

# Faktor Prognostik Luka Bakar Pediatrik di RSUPN Dr. Cipto Mangunkusumo = Prognostic Factors for Mortality of Pediatric Burn Injury in a National Tertiary Referral Center

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## Abstrak

Pendahuluan. Kematian akibat luka bakar di Indonesia mencapai 195.000 kasus setiap tahunnya.

Berdasarkan data dari Kementerian Kesehatan Republik Indonesia, insidensi luka bakar didominasi usia 1—4 tahun. Mortalitas luka bakar pediatrik di rumah sakit tersier mencapai 37,26%. Penelitian ini bertujuan untuk mengetahui hubungan antara faktor prognostik mortalitas pada kasus luka bakar pediatrik di karakteristik populasi Indonesia.

Metode. Desain penelitian ini adalah analitik retrospektif meliputi seluruh pasien luka bakar pediatrik di RSUPN Dr. Cipto Mangunkusumo pada periode 1998 hingga 2010. Fokus penelitian ini adalah mengatami variabel pemeriksaan dalam 72 jam pertama pascaadmisi dan diekstraksi dari rekam medis.

Hasil. Dari 609 luka bakar pediatrik, insidensi mortalitas adalah 37,8%. Variabel yang berhubungan bermakna dengan mortalitas adalah TBSA, cedera inhalasi, lama rawat inap, kadar hemoglobin 0-jam, hematokrit 24-jam dan 48-jam, INR 0-jam, dan 48-jam, keseimbangan cairan 24-jam, defisit basa, serum laktat, edema pulmonal, systemic inflammatory response syndrome (SIRS) + multiorgan failure(MOF), dan acute coronary syndrome (ACS) ( $p <0,05$ ). Berdasarkan analisis multivariat, variabel yang bermakna adalah lama rawat inap <14 hari, SIRS+MOF, kadar hematokrit 0-jam, dan kadar laktat serum abnormal.

Kesimpulan. Semakin banyak faktor prognostik yang teridentifikasi pada pasien akan meningkatkan risiko mortalitas. Selain itu, resusitasi cairan yang berlebih dapat meningkatkan risiko edema pulmonal, SIRS+MOF, dan komplikasi ACS, yang berujung dengan peningkatan risiko mortalitas.

.....Introduction. In Indonesia, burn injuries cause about 195,000 deaths annually. According to data from the Ministry of the Health Republic of Indonesia, the incidence of burns predominated at 1-4 years old. The mortality of pediatric burn patients in a tertiary hospital was 37.26%. This study aimed to find an association between known and unknown prognostic factors of mortality in Indonesian-specific characteristics.

Method. A retrospective analytical study included all pediatric burns admitted to Dr. Cipto Mangunkusumo General Hospital (CMGH) from 1998 to 2010. Variables within a period of the first 72 hours of admission were the focus of interest and were extracted from the medical record.

Results. Of 609 pediatric burns, the mortality rate is 37.8%. Some contributing variables significantly associated with the mortality were TBSA, inhalation injury, length of hospitalization, hemoglobin 0-h level, hematocrit 24-h and 48-h level, INR 0-h, and 48-h, fluid balance 24-h, base deficit, serum lactate, pulmonary edema, systemic inflammatory response syndrome (SIRS) + multiorgan failure (MOF), and acute coronary syndrome (ACS) ( $p <0,05$ ). On multivariate analysis, the significant variable was length of hospitalization <14 days, SIRS+MOF, abnormal hematocrit 0-h level, and abnormal serum lactate level.

Conclusion. The more identified prognostic factors a patient finds, the more the mortality risk. In addition, excessive fluid resuscitation leads to a high likelihood of pulmonary edema, SIRS+MOF, and ACS complications, followed by increased mortality risk.