INTRAVENOUS PERFUSION OF CEFTOLOZANE-TAZOBACTAM USING ELASTOMERIC INFUSION PUMPS

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Background and Importance

- Ceftolozane-tazobactam intravenous administration infusion using portable elastomeric infusion pumps (EIP) is useful especially in patients infected with resistant bacteria.

Aim and Objectives

- To describe ceftolozane-tazobactam infusion using EIP (CT-EIP) and analyze healthcare cost avoided versus hospital admission.

Materials and Methods

- Retrospective study included all patients treated with CT-EIP between January 2017-October 2019.
- Data sources: Electronic medical record.
- For economic valuation have been considered:
  - Costs of the EIP → €25.63 for the 240ml/24-hour devices (needed 1/day).
  - €15.40 for the 100ml/30min devices (needed 3/day).
  - Nursing working time needed for preparation → €15.81/hour (a nurse prepares an average of 10 EIP/hour).
  - Cost of hospital at home care unit (HHU) → a day at HHU costs €80.70.
  - Cost per hospital admission day is €528.95.

Results

- 220 CT-EIP prepared
- 5 males
- 5 females
- Mean Age: 58.1 years (range 19-90 years)
- 8/10 patients treated with concomitant antibiotic
- 7/10 patients managed by HHU
- Microorganism isolated
  - P. Aeruginosa 10/10
  - S. Aureus 2/10
  - E. Coli 1/10
- Treatment duration: 13 days (range 7-29)

Indication of treatment

- Hospital acquired pneumonia 6
- Off-label situations 2
- Severe abdominal infections 1
- Severe urinary infection 1

- Successful evolution in 5 patients
- X 5 Patients were exitus due to other severe patologies


Conclusion and Relevance

- CT-EIP was a cost-effective alternative
- Which enabled patients to stay at home,
- Avoiding unnecessary hospital admission and improving their quality of life.