compared. In a study carried out in a unit where premature infants were monitored, while the 2014 healthcare-associated infection rate according to the guidelines Turkish Nosocomial Infections Surveillance was 21.1%, it was found that it was 11.54% according to the January 2014 Diagnostic Criteria for Disease Prevention and Control Center. In the previous studies, the neonatal intensive care unit healthcare-associated infection rates varied between 5% and 32% (2-5). It was reported that infection frequency in premature babies was 21% (3). In another study, healthcare-related infection frequency in the premature babies with a birth weight of ≤1500 g was 15.3% and in babies with a birth weight of >1500 g, 15.3% (6).

The healthcare-related infection density according to the guidelines Turkish Nosocomial Infections Surveillance in the study was 18.3 in 1000 patient days, it was found that it was 10,01 according to the January 2014 Diagnostic Criteria; and a difference was found due to the lack of clinic sepsis diagnosis in the CDC criteria. In a study carried out in a neonatal intensive care unit, it was found that the healthcare-related infection density was 4.2 in 1000 patient days (7). I am of the opinion that the reason why the infection density in the study by Oruç et al. (1) was higher was related to the fact that the premature babies were included into the study.

It was reported in the study by Oruç et al. (1), the central catheter-related bloodstream infections (CCRBI) and umbilical catheter-related bloodstream infections (UCRBI) according to the January 2014 Diagnostic Criteria for Disease Prevention and Control Center were higher according to the Guidelines of Turkish Nosocomial Infections Surveillance. While 9.97 CCRBI in 1000 patient days was found according to the Guidelines of Turkish Nosocomial Infections Surveillance, 12.46 CCRBI was found in 1000 catheter days according to the 2014 CDC criteria. The reason why it was found that the rate of CCRBI was higher according to the new definition was that the growth of pathogen microorganism in a single blood culture in patients with central or umbilical catheter for more than 2 days is sufficient to make the diagnosis of CCRBI according to the CDC 2014 laboratory-proven bloodstream infection criteria. In the study by Yuan et al. (7), it was reported that the CCRBI rate in the neonatal intensive care unit was 5.4 in 1000 catheter days. The CCRBI rate in the study by Oruç et al. (1) is higher in comparison to other studies.

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References

1. Oruç Y, Yaşar N, Kara A, ve ark. Bir Eğitim ve Araştırma Hastanesinde CDC 2014 Sağlık Hizmeti ile İlişkili Enfeksiyon Tanı Kriterleri ile 2010 yılı Türkiye Hastane Enfeksiyonları Sürveyans Rehberindeki Tanı Kriterlerinin Karşılaştırılması. J Pediatr Inf 2016; 10: 6-9.
2. Verstraete E, Boelens J, De Coen K, et al. Healthcare-associated bloodstream infections in a neonatal intensive care unit over a 20-year period (1992-2011): trends in incidence, pathogens, and mortality. Infect Control Hosp Epidemiol 2014; 35: 511-8. [CrossRef]
3. Stoll BJ, Hansen N, Fanaroff AA, et al. Late-onset sepsis in very low birth weight neonates: the experience of the NICHD Neonatal Research Network. Pediatrics 2002; 110: 285-91. [CrossRef]
4. Fanaroff AA, Korones SB, Wright LL, et al. Incidence, presenting features, risk factors and significance of late onset septicemia in very low birth weight infants. The National Institute of Child Health and Human Development Neonatal Research Network. Pediatr Infect Dis J 1998; 17: 593-8. [CrossRef]
5. Brodie SB, Sands KE, Gray JE, et al. Occurrence of nosocomial bloodstream infections in six neonatal intensive care units. Pediatr Infect Dis J 2000; 19: 56-65. [CrossRef]
6. Verstraete Evelien H, Coen De K, Vogelaers D, Blot S. Risk Factors for Health Care -Associated Sepsis in Critically Ill Neonates Stratified by Birth Weight Pediatr Infect Dis J 2015; 34: 1180-6.
7. Yuan Y, Zhou W, Rong X, Lu WN, Zhang Z. Incidence and factors associated with nosocomial infections in a neonatal intensive care unit (NICU) of an urban children's hospital in China. Clin Exp Obstet Gynecol 2015; 42: 619-28.

Comparison of Healthcare-related Infection Rates Based on the National Nosocomial Infections Surveillance System of Turkey Diagnostic Criteria Reported in 2010 and Centers for Disease Control and Prevention Reported in 2014 in A Tertiary Hospital

Dear Editor,

I read the article titled Comparison of the healthcare-related infections rates according the criteria of National Nosocomial Infections Surveillance System of Turkey reported in 2010 and Centers for Disease Control and Prevention reported in 2014 in a tertiary hospital by Oruç et al. (1) with great interest. In the article where 2010 and 2014 criteria of the Centers for Disease Control and Prevention were compared, it was reported that the healthcare-related infections decreased since especially the sepsis diagnosis available in the 2010 was not used and the catheter-related and umbilical catheter-related blood circulation infections increased (2-5). However, statistically speaking, only one case with laboratory proven bloodstream infection and one with umbilical catheter-related blood circulation infection were added. Due to the reasons such as the fact that the study was carried out Premature Clinic, the difficulties experienced in obtaining blood samples from these patients, and

the inability to take sufficient blood samples for the growth of bacteria in the blood culture, the possibility of growing bacteria is much lower in comparison to the older children and adults. Therefore, clinic sepsis constitutes an important healthcare-related infection group in the Neonatal and Premature clinics; however, it was excluded from the healthcare-related infection definition due to the new criteria. There is no age group-specific definition in the CDC criteria; only the definition of clinical sepsis was given for children under one year of age. Therefore, the study should not only be limited to the Premature Clinic, and we are of the opinion that it will be more beneficial if it is simultaneously carried out in the out of neonatal clinics and especially in the intensive care units and hematology clinics due to the long-term hospitalizations, immunosuppression and invasive procedures since they are seen more frequently in those services.

Another noticeable factor in the study was the fact that the number of bacteria in the catheter was quantitatively 3 times higher than old criteria and the requirement of at least 2 hours between the culture growth times (5). Regarding the method; even though the authors did not specify the microbiological culture methods, it was though that they performed a quantitative study. We are of the opinion that this issue should be mentioned in the discussion part, and obtaining blood culture and the microbiological culture methods should be specified.

The healthcare-related infections are still the most important causes of morbidity and mortality. Implementation of isolation methods, improving the level of education of the health personnel on this issue and increasing the antibiotic protection programs are crucially important with regards to minimizing the resistant infections and the healthcare-related infections. Regular and proper functioning of a surveillance system in a hospital and determining their own data by each individual hospital are important for the hospitals to anticipate the effects of a possible infection and thus, instructive in terms of the antibiotics to be selected in the empirical treatment.

In conclusion, the healthcare-related infections cause lengthened hospitalizations and related increase in the healthcare costs as well as an increase in morbidity and mortality. Although the definitions change, the important thing is to maintain the maximum hygiene conditions, isolation methods, to train the doctors and the non-medical personnel with regards to the nosocomial infections, and minimize the infection rates, and to implement the prevention and protection methods in every hospital through the cooperation of the members of Infection Control Committee.

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References

1. Oruç Y, Yaşar N, Kara A, Düzgöl M, Çalkavur Ş, Bayram N, Ayhan Y, gülfidan G. Bir Eğitim ve Araştırma Hastanesinde CDC 2014 Sağlık Hizmeti ile İlişkili Enfeksiyon Tanı Kriterleri ile 2010 yılı Türkiye Hastane Enfeksiyonları Sürveyans Rehberindeki Tanı Kriterlerinin Karşılaştırılması. J Pediatr Inf 2016; 10: 6-9.
2. T.C Sağlık Bakanlığı Refik Saydam Hıfzıssıhha Merkezi Başkanlığı, Türkiye Hastane Enfeksiyonları Sürvayans Rehberi, Ankara, 2010. Available from: URL: http://gmkdh.saglik.gov.tr/cep_kitabi.pdf (erişim tarihi: 06.06.2016)
3. Central Line-Associated Bloodstream Infection (CLABSI) Event, January 2014. Available from: URL: http://www.cdc.gov/nhsn/PDFs/ pscManual/4PSC_CLABScurrent.pdf (erişim tarihi: 05.06.2016)
4. CDC/NHSN Surveillance Definition of Healthcare-Associated Infection and Criteria for Specific Types of Infections in the Acute Care Setting, January 2013. Available from: http://www.cdc.gov/nhsn/PDFs/pscManual/17pscNosInfDef_current.pdf (erişim tarihi:05.06.2016)
5. Mermel LA, Allon M, Bouza E, et al. Clinical Practice Guidelines for the Diagnosis and Management of Intravascular CatheterRelated Infection: 2009 Update by the Infectious Diseases Society of America. Clinical Infectious Diseases 2009; 49: 1-45. **[CrossRef]**

Herpes Zoster in Children and Adolescents: Is It a Problem?

Dear Editor,

I read the article titled “Herpes Zoster in Children and Adolescents: Is It a Problem?” by Kazancı et al. (1) with great interest. However, I am of the opinion that some points regarding the purpose of the article should be discussed.

Herpes zoster (HZ) is the secondary clinical form of VZV developing as a result of the reactivation of endogenous latent varicella-zoster virus (VZV) in the sensory ganglia. HZ is rare in children. It was reported in the previous studies that HZ was more commonly seen in children with cellular immune deficiency. However, it can also be seen in healthy children with a normal immune system.

Even if HZ can be seen in any time period following Primer infection (varicella), the incidence rates generally increase with age. The most important factor in this increase is the decrease in the specific VZV cell-mediated immunity with increasing age (2, 3). Numerous previous studies demonstrated that the most important factor in the development of HZ is the time of primer VZV infection. Having the primer VZV infection Primer in the early period of life VZV increases the risk of HZ development. Having the primer VZV infection in the first year of life during which both humoral and cellular immunity is immature is seen as a risk factor for the development of HZ (3). Furthermore, there are some case