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Summary of dissertation

Sepsis Impact

Introduction

Sepsis is defined as organ dysfunction caused by a dysregulated host response to infection. Although sepsis contributes significantly to overall mortality, the number of sepsis survivors has increased over the past years, resulting in an increased number of people living with possible long-term consequences, such as cognitive impairment, functional decline, muscle weakness and fatigue. Knowledge of post-hospital recovery is sparse, and no consensus on sepsis rehabilitation programmes exists. Knowledge about the post-sepsis sequelae experienced by sepsis survivors is essential in the pursuit of enhancing recovery from sepsis. A few qualitative studies have elucidated this subject; however, they have focused on sepsis survivors from the intensive care unit (ICU).

Health is a fundamental human right, but it is socially determined, which also applies to infectious diseases. Socioeconomic measures are difficult to obtain and interpret, especially due to differences in social inequality, social infrastructure and access to healthcare between countries. No Danish study has investigated the association between socioeconomic status and mortality in patients with sepsis.

WHAT DO WE KNOW?

Sepsis is a life-threatening condition with potential long-term consequences that extend beyond the acute state of illness.

In this PhD thesis, we sought to increase knowledge of sepsis burden and consequences related to sepsis at the patient level. With a qualitative approach, we explored how sepsis survivors experienced life in the aftermath of hospitalisation with sepsis.

In the qualitative study, we found that sepsis survivors often experienced fatigue and physical and psychological declines. Some survivors withdrew from social activities, were tormented by thoughts of death or had cognitive declines. All sepsis survivors, except one, had been treated outside the ICU. However, their experiences had substantial similarities to those previously described in sepsis survivors from the ICU.

In the second study (a register-based cohort study), we investigated whether low income was associated with an increased risk of death in patients with sepsis. Low income was associated with an increase in 90- and particularly 365-day mortality but was not identified in 7-day mortality. Patients from different income groups were referred to the ICU equally. Our results indicate that the increased risk of death among patients with sepsis and low incomes is mediated by a complex combination of out-of-hospital factors.

In the third study (a register-based cohort study), we described affiliations to the labour market among all patients with sepsis aged 20–63 years in the Region of Southern Denmark. Despite being of working age, only approximately 40% of the patients with sepsis were part of the active workforce at hospitalisation. Factors associated with return to work (RTW) among patients with sepsis who were part of the workforce at admission included patient characteristics such as lower age and lower Charlson Comorbidity Index, no major mental illness, no markers of smoking, no alcohol-related disorders and a high educational level. Further, hospital stays of less than 7 days and no admission to the ICU were also associated with RTW. By far, the strongest factor associated with RTW was whether one was working before hospitalisation, which ruled out the impact of other factors, including educational level.

Our research provides a more comprehensive understanding of sepsis trajectories at the individual level. The outcome after sepsis depends, to some extent, on 'who you were' before becoming sick. Understanding what matters most to sepsis survivors can contribute to an increased quality of post-hospital care and rehabilitation programmes. Increased awareness of socioeconomic disparities can potentially improve existing inequality in healthcare; however, improved equality in health requires understanding the impact of out-of-hospital factors.

CLINICAL IMPACT

Early identification of patients with sepsis who are at increased risk of poor long-term outcomes may enable targeted follow-up and rehabilitation.

APPLICATION IN DANISH EMERGENCY DEPARTMENTS

Outcomes after sepsis are influenced not only by the severity of the acute illness but also by socioeconomic factors and pre-existing labour market attachment. Sepsis survivors experience long-term cognitive, physical, and psychological impairments that affect everyday life after hospital discharge.

Conflicts of Interest

The authors declare no conflicts of interest.

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