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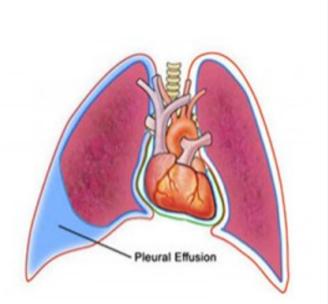


Intrapleural colistin for pleural empyema caused by extensively drug-resistant *Pseudomonas aeruginosa*: A case report

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BACKGROUND AND IMPORTANCE



- Pleural empyema (PE) is a collection of pus in the pleural space \rightarrow High morbimortality if it's caused by multidrug-resistant (MDR) bacteria.
- The most common cause of empyema is a primary pneumonic process.
- Intrapleural administration of antimicrobials makes it possible to reach therapeutic concentrations at the pleural cavity, limiting the adverse effects associated with systemic treatment.

AIM AND OBJECTIVES



Describe the use of intrapleural colistin (IpC) in one patient with PE.

RESULTS



Respiratory failure (necrotizing pneumonia) -> Retransplantation



Culture positive for *Pseudomonas aeruginosa* \rightarrow intravenous (IV) ceftazidime 2g every 8 hours (h)



Pseudomonas aeruginosa resistant to ceftolozane/tazobactam and ceftazidime-avibactam (MIC>250 μg/mL)





Pleural empyema → Pseudomonas

aeruginosa resistant to carbapenems →

ceftolozane/tazobactam 2g/1g every 8h



IV ciprofloxacin 400 mg/12h IV amikacin 15 mg/kg/24h Nebulized colistin 5 MIU/8h



Persistence of extensively drug-resistant (XDR) *Pseudomonas aeruginosa* in the pleural fluid



Desaturation and sweating associated with the administration of IpC → Suspension of IpC after 9 days of treatment



Intrapleural colistin (ipC)

0.5 MIU of colistimethate sodium were diluted in 50 mL of 0.9% physiological saline and instilled through the pleural drains every 12h (clamped for 2h)

MIU: million international units; MIC: minimal inhibitory concentration

Rana MA et al. Intra-Pleural Colistin Methanesulfonate Therapy for Pleural Infection caused by Carbapenem-Resistant Acinetobacter Baumannii: A Successful Case Report. *Infect Dis Rep*. 2014;6(3):5413.

CONCLUSION AND RELEVANCE



- The persistence of XDR *Pseudomonas aeruginosa* in our patient motivated the search for alternatives and IpC was chosen on the basis of a single case.
- However, the efficacy could not be determined due to its poor tolerance.
- Despite the limited amount of published data, the administration of intrapleural antibiotics may constitute a therapeutic option.