

ABSTRACT

PROGNOSTIC FACTOR OF 3-YEAR SURVIVAL BILIARY ATRESIA PATIENTS FOLLOWING KASAI PROCEDURE IN RSUP DR. SARDJITO

Dennis¹, Gunadi², Akhmad Makhmudi²

¹Undergraduate Program, Faculty of Medicine, Public Health, and Nursing,
Gadjah Mada University, Yogyakarta, Indonesia

²Division of Pediatric Surgery, Department of Surgery, RSUP Dr. Sardjito,
Yogyakarta, Indonesia

Background: Biliary atresia (BA) is a congenital disease in the form of progressive and idiopathic intra-and extrahepatic biliary duct abnormalities that illustrates the presence of obstruction in the biliary duct. The obstruction cause increased levels of bilirubin in the blood, causing jaundice in newborns for more than 2 weeks. The main treatment of biliary atresia is the Kasai procedure. Literature studies have proven that the Kasai procedure can increase the survival of patients with biliary atresia. Our previous study showed the overall survival of BA patients after Kasai surgery was 60%. This is influenced by several factors such as age at surgery, operator experience, 7-day postoperative bilirubin, pre-operative GGT, 7-day post-operative GGT, and GGT7/GGT0 ratio. Specific research regarding the prognostic factor of BA patient survivability after Kasai surgery in Indonesia is still limited, especially for 3-year survival.

Objective: To evaluate the prognostic factor for 3-year survival of BA patients after the Kasai procedure at RSUP Dr. Sardjito.

Method: This study was an observational study using a retrospective cohort design conducted on 24 AB patients as recorded in the medical records of RSUP Dr. Sardjito with a time span from January 2012 to December 2018. The data used in this study are secondary data that contains data such as age at surgery, operator, 3-year survival, and lab parameters such as bilirubin and GGT. The relationship of these factors with 3-year survival was analyzed using the chi-square test. Analysis of 3-year survival of AB patients using the Kaplan-Meier test.

Results: There was no correlation between age at surgery ($p = 0.098$), operator experience ($p = 0.640$), 7-day postoperative bilirubin ($p = 1,000$), preoperative GGT ($p = 0.682$), 7-day postoperative GGT ($p = 0.682$), the ratio of GGT7/GGT0 ($p = 1,000$) to the 3-year survival of Kasai postoperative patients. A 3-year survival analysis using the Kaplan-Meier test obtained insignificant results in the form of: age at surgery ($p = 0.162$), operator experience ($p = 0.479$), bilirubin 7 days postoperatively ($p = 0.827$), pre-operative GGT ($p = 0.827$) $p = 0.865$, postoperative GGT ($p = 0.771$), and GGT7 / GGT0 ratio ($p = 0.352$).

Conclusion: Age at surgery, operator experience, 7-day postoperative bilirubin, pre-operative GGT, 7-day post-operative GGT, and GGT7 / GGT0 ratio were not a prognostic factor for 3-year survival of AB patients after Kasai surgery.

Keyword (s): biliary atresia; 3 year survival; Kasai; prognostic factors.

INTISARI

FAKTOR PROGNOSIS KESINTASAN 3 TAHUN PASIEN ATRESIA BILIER PASCA OPERASI KASAI DI RSUP DR. SARDJITO

Dennis¹, Gunadi², Akhmad Makhmudi²

¹Program Sarjana Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan,
Universitas Gadjah Mada, Yogyakarta, Indonesia

²Divisi Bedah Anak, Departemen Ilmu Bedah RSUP Dr. Sardjito, Yogyakarta,
Indonesia

Latar Belakang: Atresia Bilier (AB) merupakan penyakit bawaan berupa kelainan duktus bilier intra- dan ekstrahepatik progresif dan idiopatik yang menggambarkan adanya hambatan pada duktus bilier. Hambatan pada duktus bilier menyebabkan kadar bilirubin dalam darah meningkat sehingga menimbulkan manifestasi berupa kekuningan pada kulit bayi baru lahir lebih dari 2 minggu. Tatalaksana utama atresia bilier adalah prosedur Kasai. Studi literatur telah membuktikan bahwa prosedur Kasai dapat meningkatkan kesintasan pasien dengan atresia bilier. Penelitian kami sebelumnya menunjukkan kesintasan keseluruhan pasien AB pasca operasi Kasai adalah 60%. Hal ini dipengaruhi oleh beberapa faktor seperti usia saat operasi, pengalaman operator, bilirubin 7 hari pasca operasi, GGT pre-operatif, GGT 7 hari post-operatif, dan rasio GGT7/GGT0. Penelitian spesifik mengenai faktor prognosis kesintasan pasien AB pasca operasi Kasai di Indonesia masih terbatas terutama untuk kesintasan 3 tahun.

Tujuan: Untuk mengevaluasi faktor prognosis kesintasan 3 tahun pasien AB pasca prosedur Kasai di RSUP Dr. Sardjito.

Metode: Penelitian ini merupakan penelitian observasional menggunakan rancangan *cohort retrospective* yang dilakukan pada 24 pasien AB sebagaimana tercatat dalam rekam medis RSUP Dr. Sardjito dengan rentang waktu Januari 2012 hingga Desember 2018. Data yang digunakan dalam penelitian merupakan data sekunder yang berisi data usia saat operasi, operator, kesintasan 3 tahun, dan parameter lab seperti bilirubin dan GGT. Hubungan faktor-faktor tersebut dengan kesintasan 3 tahun kemudian dianalisis menggunakan uji *chi-square*. Analisis kesintasan 3 tahun pasien AB menggunakan uji Kaplan-Meier.

Hasil: Tidak terdapat adanya hubungan antara faktor usia saat operasi ($p=0,098$), pengalaman operator ($p=0,640$), bilirubin 7 hari post-operatif ($p=1,000$), GGT pre-operatif ($p=0,682$), GGT 7 hari post-operatif ($p=0,682$), rasio GGT7/GGT0 ($p=1,000$) dengan kesintasan 3 tahun pasien AB pasca operasi Kasai. Analisis kesintasan 3 tahun menggunakan uji Kaplan-Meier diperoleh hasil yang tidak signifikan berupa: usia saat operasi ($p=0,162$), pengalaman operator ($p=0,479$), bilirubin 7 hari post-operatif ($p=0,827$), GGT pre-operatif ($p=0,865$), GGT post-operatif ($p=0,771$), dan rasio GGT7/GGT0 ($p=0,352$).

Kesimpulan: Usia saat operasi, pengalaman operator, bilirubin 7 hari post-operatif, GGT pre-operatif, GGT 7 hari post-operatif, dan rasio GGT7/GGT0 bukan merupakan faktor prognosis kesintasan 3 tahun pasien AB pasca operasi Kasai.

Keyword(s): atresia bilier; kesintasan 3 tahun; Kasai; faktor prognosis.