

INTISARI

Latar belakang Anak dengan sepsis sering mengalami kegagalan hemodinamik sehingga memerlukan resusitasi cairan. Sementara itu, anak dengan sepsis dan sakit kritis berisiko lebih tinggi mengalami akumulasi cairan ekstrasvaskuler akibat peningkatan permeabilitas kapiler dan peningkatan tekanan hidrostatis kapiler, yang dapat meningkatkan morbiditas dan mortalitasnya selama perawatan di PICU.

Tujuan Untuk mengevaluasi apakah kelebihan cairan memperlama penggunaan ventilator mekanik pada anak dengan sepsis yang dirawat di PICU

Metode Kami akan melakukan penelitian kohort retrospektif yang mengikutsertakan semua anak usia 1 bulan-18 tahun yang terdiagnosis sepsis dan menggunakan ventilator mekanik sejak perawatan kurang dari 24 jam di PICU RSUP dr. Sarjito dari Januari 2013-Juni 2018. Data sekunder diperoleh dari rekam medis pasien.

Hasil Dari 444 anak dengan sepsis selama Januari 2013-Juni 2018, 166 anak memenuhi kriteria inklusi. Sebanyak 17 diantaranya dieksklusi karena menderita penyakit jantung bawaan. Median usia subyek adalah 19 bulan dengan median skor PELOD-2 saat masuk adalah 8. Sebanyak 18 (12,1%) subyek mengalami kelebihan cairan (%FO \geq 10%). Median lama ventilasi mekanik adalah 5 hari. Kelebihan cairan berpengaruh secara signifikan terhadap lama ventilasi mekanik ($p=0,01$) dan berpengaruh terhadap kejadian kematian di PICU (RR=2,06; IK95% 1,66-2,56; $P=0,001$). Baik lama perawatan PICU maupun kegagalan ekstubasi tidak dipengaruhi oleh kelebihan cairan.

Kesimpulan Kelebihan cairan pada pasien sepsis di PICU berpengaruh terhadap lama ventilasi mekanik dan kejadian kematian di PICU

Kata kunci: kelebihan cairan, sepsis, lama ventilasi mekanik

ABSTRACT

Background Children with sepsis were often had hemodynamic failure and would benefit from fluid resuscitation. On the other hand, critically ill children with sepsis are on higher risk of fluid accumulation due to raise in capillary hydrostatic pressure and permeability. Therefore, fluid overload may result in higher morbidity and mortality during PICU admission.

Aim To evaluate the consequences of fluid overload toward the length of mechanical ventilation in children with sepsis admitted to PICU.

Methods Our study design was retrospective cohort which included children aged 1 month-18 years old with sepsis who were admitted to PICU between January 2013 and June 2018 and mechanically ventilated. We extracted secondary data from medical record. We perform independent T-test and survival analysis for data analysis.

Result We included 166 subject from 444 children admitted to PICU from January 2013 to June 2018. Of those, 17 children were excluded due to having congenital heart disease. Median of age was 19 months and median of PELOD-2 score was 8. Eighteen children (12,1%) were found to have positive fluid balance in the first 48 hours. Median of mechanical ventilation duration was 5 days. Fluid overload was significantly correlated with length of mechanical ventilation ($p=0,01$) and PICU mortality ($RR=2,06$; $95\%CI$ 1,66-2,56; $P=0,001$). Neither length of PICU stay nor extubation failure was significantly influenced by fluid overload.

Conclusion Fluid overload was significantly correlated with length of mechanical ventilation and could predict mortality in children with sepsis in PICU.

Keyword fluid overload, sepsis, length of mechanical ventilation