HUBUNGAN ANTARA KARAKTERISTIK FARMAKOKINETIKA DENGAN RESPON TERAPI PADA KASUS KEGAWAT-DARURATAN PASIEN ANAK

(Studi Penggunaan Aminofilin IV di IGD RSU Haji Surabaya)

Jamilah, 2018

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ABSTRAK

Abstrak: Penelitian ini bertujuan untuk mengetahui mengetahui hubungan karakteristik farmakokinetika aminofilin intravena dengan respon terapi pada pasien anak serangan asma berat dan/ancaman henti napas. Rancangan penelitian secara retrospektif berdasarkan rekam medis di IGD RSU Haji Surabaya. Dari 36 pasien yang menerima aminofilin intravena periode Januari 2016-Juni 2017 diperoleh perkiraan parameter farmakokinetik menggunakan asumsi data populasi dan analisis data PKPD dengan program monolix® diperoleh Vd = 0.286 liter/kg, K = 0,00564/jam, K_{12} = 2.41/jam, K_{21} = 0,0697/jam, Emax = 4,7 mg/L, dan EC50 = 1,66mg/L. Disimpulkan terdapat hubungan (p = 0,000) antara karakteristik farmakokinetika aminofilin infusi intravena dengan respon terapi pada pasien anak serangan asma berat.

Kata kunci : model farmakokinetika-farmakodinamika, serangan asma berat, aminofilin, teofilin, monolix®

RELATIONSHIP BETWEEN PHARMACOKINETICS CHARACTERISTICS WITH THERAPY RESPONSES IN CASE OF CHILDREN PATIENTS
(Study of Use of Aminofilin IV at IGD RSU Haji Surabaya)

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ABSTRACT

Abstract: This study was aimed to find out the correlation between the characteristics of intravenous aminophylline pharmacokinetics with therapeutic response in pediatric patients with severe asthma attack and / stop breathing threat. The research design is retrospectively based on medical record at IGD RSU Haji Surabaya. Of the 36 patients receiving intravenous aminophylline from January 2016-June 2017 we obtained an estimate of pharmacokinetic parameters using population data assumption and PKPD data analysis with monolix® program obtained Vd = 0.286 liter / kg, K = 0.00564 / h, K12 = 2.41 / h , K21 = 0.0697 / h, Emax = 4.7 mg / L, and EC50 = 1.66mg / L. It was concluded that there was a relationship (p = 0,000) between the pharmacokinetics characteristics of aminophylline of intravenous infusion with therapeutic response in pediatric with severe asthma attack.

Keywords: pharmacokinetics-pharmacodynamics model, severe asthma attack, aminophylline, theophylline, monolix®