Methods A review of the available literature related to application of Octaplas in children.

Results The use of Octaplas in severe patients reduces the possibility of immune and anaphylactic reactions and transfusion – induced acute lung injury. Also, a smaller volume of Octaplas compared to FFP is required to correct coagulopathy. No additional bleeding with reduction in the number of transfusions in liver transplant patients was observed. An increase in platelets has been demonstrated in patients with thrombotic thrombocytopenic purpura who were refractory to FFP. The survival rate in Pediatric Intensive Care Unit (PICU) was higher in children treated with Octaplas compared to FFP. Recent research has shown that in children who received Octaplas during cardiac surgery ACT values were lower with lower doses of heparin, and platelets, APTV, INR, fibrinogen values were higher compared to children who received FFP. Reduction in postoperative infections and shorter stay in PICU were observed. The latest prospective, multicenter study in the United States examined the safety, tolerability, and efficacy of Octaplas in the treatment of children who required replacement of multiple coagulation factors due to cardiac surgery, transplantation and/or liver dysfunction, with coagulopathy and sepsis – related coagulopathy as well as hypoxic encephalopathy. No thromboembolic events associated with hyper fibrinolysis or treatment have been reported. The overall safety, tolerability and efficiency was defined as excellent. Hemostatic parameters measured with INR, PT, APTV, thromboelastography, or thromboelastometry were within the expected range.

Conclusion The results of previous research support the use of Octaplas in children. Octaplas has an advantage over FFP due to its strong hemostatic effect, less frequent side effects, safety and in critically ill children may be associated with improved survival.

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RETROSPECTIVE STUDY OF THE USAGE OF CENTRAL VENOUS CATHETERS IN TWO-YEAR PERIOD AT THE DEPARTMENT OF PEDIATRICS IN UNIVERSITY HOSPITAL CENTRE ZAGREB, CROATIA

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Aim To analyze methods of central venous catheter (CVC) usage, to establish the state of current practice and perhaps change the approach depending on the analysis of our results.

Methods A retrospective study which included a cohort of patients treated at the Department of Pediatrics UHC Zagreb, to whom in the period from January 1st 2018 till December 31st 2019 the CVC was extracted. A sample was formed based on results of microbiological analysis of the CVC tip. The main source of data was the hospital's information system, which was analyzed using descriptive statistics methods. According to the variety of the underlying disease, patients have been divided into 4 groups: congenital anomalies, cardiovascular, hemato – oncological diseases and others.

Results 11,648 children were hospitalized in our Department during a two-year period, when CVC was extracted in 505 (4.3%) of all hospitalized children. One CVC had 385, two 81, three or more 39 of 505 children. A total of 693 catheters were extracted: 449 Broviac, 195 PICC, 38 umbilical, 7 Port-a-Cath and 2 Hickman catheters. The distribution of

CVC by groups was: heart diseases (287), congenital anomalies (224), hemato – oncological (78), other diseases (104). Based on the available data, we singled out the causes of extraction in 91 respondents (i.e. 122 removed catheters). We list them in order: end of treatment (75/122), dysfunction (9/122), displacement (6/122), mechanical damage (5/122) and catheter sepsis (2/122). A total of 667 catheters were microbiologically analyzed, 172 of them were positive (25.78%). The most common agents were: Coagulase – negative Staphylococcus (51), Staphylococcus epidermidis (44) and Candida yeasts (18). There was no difference in the incidence of positive catheters in groups of respondents with different numbers of catheters (I 24.5%, II 27.5%, III 27.1%). Patients with congenital anomalies had a slightly higher incidence of microbiologically positive catheters (32%), while in cardiovascular, hemato – oncological and other diseases, incidence was almost equal (22%, 25%, 26%).

Conclusion CVC is rarely required in the treatment of our patients, but unavoidable in cardio-surgical, hemato – oncological patients and in many others with complex congenital anomalies. A significant number of catheters had been colonized over the time, but even in the case of an invasive disease, antimicrobial treatment was continued using the same catheter. Its extraction was needed extremely rare. Regardless to the nature of diseases in which the CVC was used, our results suggest the requisite to revise their usage.

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OUR EXPERIENCES IN CONTRAST-ENHANCED VOIDING UROSONOGRAPHY IN THE DIAGNOSTICS OF THE VESICoureTERAL REFLUX IN CHILDREN

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Vesicoureteral reflux (VUR) is one of the most common anomalies of the urinary system in children. It is the most common cause of renal scarring and consequently impaired renal function. Contrast-enhanced voiding urosonography (ceVUS) is becoming a recognized method for the diagnosis of VUR in children in specialized centers. The aim of this study is to examine the indications for ceVUS in children, determine the degrees of VUR and their associated characteristics, and possibly predict which children are at higher risk of VUR.

Patient data was collected from medical records of the Institute for Nephrology, Department of Pediatrics of the Sisters of Mercy University Hospital, from September 2016 till December 2018. The following data were taken into consideration: gender, age, characteristics of UTI (relapse, febrility), distribution of pathogens, values of inflammatory parameters (leukocytes and CRP), findings of the urinary tract ultrasound and correlation of these characteristics with the appearance of VUR. Percentages and mean values were used for descriptive statistics purposes. The χ^2 test was used to determine the differences between the two variables and the Student's t-test was used to determine the differences of arithmetic means.

The average age of children was 1.7 ± 1.1 . Out of 175 children who underwent ceVUS, VUR was detected in 68 (38.9%), equally for both genders (M vs. F = 32.3%:40.2%),