ABSTRAK

SURVIVAL RATE PADA ANAK-ANAK PENDERITA HIDROSEFALUS KOMUNIKANS AKIBAT MENINGITIS BAKTERIAL DENGAN PEMBERIAN ANTIBIOTIKA INTRAVENA DAN KOMBINASI INTRAVENA-INTRAVENTIKULAR DI RSUD DR. SOETOMO SELAMA TAHUN 2014

Latar Belakang: Hingga saat ini prosedur pemberian antibiotika secara intraventrikular pada anak-anak penderita meningitis bakterial masih merupakan suatu kontroversi. Namun secara teori, pemberian antibiotika secara intraventrikular dapat memberikan konsentrasi antibiotika yang lebih tinggi di cairan serebrospinal (CSS) daripada secara intravena. Penelitian ini bertujuan untuk mendiskripsikan efektivitas terapi pemberian antibiotika intravena dan kombinasi antibiotika intravena-intraventrikular pada anak-anak penderita hidrosefalus komunikans akibat meningitis bakterial.

Metode: Penelitian observasional deskriptif secara longitudinal prospektif ini mengambil sampel anak-anak penderita meningitis bakterial usia baru lahir hingga 18 tahun yang diberikan injeksi antibiotika intravena dan kombinasi antibiotika intravena-intraventrikular yang dirawat di RSUD dr. Soetomo pada Januari-Desember 2014. Pemilihan pemberian antibiotika intravena atau kombinasi intravena-intraventrikular adalah berdasarkan keputusan dari hasil diskusi Divisi Pediatri dan Infeksi Departemen Bedah Saraf RSUD dr. Soetomo.

Hasil: Dari lima sampel yang mendapatkan terapi antibiotika intravena, seluruh sampel (100%) meninggal (*survival rate* 0%). Dari lima sampel yang mendapatkan terapi kombinasi antibiotika intravena-intraventrikular, empat sampel (80%) meninggal, sementara satu sampel (20%) diperoleh perbaikan klinis dan CSS steril kemudian dilakukan tindakan pemasangan VP shunt setelah perawatan selama 37 hari (*survival rate* 20%). *Median survival time* antara sampel yang mendapatkan terapi antibiotika intravena dan kombinasi intravena-intraventrikular empirik-terapetik menggunakan uji komparasi non parametrik Log Rank (Mantel-Cox), diperoleh perbedaan yang signifikan ($p<0,002$). Sementara uji komparasi *median survival time* pada sampel yang mendapatkan terapi antibiotika intravena dan kombinasi intravena-intraventrikular terapetik diperoleh juga perbedaan yang signifikan ($p<0,008$).

Kesimpulan: Terapi kombinasi antibiotika intravena-intraventrikular pada anak-anak penderita hidrosefalus komunikans akibat meningitis bakterial memiliki *survival time* yang lebih baik.

Kata kunci: hidrosefalus, meningitis, antibiotika, intravena, intraventrikular

ABSTRACT

SURVIVAL RATE IN CHILDREN WITH COMMUNICATING HYDROCEPHALUS DUE TO BACTERIAL MENINGITIS AFTER TREATMENT OF INTRAVENOUS ANTIBIOTICS AND A COMBINATION OF INTRAVENOUS-INTRAVENTRICULAR ANTIBIOTICS IN Dr. SOETOMO GENERAL HOSPITAL DURING YEAR 2014

Background: Until now, intraventricular antibiotics administration in children with bacterial meningitis remains a controversy. Theoretically, intraventricular antibiotics can provide higher antibiotic concentrations in cerebrospinal fluid (CSF) rather than intravenous antibiotics. This study aimed to describe the therapeutic effectiveness of intravenous antibiotics and combination of intravenous-intraventricular antibiotics in children with communicating hydrocephalus due to bacterial meningitis.
Methods: This observational descriptive study in longitudinal prospective took a sample of children with bacterial meningitis who were given intravenous antibiotics and a combination of intravenous-intraventricular antibiotics in dr. Soetomo General Hospital in January-December 2014. Selection of intravenous antibiotics or a combination of intravenous-intraventricular antibiotics therapy was based on the decision from Division of Pediatric and Infection, Department of Neurosurgery, dr. Soetomo General Hospital.
Results: Of the five samples received intravenous antibiotics therapy, all samples (100%) were died (survival rate 0%). Of the five samples receiving combination therapy of intravenous-intraventricular antibiotics, four samples (80%) were died, while one sample (20%) obtained clinical improvement, its CSF became sterile, and VP shunt was performed after treatment for 37 days (survival rate 20%). Median survival time between sample who received intravenous antibiotics therapy and a combination of intravenous-intraventricular antibiotics therapy using comparison test for non-parametric of Log Rank (Mantel-Cox) obtained a significant difference ($p < 0.002$). Meanwhile, comparison test for median survival time on sample who received intravenous antibiotics therapy and a combination of intravenous-intraventricular antibiotics therapy also obtained a significant difference ($p < 0.008$).
Conclusions: Combination of intravenous-intraventricular antibiotics treatment to childen with communicating hydrocephalus due to bacterial meningitis has a better survival time.

Keywords: hydrocephalus, meningitis, antibiotics, intravenous, intraventricular