patients were initiated on Polymyxin B presumptively and Klebsiella pneumoniae and Acinetobacter spp were most common isolated organisms. Polymyxin B was initiated using bolus dose (equivalent to total daily dose) and administered at mean daily dose of 0.97±0.33 MIU in two divided doses. Majority (66.7%) of patients received Polymyxin B therapy for <7 days, (mean duration of therapy, 5.37±4.22 days). Meropenem (85.7%) was most commonly co-administered antimicrobial. No unlisted adverse drug reactions were reported. The all-cause mortality rate was 28.6%.

Conclusion:
Our experience suggests Polymyxin B to be favourable choice for management of MDR gram-negative infection. Further systematic evaluations are required for cementing therapeutic status of Polymyxin B in multi-drug resistant gram negative infections in ICU set-up.

References:

Image 1:
Distribution of duration of Polymyxin B Therapy

Image 2:

Distribution of supportive interventions required in Intensive Care Setup