Children who survive sepsis often experience lingering effects

SAN FRANCISCO - Survival rates have risen dramatically in recent years among children who develop sepsis, a severe, life-threatening immune reaction to an infection somewhere in the body. But new research being presented at the 2017 Pediatric Academic Societies Meeting shows that recovery remains a long haul for patients, with many still feeling effects on their physical, social, emotional and school functioning for months after they are discharged from the hospital.

Researchers will present the abstract, "Illness Severity Associated with Deterioration of Health-Related Quality of Life Following Pediatric Sepsis" on Monday, May 8, at the Moscone West Convention Center.

Lead author Elizabeth Killien, a pediatric critical care medicine fellow at the University of Washington School of Medicine, said that while it is increasingly rare for children to die from severe infections in the United States, the number of children experiencing sepsis actually is increasing.

"Although the number of children surviving sepsis is rising dramatically," Killien said, "we know very little about what happens to these children after they're released from the hospital."

Reviewing electronic health records, the researchers identified 778 children admitted to Seattle Children's Hospital between 2012 and 2015 who met the criteria for sepsis within four hours of arrival. They compared the patients' reported, baseline health-related quality of life, a collection of factors that describe a child's overall level of functional well-being, with similar measurements taken two weeks and five months after hospital discharge.

"What we found was that more than 23%, or nearly a quarter, of the patients hospitalized with sepsis have a significant decline in quality of life after hospitalization that can last several months after discharge," Killien said.

Among factors that most strongly predicted failure to recover to baseline health-related quality of life, Dr. Killien said, was the severity of a patient's sepsis. For example, fully 50% of patients who developed septic shock, in which blood pressure plunges and organ damage can occur, were still below their baseline functional health status nearly five months after discharge. An even higher amount (56%) of patients who had sepsis that involved infections in their blood also had failed to fully recover, as did 53% of those who had central nervous system infections.

Identifying which factors predict declines in quality of life, Dr. Killien said, can help the medical community recognize which children are most at risk for prolonged recovery.

"We've always focused on reducing deaths from pediatric sepsis, but it's becoming increasingly clear that children who are surviving sepsis experience many lasting effects on their health and quality of life," she said. "Knowing that sepsis can have such a significant impact on children's long-term well-being can help us better support them during and after a hospitalization to help improve outcomes among survivors."

Dr. Killien will present the abstract at 1:45 p.m. It is available at https://registration.pas-meeting.org/2017/reports/rptPAS17_Ababstracts.asp.