6.027 (95% CI, 3.996–9.090) for inotropic drug usage, 2.348 (95% CI, 1.547–3.564) for RBC transfusion requirement, 1.655 (95% CI, 1.162–2.356) for RDW > 15.1% and 2.950 (95% CI, 1.933–4.503) for PLT < 150 × 10³/μL.

The AKI is associated with prolonged hospitalization and increased mortality among critically ill children. In patients with AKI, the need for mechanical ventilation, CRRT and inotropic drugs was statistically associated with mortality.

345 SPICING UP THE EDMONTON ANTICOAGULATION PROTOCOL: INTERFERENCE OF DIETARY CURCUMIN ON COAGULATION STATUS DURING MECHANICAL CIRCULATORY SUPPORT WITH BERLIN HEART LVAD

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In patients with implanted Berlin Heart EXCOR® Ventricular Assist Device, appropriate anticoagulation and antiaggregation within pre-defined values are essential for proper device function, and vital in order to avoid complications such as thromboembolic events and/or bleeding.

Important factors that contribute to achieve the desired coagulation control are patient's pharmacogenomics, liver status with nutritional status and interactions with other medications and supplements given to the patient during treatment.

Bleeding or clotting issues that could occur are addressed according to aetiology, site of the incident, laboratory and clinical parameters.

We describe a 3-year-old female patient with restrictive cardiomyopathy and acute heart failure subjected to implantation of Berlin Heart EXCOR® paediatric Left Ventricular Assist Device mechanical support as bridge therapy to cardiac transplantation. After device implantation, anticoagulation and antiaggregation were started and maintained according to the Edmonton Anticoagulation and Platelet Inhibition Protocol. Achievement of appropriate anticoagulation was compromised due to a non-disclosed addition of turmeric in her dietary regimen by parents. Curcumin, a polyphenol responsible for the yellow colour of turmeric, possesses anticoagulant properties, prolongs aPTT and PT significantly and inhibits thrombin and FXa activities. As a result, unexpected oscillations in the coagulation profile occurred, which represented a substantial management challenge.

The aim of this report is to analyse and discuss the factors that could have been contributed to the difficult control of anticoagulation in our patient, with emphasis on the potential danger of undetected compounds deriving from sub-optimal control of paediatric patients during parental presence in PICU.

346 BIVALIRUDIN USE DURING CONTINUOUS RENAL REPLACEMENT THERAPY IN A 2.5-YEAR-OLD GIRL SUFFERING FROM CARDIOMYOPATHY AND RECEIVING VAD SUPPORT

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Ventricle assist devices (VAD) are often the only bridge to heart transplantation in children with deteriorating cardiomyopathies.

Berlin Heart EXCOR Pediatric is registered for children and can be used to support the function of right, left or both ventricles. Despite the use of the 'Edmonton protocol' to guide the anticoagulation management, thromboembolism and hemorrhage are common adverse effects. Moreover, prolonged intravenous heparin use is often complicated with heparin induced thrombocytopenia (HIT), which leads to a conclusion that new antithrombotic strategies are needed, such as use of direct inhibitor of thrombin, i.e. bivalirudin.

In our patient, a 2.5-year-old girl with restrictive cardiomyopathy, heart decompensation occurred after a viral infection (with later confirmation of parvovirus B19 myocarditis). Mechanical circulatory support with VA ECMO was started, with an implantation of LVAD Berlin Heart 3 weeks later. She spent 125 days on VAD support waiting for a heart transplantation. The 'Edmonton protocol' was followed for anticoagulation and anti-aggregation therapy guidance (warfarin, acetylsalicylic acid and clopidogrel). She suffered multiple complications: bilateral pleural effusions, middle cerebral artery thrombosis, fibrin over the VAD cannula, intracranial hemorrhage and shunt meningitis. During an episode of septic shock, acute renal failure occurred, requiring continuous venovenous hemodiafiltration that has been continued for 21 days. Prolonged thrombocytopenia led to diagnosis of HIT, so heparin was replaced with bivalirudin (direct thrombin inhibitor) as anticoagulation therapy, in addition to acetylsalicylic acid and clopidogrel. Bivalirudin use is easily monitored by APTT and ACT and the dosage is modified according to it. Bivalirudin has been used for 16 days along with CVVHDF, without hemofilter occlusion or fibrin deposits on cannulas of BH Excor.

According to our experience and cases described in literature, bivalirudin has been used in children with VAD Berlin Heart EXCOR with positive outcomes. In addition, successful use of bivalirudin for anticoagulation during continuous renal replacement was associated with longer hemofilter survival time and less hemorrhagic and/or thrombotic events. On the other hand, there are some disadvantages such as lack of pediatric experience, no available antidote and high price. From all of the above, we may conclude that new experiences and investigations are needed and alternative anti-thrombotic drugs, such as bivalirudin, should be considered for patients with VAD and CVVHDF.

347 HYPERFREQUENT USERS OF THE EMERGENCY DEPARTMENT DURING THE COVID-19 PANDEMIC – A SURVEY STUDY

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Hyperfrequent users (HU) of the pediatric emergency department (ED) is a group of patients that tendentially play an important stress factor in health services but there is no data available yet to the role of their behaviour during the COVID-19 pandemic – the purpose of our study.

A quota sampling out of 1816 HU from a Level II Hospital, defined by ≥10 admissions in a single civil year, between