Efektivitas penggunaan ear plug terhadap angka kejadian emergence delirium pasien anak yang menjalani anestesi umum inhalasi = Effectiveness of ear plug toward the insidence emergence delirium in pediatric patients undergoing general inhalation anesthesia

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Abstrak

Latar belakang. Emergence Delirium (ED) merupakan stadium dari disosiasi kesadaran pasca pembiusan dengan gejala khas berupa gelisah,mengamuk,tidak dapat dibujuk dan inkoherensi. Angka kejadian ED pada anak yang menjalani pembiusan umum di RSUPN Dr. Cipto Mangunkusumo 39,7%. Saat pulih stimulus auditorik menyebabkan sinaps talamus di Lateral amigdala sehingga menimbulkan respons takut berlebihan yang merupakan salah satu faktor terjadinya ED. Kebisingan di kamar operasi yang tinggi dapat dikurangi dengan penggunaan ear plug.
Metode. Penelitian uji klinik acak tersamar ganda terhadap anak usia 1-5 tahun yang menjalani anestesia umum inhalasi di RSCM pada bulan September-Desember 2018. Sebanyak 107 subjek didapatkan dengan metode konsekutif yang dirandomisasi menjadi dua kelompok. Kelompok earplug (n=53) dilakukan pemasangan ear plug di akhir anestesia, sedangkan kontrol (n=54) tidak dilakukan pemasangan ear plug. Kejadian ED, waktu ekstubasi dicatat. ED dinilai dengan Pediatric Anesthesia Emergence Delirium (PAED). Analisis data menggunakan analisa multivariate regresi logistik dan analisa ANCOVA.
Hasil. Kejadian ED pada kelompok ear plug sebesar 16,7% sedangkan kontrol 32,1% (OR = 0,402; IK 95% 0,152-1,062; p=0,066). Rerata waktu ekstubasi kelompok ear plug vs kontrol (5,76+3,23 menit) vs (6,54+ 3,67 menit) selisih rerata 0,825(0,530-2,180); p=0,230.
Simpulan. Pemberian ear plug di akhir anestesia secara statistik tidak efektif namun secara klinis efektif menurunkan kejadian ED pasien anak yang menjalani anestesia umum inhalasi.
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Background. Emergence Delirium (ED) is classified as a transient postoperative disassociation state with characteristic such as agitation, irritable, umcompromising, uncooperatative, inconsolably crying. The incidence of ED in pediatric patients who underwent general anesthesia in RSUPN Dr. Cipto Mangunkusumo was 39,7%. During emergence state, auditoric stimulation induce Thalamic synaps in Lateral amigdala which leads to over respons of fearness (one of the risk factor of ED). A high noise level in operating room can be reduced with ear plug application to the patient.
Method. A double blind randomized clinical trial towards 1-5 years old pediatrics patients who underwent inhalation general anesthesia in RSCM from September-December 2018. One hundred and seven subjects were randomized after a consecutive sampling into two groups. Earplug group (n=53) with application of ear plug at the end of surgery, while in control group (n=54) without application of ear plug. The incidence of ED and time to extubation were recorded. ED was measured using Pediatric Anesthesia Emergence Delirium (PAED). All the data was analyzed using multivariate logistic regression and ANCOVA.
Result. Incidence of ED in ear plug group was 16.7% while in control group was 32.1% (OR = 0.402; CI 95% 0.152-1.062; p=0.066). Mean value of time to extubation in ear plug vs control group (5.76+3.23 minutes) vs (6.54+ 3.67 minutes) with mean difference of 0.825(0.530-2.180); p=0.230.

Conclusion. Ear plug application at the end of anesthesia was not statistically effective. However, it was clinically effective in reducing the incidence of ED in pediatric patient underwent inhalation anesthesia.