Pengaruh dobutamin terhadap faal kadiovaskular dan perjalanan klinis penyakit membran hialin studi fisiologi dan epidemiologi klinis sebagai upaya untuk mengembangkan model pengobatan yang efisien

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Abstrak

TUJUAN (1) Menilai efek pemberian dabutamin data perjalanan penyakitmembran hialin (PMFi)" ringan pada xieonatps kurangislan (NKB) (2) ,Mendeteksi gangguan faal, kardiovaskular pada-PMH ringan; (3}; Menilai respons faal kardiovaskular; pada ..PMH ringan; terhadap pemberiandobutamin; (4).Mendeteksi faktor risiko untuk.terjadinya PMH pada NKB. TEMPAT PENELITIAN: Unit perawatan neonatus tingkat II pada rumah sakit rujukan utama, SUBYEK PENELITIAN: NKB dengan ibunya.
PENGURURAN DAN INTERVENSI NKB yang.lahir di RSCM diikuti sampai terjadi PMH atau tidak. Faktor risiko dihitung dengan analisis bivariat dan regresi logistik. Faal ven tnkel dari aliran darah otak (ADO diperiksa dengan teknik" Doppler Faal, diastolik' ventikel varian dari kin diestimasi dengan mengukur puncak E, puncak-A, dan rasio Faal sistolik ventrikel kiri diukur dengan periode praejeksi (PPE) dan waktu ejeksi ventrikel kiri (WEVKi) yang"dikoreksi terhadap laju jantung, serta rasio PPE/WEVKi: ADO'dinilai dengan pengukuran kecepatan aliran darah otak (KADO) maksimal dari Ina1, indeks Pour-ot dan akselerasi aliran Perinrih dobutamin diteliti dengan uji intervensi tersamar ganda dengan desain silang. Pengaruh`dobutamin dalam perjalanan PMI-J dinilai dengan analisis kesintasan pasien yang mendapat dobitamin atau placebo, dengan metode Kaplan Meier dan uji Breslow: Efek pada analisis kesehan adalah saat pasien memerlukan ventilasi mekanik atau mengalami perburukan yang mengancam jiwa.
.....PURPOSE To determine: (1) effects of dobutamine administration on the clinical course of preterm infants with mild hyaline membrane disease (HMD); (2) cardiovascular involvement in mild HMD; (3) response of cardiovascular functions in patients with mild HMD to dobutamine administration; (4) risk factors for the development of HMD in preterm infants.
SETTING Level2neonatal unit of a national referral hospital. STUDY SUBJECTS Preterm infants with their respective mothers.
MEASUREMENTS AND INTERVENTION Pre term infants born at Cipto Mangunkuswno Hospital, Jakarta, were followed from birth to detect the development of HMD. The risk or protective factors were calculated by univariate and logistic regression analyses. Right ventricular (RV) and left ventricular (LV) diastolic functions were estimated by measuring points E and A, and E/A ratio_ LV systolic function was estimated by measuring rate-corrected pre-ejection period (PEP) and left ventricular ejection time (LVET), and PEP/ LVET ratio. Cerebral blood flow velocity (CBFV) was determined at the anterior cerebral artery. Maximal and minimal flows were determined and Pourcelot Index calculated; acceleration of the flow was also measured. Comparison of preterms with or without mild HMD was performed in 23 gestational age and birth weight matched pairs infants. Effects of dobutamine were determined by randomized, double-blind, placebo controlled trial in 41 preterm infants with mild HMO. The role of dobutamine in the clinical course of mild HMD was determined by comparing survival curves of placebo-treated and dobutamine-treated patients using Kaplan-Meier method and Breslow hypothesis testing. The need for mechanical ventilation or deterioration of patient's condition was judged as the event of interest.

MAIN RESULTS Eighty-seven out of the 308 preterm infants studied developed HMD. Logistic regression model disclosed that antepartum hemorrhage, mode of delivery, sex, gestational period, and peri natal asphyxia were associated with the development of HMO. RV diastolic function parameters were not significantly different between infants with. or without mild HMD, and dobutamine did not alter the values. In contrast, LV E and A points were significantly different between the 2 groups,, although the E/A ratio was not different. Dobutamine improved the de-pressed LV diastolic function. Infants with mild HMD had significantly longer rate corrected PEP, ' shorter rate corrected LVET, and larger PEP/LVET ratio compared with those without HMD. The dysfunction was improved by dobutamine. CBFV was not significantly different between preterm infants with or without mild HMD, and dobutamine did not alter CBFV but it increased blood flow acceleration. Dabutamine treated infants had a significantly longer mean mechanical-ventilation-free survival than placebo, treated infants, i.e. 78 vs 61 hours.
CONCLUSIONS (1) Administration of dobutamine to standard treatment delays the deterioration of preteen infants with mild HMD, so that use of dobutamine 10 lrg/kg/min early in the course of the disease is recommended. (2) LV diastolic and systolic functions are depressed in mild HMD, and dobutamine can correct the dysfunction; however; RV diastolic function is not disturbed in mild HMD (3) CBFV is not significantly different between preterm infants vvith or without mild HMD; dobutamine hasnigligible effect on CBPV, but it increases.CBE acceleration: (4) As tepartun hemorrhage, mode of delivery, sex, gestational age, and asphyxia are independently associated with the development of HMOwoRDB Dobutamine prevent infants, hyalin"membranes', rardiovascular involvecerebral blood flow