

ABSTRAK

Perbandingan Penggunaan Kafein dan Teofilin Sebagai Terapi Pada Apneu Prematuritas

Nensy Anggrainy, Gatot Irawan Sarosa, Adhie Nur Radityo
Bagian Ilmu Kesehatan Fakultas Kedokteran Universitas Diponegoro/RSUP
Dr.Kariadi
Semarang, Indonesia

Latar Belakang: Apneu prematuritas adalah gangguan pernapasan yang terjadi pada bayi prematur dan merupakan penyebab bradikardi dan hipoksemia. Kafein dan teofilin merupakan golongan metilxantin yang telah digunakan pada terapi apneu prematuritas. Pada penelitian sebelumnya menunjukkan bahwa kafein merupakan salah satu terapi paling efektif pada apneu prematuritas.

Tujuan: Menganalisis efektifitas pemberian kafein per oral dibandingkan teofilin per oral sebagai terapi apneu prematuritas.

Metode: Penelitian *randomized controlled trial* pada Oktober 2021 – Oktober 2022 di ruang perinatologi RSUP Dr. Kariadi terhadap 50 bayi prematur yang terdiagnosis apneu prematuritas. Penelitian ini menganalisis efektifitas pemberian kafein dibandingkan teofilin dengan membandingkan frekuensi apneu pada kedua kelompok. Variabel lain yang diteliti yaitu durasi pemberian O₂ atau CPAP, penurunan FiO₂, toleransi minum, durasi rawat inap, serta efek samping yang terjadi. Data dianalisis menggunakan Mann-Whitney test dan Chi square. Tingkat kemaknaan penelitian dinyatakan bila nilai $p < 0,05$.

Hasil: Sampel penelitian sebanyak 48 subjek dari 50 subyek. Analisis efektifitas kelompok kafein dan teofilin terdapat perbedaan bermakna ($p=0,031$). Analisis durasi pemberian O₂ atau CPAP kelompok kafein dibanding kelompok teofilin terdapat perbedaan bermakna ($p=0,030$). Analisis penurunan FiO₂ setelah pemberian kafein dan teofilin terdapat perbedaan bermakna ($p=0,035$). Analisis toleransi minum kelompok kafein dan kelompok teofilin tidak terdapat perbedaan bermakna ($p=0,120$). Analisis durasi rawat inap kelompok kafein dibanding kelompok teofilin tidak terdapat perbedaan bermakna ($p=0,200$). Analisis efek samping kelompok kafein dibanding kelompok teofilin tidak terdapat perbedaan yang bermakna ($p=0,741$).

Kesimpulan: Pemberian kafein dan teofilin sama-sama efektif menurunkan frekuensi apneu pada terapi apneu prematuritas.

Kata kunci: bayi prematur, apneu prematuritas, kafein, teofilin, efektifitas, terapi

ABSTRACT

Comparison The Use of Caffeine and Theophylline as A Therapy in Apnea of Prematurity

Nensy Anggrainy, Gatot Irawan Sarosa, Adhie Nur Radityo
Department of Pediatric, Faculty of Medicine, Diponegoro University, Kariadi Hospital,
Semarang, Indonesia

Background: Apnea of prematurity is a respiratory disorder in premature infants and is a cause of intermittent bradycardia and hypoxaemia. Caffeine and theophylline are methylxanthine groups that have been used in the treatment of apnea of prematurity. Previous studies have shown that caffeine is one of the most effective therapies for apnea of prematurity.

Objective: Analyzing the effectiveness of oral administration of caffeine compared to oral theophylline as a therapy for apnea of prematurity.

Metode: Randomized controlled trial study in October 2021 - October 2022 in the perinatology room of RSUP Dr.Kariadi on 50 premature babies diagnosed with apnea of prematurity. This study analyzed the effectiveness of giving caffeine compared to theophylline by comparing the frequency of apnea in both groups. Other variables studied were the duration of O₂ or CPAP administration, decreased FiO₂, feeding tolerance, duration of hospitalization and side effects. Data were analyzed using the Mann-Whitney test and Chi square. The level of significance is stated if the p value <0.05.

Results: This study were 48 subject from 50 subjects. There was a significant difference in the effectiveness analysis of the caffeine and theophylline groups ($p=0,031$). Analysis of duration of O₂ or CPAP administration in the caffeine group and the theophylline group showed significant difference ($p=0,030$). Analysis in duration FiO₂ after administration of caffeine and theophylline, showed a significant difference ($p=0,035$). There was no significant difference in the feeding tolerance of the caffeine and theophylline group ($p=0,120$). Analysis of the duration of hospitalization in the caffeine group and theophylline group showed no significant difference ($p=0,200$). Analysis of side effects in the caffeine and theophylline group showed no significant difference ($p=0,741$).

Conclusion: Administration of caffeine and theophylline were both effective in reducing the frequency of apnea in the treatment of apnea of prematurity.

Keywords: premature babies, apnea of prematurity, caffeine, theophylline, effectiveness, therapy