

OPENING REMARKS

The problem of sepsis is one of the essential, even urgent problems in health care, especially in intensive care units. This is the reason why we decided to organize a course entitled: "Sepsis – modern principles of diagnostics and treatment", which was held in March 2013 in Zagreb. The course resulted in high quality lectures which make the content of this thematic issue about sepsis.

Sepsis is a complex syndrome which develops when an initially adequate host immune response to an infective agent intensifies, whereupon the disorder of its regulation occurs. Why one patient develops only minimal symptoms of disease as response to an infective agent, and another develops sepsis or septic shock, is not known.

The incidence of sepsis and consequential complications are constantly on the increase. The reasons for this increasing incidence could be the aging of the population with accompanying chronic diseases, a more frequent use of invasive procedures, immunosuppressive drugs, transplantation, increased resistance of microorganisms to antibiotics, maybe even climatic changes which support the spreading of certain types of microorganisms.

In spite of the technological, pharmacological and surgical advances, mortality due to severe sepsis and septic shock is still very high.

Numerous studies of this phenomenon were done, including researches of genetic polymorphisms, but in spite of it, no new drugs were found which would last in clinical practice and which would be of substantial help in the treatment of sepsis.

Efforts that were made and are still ongoing, such as creating and enhancing the guidelines for the treatment of sepsis as well as the education of physicians involved in the implementation of these guidelines gradually lead to a decrease of mortality from sepsis. Some neighbouring countries (Montenegro) declared and implemented the guidelines for the treatment of sepsis as national guidelines.

It is hardly possible to overstate the need of a timely recognition of sepsis. The septic patient (as is usual in medicine) can present with varied clinical picture, and it is still necessary to expand the awareness, even among medical personnel, that a septic patient is not necessarily febrile, that the blood culture is not necessarily positive, that sometimes the infective agent evades isolation, that initially the condition may manifest only with somnolence, unclear metabolic acidosis or development of intestinal paresis and similar. Sometimes we reach the diagnosis of septic shock only by excluding other causes of shock.

The costs of treating sepsis are high, because this is a clinical state which requires the most expensive treatment. The costs are both direct and indirect, because the debilitating effects of sepsis in those who survived it are well known.

Sepsis is maybe still insufficiently recognized as a state which very often directly leads to death, and is not mentioned as a *ispisna dijagnoza*. Hand in hand with sepsis we have the issue of growing resistance of microorganisms to antibiotics which is becoming a serious problem. There is a very real threat that very soon we will not have antibiotics with which to treat the patients due to a high level of resistance of microorganisms, especially bacteria.

The overuse and irrational use of antibiotics which potentiates the development of resistance can be mitigated by adequate education, awareness of the dangers, continuity in the patient follow-up (medical history, status and again medical history, status) on the part of physicians on duty in intensive care units, as well as all other wards.

The importance and urgency of management of a septic patient can be compared to that of a patient with an acute coronary syndrome. Septic patients are actually sometimes even worse off because we can only hope that the given antibiotic and other therapies will work.

With respect to such, sometimes very limited possibilities of treatment of septic patients, we can never sufficiently stress the need for prevention, for a strict implementation of hygienic measures, creating the resources for an adequate isolation of the patient with resistant microorganisms and ensuring sufficient medical staff (physicians, nurses, technicians, auxiliary staff) which will be in the position to "service" such patients. At the moment these are the only resources at our disposal in order to treat the patients faster and in a better way and at the same time to reduce the emergence and spreading of intra-hospital infections, especially in view of the fact that in the last 25 years there were no new antibiotics on the market.

At the beginning of the antibiotic era opinion prevailed that infectious diseases will be eradicated, however, the microorganisms found their means of survival. Therefore, in spite of all the technical advances and the advances in medicine and pharmacology we are still very "small under the stars". This, however, should not discourage us to try harder... for the sake of our patients and ourselves.

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