

HUBUNGAN USIA SAAT OPERASI DAN DURASI OPERASI TERHADAP KESINTASAN PADA NEONATUS DENGAN OBSTRUKSI DUODENUM KONGENITAL DI RSUP DR SARDJITO YOGYAKARTA

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ABSTRAK

Latar Belakang: Obstruksi duodenum kongenital merupakan penyebab obstruksi intestinal pada neonatus yang memerlukan tindakan operatif. Luaran klinis pascaoperasi dipengaruhi oleh berbagai faktor perioperatif, termasuk usia saat operasi dan durasi operasi. **Tujuan:** Mengetahui cut-off optimal usia saat operasi, pengaruh durasi operasi terhadap kesintasan, serta faktor lain yang memengaruhi kesintasan neonatus dengan obstruksi duodenum kongenital. **Metode:** Penelitian kohort retrospektif pada 65 neonatus dengan obstruksi duodenum kongenital yang menjalani operasi di RSUP Dr. Sardjito Yogyakarta selama periode Juni 2020 – Juni 2025. Variabel dependen adalah kesintasan pasien. Variabel independen meliputi jenis kelamin, usia kehamilan, berat badan lahir, usia saat operasi, sepsis neonatorum, kelainan kongenital penyerta, tipe dan letak obstruksi, penyebab obstruksi, prosedur operasi, serta durasi operasi. Analisis menggunakan kurva ROC, Kaplan–Meier, dan regresi Cox. **Hasil:** Cut-off usia operasi optimal adalah 3,5 hari (AUC 0,589). Kesintasan lebih baik pada neonatus yang dioperasi >3,5 hari ($p=0,030$), namun tidak signifikan pada regresi Cox (HR 2,197; $p=0,062$). Durasi operasi memiliki cut-off 197,5 menit (AUC 0,695) dan berhubungan signifikan dengan kesintasan. Durasi operasi $\geq 197,5$ menit meningkatkan risiko kematian 2,6 kali (HR 2,648; $p=0,026$). Faktor praoperatif dan faktor pembedahan lainnya tidak menunjukkan hubungan signifikan dengan kesintasan. Berat lahir rendah dan kelainan kongenital penyerta menunjukkan kecenderungan meningkatkan risiko kematian. **Kesimpulan:** Durasi operasi berpengaruh signifikan terhadap kesintasan neonatus dengan obstruksi duodenum kongenital. Penentuan waktu operasi perlu mempertimbangkan stabilitas klinis pasien, sedangkan durasi pembedahan perlu diminimalkan melalui perencanaan operatif yang optimal.

Kata kunci: obstruksi duodenum kongenital, usia operasi, durasi operasi, kesintasan neonatus.

**Age at Surgery and Operative Duration as Predictors of Survival in Neonates
with Congenital Duodenal Obstruction at Dr. Sardjito General Hospital
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ABSTRACT

Background: Congenital duodenal obstruction is a cause of intestinal obstruction in neonates that requires surgical intervention. Postoperative clinical outcomes are influenced by various perioperative factors, including age at surgery and operative duration. **Objective:** To determine the optimal cut-off point for age at surgery, evaluate the effect of operative duration on survival, and identify other factors influencing survival in neonates with congenital duodenal obstruction. **Methods:** This retrospective cohort study included 65 neonates with congenital duodenal obstruction who underwent surgery at Dr. Sardjito General Hospital, Yogyakarta, from June 2020 to June 2025. The dependent variable was patient survival. Independent variables included sex, gestational age, birth weight, age at surgery, neonatal sepsis, associated congenital anomalies, type and location of obstruction, cause of obstruction, surgical procedure, and operative duration. Data were analyzed using ROC curve analysis, Kaplan–Meier survival analysis, and Cox regression. **Results:** The optimal cut-off point for age at surgery was 3.5 days (AUC 0.589). Survival was better in neonates who underwent surgery at >3.5 days ($p=0.030$), although this was not statistically significant in Cox regression analysis (HR 2.197; $p=0.062$). The optimal cut-off for operative duration was 197.5 minutes (AUC 0.695) and was significantly associated with survival. Operative duration ≥ 197.5 minutes increased the risk of mortality by 2.6 times (HR 2.648; $p=0.026$). Other preoperative and surgical factors were not significantly associated with survival. Low birth weight and associated congenital anomalies showed a tendency to increase the risk of mortality. **Conclusion:** Operative duration significantly affects survival in neonates with congenital duodenal obstruction. The timing of surgery should consider the patient's clinical stability, while operative duration should be minimized through optimal surgical planning.

Keywords: congenital duodenal obstruction, age at surgery, operative duration, neonatal survival.