The aim of our research was to investigate the diseases of 0-18 year old patients who were admitted to the 'Muratsan' University hospital complex(UHC) Intensive care unit (ICU) and toxicology for the last 7 years, including cases that have been reported from the dispensary with or without referral.

A retrospective study was performed using medical charts up to 7 years (2012-2018) from 'Muratsan'(UHC) ICU and toxicology. The overall number of patients was 5152, among them 3074 were male and 2078 were female.

This study included cases that have been reported by the 'Muratsan'UHC ICU and toxicology from the dispensary with or without referral.

The number of patients who were referred from the polyclinics of Yerevan is 41(0.7%). 23(56.1%) of them had Acute respiratory infections(ARI), 3(7.3%)-Acute Intoxications(AI), 5 (12.2%)-Acute Drug Intoxications(ADI) and 2(4.9%)-allergic disorders, 8(19.5%) other disorders*. The referred patients were divided into 4 age groups(0-1,1-7,7-14,14-18), the first group-10, the second-27, the third-3 and the fourth-1 case. 24%-moderate, 64%-severe and 11%-extremely severe cases (the level of severity was absent in 1% of cases).

53 patients(1%) were referred from regional polyclinics, 20 (37.7%) of them had ARI, 13(24.5%)-AI, 11(20.8%)-ADI and 2(3.8%)-allergic disorders, 7(13.2%) other disorders. The first age group included-6, the second-42, the third-5 and the fourth-0 cases. 36%-moderate, 57%-severe cases(the level of severity was absent in 7% of cases).

Out of 2414 patients who were admitted to hospital without referral 519(21.5%) had ARI, 859(35.6%)-AI, 575 (23.8%)-ADI and 87(3.6%)-allergic disorders.

374(15.5%)-other disorders. The first age group included-300, the second-1832, the third-209 and the fourth-73 cases. 42%-moderate, 54%-severe and 2%-extremely severe cases(the level of severity was absent in 2% of cases).

*Diabetes mellitus, epilepsy, cancer, hematological disorders, etc.

ARIs are more prevalent in patients who have been referred from polyclinics, while the patients without referral had mostly ADIs and AIs. The hospitalization without referral was rather high, which suggests that the primary chain of trust has decreased.

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AGE-RELATED DISORDERS IN CHILDREN

Eline Harutyunyan*, A Aghajanyan, L Shahumyan, A Asatryan, H Shahumyan, S Khachatryan, I Atoyan, A Sahakyan, G Manukyan, K Esayan, S Mirabyan, A Sahakyan, M Grigoryan, B Baveyan, V Asoyan, H Apresyan. *Yerevan State Medical University*

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The aim of our research was to investigate the diseases of 0-18 years old patients who were admitted to the 'Muratsan' University hospital complex(UHC) Intensive care unit (ICU) and toxicology for the last 7 years, their relation to the ages and the underlying reasons.

A retrospective study was performed using medical charts up to 7 years(2012-2018) from 'Muratsan' UHC ICU and toxicology. The overall number of patients was 5152, among them 3074 were male and 2078 were female.

In this study, we have separated four age groups(0-1;1-7;7-14;14-18) and have included the most common disorders typical for each age group.

During this period 538 patients under 1 year old have been admitted to hospital. 201(37.4%)-Acute Intoxications (AI) (predominantly caused by KMnO₄ solution, carbon monoxide (CO) and flavor essence). 193(35.9%) patients had Acute respiratory infection(ARI) and 108(20%)-acute drug intoxications (ADI), 36(6.7%)-other disorders*.

By observing the 3585 patients aged 1-7 years old we found out the following results: AI-1441(40.2%) patients (acetone solution, sodium hypochlorite solution and KMnO₄ solution), ADI-939(26.2%), ARI-762(21.3%), 443(12.3%)-other disorders.

The number of 7-14 years old patients was 632, among them 316(50%) had AI (CO, alcohol, flavor essence), 93 (14.7%)-ADI (15% of which were suicide attempts) and 57 (9%)-ARI, 166(26.3%)-other disorders.

The analysis of 361 patients aged 14-18 years old led to following results: 155(43%)-AI (commonly with alcohol, CO, sodium hypochlorite solution), 122(33.8%)-ADI, 75.4% of which were suicide attempts, 20(5.5%) were bitten by animals and insects, 64(17.7%)-other disorders.

*Diabetes mellitus, allergic disorders, cancer, hematological disorders, etc.

We found out that the most common diagnoses of the patients are ADI and AI independent of age group. This phenomenon might be associated with high curiosity of kids as well as with parental negligence. AIs in adolescents are predominantly caused by alcohol. Both ADIs and AIs in adolescents are usually due to suicide attempts.

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SYNCOPE IN PEDIATRIC EMERGENCY DEPARTMENT

Nikolina Benco*, Alen Švigir, Iva Topalušić, Katarina Vulin, Zdenka Pleša Premilovac. *Children's Hospital Zagreb*

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The objective of this study was to evaluate the various factors related to the children who presented to the emergency department of Children's Hospital Zagreb after experiencing syncope.

Information about all visits in ER during 2018 was analyzed from a database.

Out of all 14115 visits, the syncope was present in 96 patients (0.6%).

Their medical history, clinical characteristics, laboratory and diagnostic tests were analyzed.

The patients were mainly girls (68%). The mean age of the patients did not differ between genders (girls 12.84±3.86 and boys 12.71±3.54; p= 0.868; age range 3-18y). 79.1% arrived with an ambulance, while the rest were referred by their primary pediatrician. 57% of the patients arrived between the 08 a.m. and 4 p.m., 32% between 4 p.m. and 10 p.m., while 10% came during the night. 29% arrived during weekend and 71% during workdays. 82% came during the school-year, thus making it obvious that syncope episodes are more often while school obligations last. 60% experienced syncope for the first, second (19%) and third (11%) time. In 85% of patients the

event lasted less than one minute, and 80% had prodromal symptoms. The syncope episodes occurred while standing (48%), abrupt stand-up (19%), seating (14%), walking (14%) and during or immediately after exercising (9%).

Psychological stress (24%), hyperventilation (10%), trauma or blood-work (19%) were often present. 28% had previously known headache, migraine, diabetes and rhythm disorders.

ECG was conducted in 70% (2% pathological), EEG in 20% (1% pathological) and blood work in 57% (6% pathological). Neuropediatric (13%), cardiology (12.9%) and psychiatric (6%) examinations were performed (0, 1% and 2% pathological, respectively). 22% were admitted in the hospital for further diagnostics and treatment due to diagnostic dilemma, recurrent syncope or new symptoms.

At release, 70.8% were diagnosed with reflex syncope (63.5% vasovagal and 7.3% situational), hyperventilation (7.3%), heat illness (4.1%), pseudo syncope (4.2%), breath holding spells (4.2%), orthostatic syncope (3.1%), convulsions (3.2%), toxin exposure (2.1%) and anaphylaxis (1%).

The majority of the children experiencing syncope in pediatric ED were not life endangered by cardiac or other underlying etiology. A potentially life-threatening was an anaphylactic shock, toxin exposed children, heat syncope and exercise associated collapse. Based on a detailed history, clinical exam and specific diagnostic procedures, specialists in ED should recognize specific conditions that require attention.

335 COMBINED INTRANASAL DEXMEDETOMIDINE AND KETAMINE VS INTRANASAL DEXMEDETOMIDINE AND ORAL MIDAZOLAM FOR PROCEDURAL SEDATION IN CHILDREN: A RANDOMIZED MULTICENTRE TRIAL TO EVALUATE INDUCTION TIME AND SEDATION LEVEL

Andrea Trombetta*, Francesca Cossovel, Egidio Barbi. *University of Trieste*

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The aim of this study is to compare the combination of intranasal dexmedetomidine and ketamine to intranasal dexmedetomidine and oral midazolam to evaluate induction time and sedation level in children undergoing procedural sedation.

this multicentre trial was conducted in a tertiary pediatric teaching hospital and in a secondary hospital on patients in need of procedural sedation who referred from November 2019 to March 2020. All consecutively admitted subjects were randomized to receive one-time dose (4 mcg/kg) of intranasal dexmedetomidine and 3mg/Kg of intranasal ketamine or one-time dose of 4mcg/Kg of intranasal dexmedetomidine and oral midazolam (0.5mg/Kg) with the intended goal to compare induction-time, effectiveness and adverse effects.

fifty patients were recruited to receive intranasal dexmedetomidine and ketamine and fifty patients were recruited to receive intranasal dexmedetomidine and oral midazolam. The induction time was significantly lower in the intervention group when compared to the control group (11' and 33 minutes, respectively). Sedation success rate was similar in both groups without any major adverse observed in both groups according to this preliminary report a combination of intranasal dexmedetomidine and ketamine could be considered as a possible option in for procedural sedation in children, in

particular in settings in which shortening induction-time is essential in comparison to an oral midazolam plus in dexmedetomidine association.

336 THROMBOEMBOLIC EVENT AND IT'S MANAGEMENT IN A GIRL WITH RESTRICTIVE CARDIOMYOPATHY AND IMPLANTED BERLIN HEART EXCOR DEVICE

Mario Šestan*, Hana Matković, Sandro Dessardo, Toni Matić, Miran Cvitković, Slobodan Galić, Dorotea Bartonček, Marko Radoš, David Ozretić, Ivan Jovanović, Filip Rubić. *Department of Paediatrics, University Hospital Centre Zagreb; School of medicine, University of Zagreb*

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Ventricular assist devices are increasingly used as an emerging therapy in children with different heart condition, mostly cardiomyopathy. Introduction of pulsatile devices for bridge to heart transplantation contributed to significant improvements in the survival and discharge rate of these patients. Berlin Heart EXCOR Pediatric (BH) is a pulsatile device with different chamber sizes and is registered for use in pediatric patients. When such devices are used during longer period of time, many complications can occur, most of which are linked to clotting disorders. Therefore, Edmonton protocol was introduced for patients on BH where detailed instructions are given regarding institution and maintenance of anticoagulation and antiaggregation therapy. Despite proper management, patients could have devastating complications, particularly cerebral arterial thromboses.

We present a case of a 2,5-year-old girl who was diagnosed with restrictive cardiomyopathy caused by the p.Arg192Cys variant in the gene encoding cardiac troponin I (TNNI3). When her condition worsened and end-stage heart failure developed, she was placed on Venoarterial extracorporeal membrane oxygenation (VA-ECMO), by which she was supported for 3 weeks. Since she did not tolerate separation from mechanical support, a left ventricular assist device BH was implanted. Afterwards her anticoagulation and antiaggregation therapy was managed according Edmonton protocol thus she was given warfarin (target INR 2.8-3.5), acetylsalicylic acid (target value of ASPI test <30 U) and clopidogrel (target value of ADP test <50 U). After 50 days on BH significant changes in behavior with a qualitative change in the level of consciousness were observed in our patient prompting a computed tomographic cerebral angiography to be performed, resulting in the detection of a thrombus in the right middle cerebral artery. Motor deficit i.e. paresis of her left limbs was not present during the first hours of symptom development and appeared soon after brain imaging was done. After urgent consultation with our interventional radiologists, she underwent thrombectomy through her right femoral artery with complete reperfusion of the affected parts of the brain followed by immediate recovery of her mental state while her motor deficit resolved over the next 2 weeks.

Clinicians should have a low threshold for early imaging of central nervous system when arterial thromboses are suspected. Good cooperation with radiologists that can perform such minimally invasive procedures is of the most importance since it can be lifesaving.