



Our findings support 12 or 24hours continuous elastomeric infusion of ceftaroline-NS admixture, and bulk preparation of elastomeric pumps containing ceftaroline solution in advance” Al Madfai et al (2018).

Abstract:

BACKGROUND: Severe infections such as endocarditis and osteomyelitis require long-term treatment with parenteral antibiotics and hence prolonged hospitalisation. Continuous infusion of ceftaroline through elastomeric devices can facilitate early hospital discharge by managing parenteral antibiotics in patient’s home. Therefore, the purpose of this study was to investigate the stability of ceftaroline in a commonly used elastomeric device.

METHOD: A total of 24 elastomeric devices were prepared, and six elastomeric devices containing 6mg/mL of ceftaroline (three in each type of diluents) were stored at one of the following conditions: 4°C for 6 days, 25°C for 24hours, 30°C for 24hours or 35°C for 24hours. An aliquot was withdrawn before storage and at different time points. Chemical stability was measured using a stability indicating high-performance liquid chromatography, and physical stability was assessed as change in pH, colour and particle content.

RESULTS: Ceftaroline, when admixed with both diluents, was stable for 144, 24 and 12hours at 4°C, 25°C and 30°C, respectively. At 35°C, ceftaroline admixed with normal saline (NS) and glucose 5% was stable for 12hours and for 6hours, respectively. No evidence of particle

formation, colour change or pH change was observed throughout the study period.

CONCLUSIONS: Our findings support 12 or 24hours continuous elastomeric infusion of ceftaroline-NS admixture, and bulk preparation of elastomeric pumps containing ceftaroline solution in advance. This would facilitate early hospital discharge of patients eligible for the elastomeric-based home therapy and avoid the need for patient's caregivers travelling to the hospital on a daily basis.

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Reference:

Al Madfai, F., Zaidi, S.T.R., Ming, L.C., Wanandy, T. and Patel, R.P. (2018) Physical and chemical stability of ceftaroline in an elastomeric infusion device. *European Journal of Hospital Pharmacy*. 25(e2), p.e115-e119. doi: 10.1136/ejhpharm-2017-001221.

