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### Polish Working Group for Sepsis

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On November 19th, 2001 the Polish Society of Anaesthesiology and Intensive Therapy established a Working Group for Sepsis, motivated by the increasing worldwide interest in the syndrome and the lack of epidemiological information about its occurrence and course in Poland. In January and February 2002, the Group performed a survey assessment of the knowledge on definition, diagnosis and management of sepsis among medical personnel in Polish Intensive Care Units (ICUs). The results of the survey, published in the Polish Journal for Intensive and Emergency Medicine, demonstrated low awareness of problems associated with sepsis. The Group initiated broad educational activity in the form of courses and conferences and in April 2003, established its own website ([www.sepsa.pl](http://www.sepsa.pl)) with primary aim of propagating new information about sepsis and providing a platform for the exchange of opinions and knowledge on the syndrome.

Furthermore, the Working Group decided to start a web-based Severe Sepsis Registry programme, designed as a simple system of passive epidemiological surveillance. This type of surveillance is commonly used for the registration of nosocomial infections. The innovative aspect of the Polish Severe Sepsis Registry is that it gathers information not only about pathogens and infection, but also about the entire clinical picture of severe sepsis. The Registry is based on a questionnaire, completed after the end of severe sepsis treatment in an ICU. The participation in the surveillance programme is voluntary and the case presentation - anonymous. The participants have access only to their own data but are regularly provided with regional and national surveillance reports. Severe Sepsis Registry is constructed as an ongoing, longitudinal project and is now the main source of information on the subject in Poland since this syndrome is neither recognised by the International Classification of Diseases (ICD) nor obligatory entered into official hospital documentation. The Severe Sepsis Registry project has been widely accepted among Polish ICUs and up until April 2007, over 4,000 patient records have been entered by the 140 ICUs.

The provided data contains patient demographic information, organ dysfunction and infection characteristics, methods, results, and outcome of therapy. The results of the Registry show that severe sepsis in Polish ICUs is more frequently developed in men (58%), due to surgical disorders (54%) and with primary infection site the abdominal cavity (46%). Mean age of the patients is 54 years. Over 60% of severe case patients entered the ICU with three or more organ dysfunctions. Respiratory failure was the most common of them (95%), followed by circulatory failure (89%). Mean APACHE II score on admission was 24 and one-day mean TISS-24 value - 38. Pathogens, reported as the anticipated cause of severe sepsis, were G- bacteria (49%), G+ bacteria (39%) and fungi (12%). Positive blood cultures were obtained in 44% of the patients. Vasoconstrictors were used in 88%, mechanical ventilation in 88%, heparin in 82%, steroids in 56%, renal replacement therapy in 20%, and activated protein C in 9% of the cases. The mean duration of treatment in the ICU was 17 days and the average mortality rate - 54%. Interim analyses of surveillance data were performed and published after every 1,000th entered patient. Demographics, severity of disease, site of infections, all followed a stable pattern during the four years of observation but the distinctive trend of mortality reduction was observed: 2004 - 56%, 2005 - 51%, 2006 - 47%.

Even though, surveillance programmes for severe sepsis can adequately describe the characteristics of patients, infections, clinical course, management and outcomes, they are not able to assess the prevalence and incidence of severe sepsis. Therefore, the Working Group performed two oneday, point-prevalence studies on sepsis occurrence in Polish ICUs during two 6-month intervals between December 2004 and June 2005. 48% of all accredited ICUs in Poland responded. The mean values from the two studies showed that 34% of patients treated in ICUs had all forms of sepsis, 16% had severe sepsis and 6% - septic shock. The calculated incidence of severe sepsis per year was 0.34 cases in a population of 1,000. This number does not include the septic patients treated outside the accredited ICUs, in intermediate care facilities and in general wards thus, the real incidence of severe sepsis is at least two to four times higher.

Considering its common incidence, high mortality, prolonged length of ICU stay and substantial costs, severe sepsis should be regarded as a major public health problem in Poland. The main goal of the Working Group for Sepsis is to achieve a 25% decrease of severe sepsis mortality in the next 5 years. For such outcome, it is necessary to achieve not only quality improvement in management process of severe sepsis but also strategic decisions in the national health service enabling the increase of ICU beds number for early implementation of critical care interventions in all severe sepsis cases.

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