Background Muratsan University Hospital Complex (UHC) is a multidisciplinary hospital with 260 beds and has Pediatric, surgical, toxicological, traumatological, ICU, emergency, neonatal pathology, mandibulofacial surgical, Otolaryngologic departments.

Our goal was to describe the clinico-epidemiological characteristic of patients with acute respiratory tract infection (ARTI) applied to the Muratsan UHC in January 2019.

Acute respiratory tract infections are the most common childhood infections worldwide, with close to 100% of children being infected during the first years of life. Whereas the vast majority of viral respiratory infections are mild and self-limiting, more severe disease leads to the hospitalization.

Methods and materials We used the medical charts of patients (up to 18 years) applied to the Muratsan University Hospital Complex in January 2019.

Results In January 2019 3572 patients applied to the Muratsan UHC, 1117 of them were hospitalized. 1523 (58.7%) outpatients had pneumonia. Among hospitalized patients pneumonia had 191 (17.1%) patients, 38.1% were from Yerevan and 502 (33%) from regions.

We find out that patients with ARTI applied in the first 3 days of disease, with subfebrile temperature and cough symptoms had 1025 (67.3%), catarrhal symptoms-575 (37.8%), vomiting-28 (1.8%) and diarrhea-12 (0.8%).

Chest X-ray were done in 152 cases, and in 50 cases patients with acute respiratory tract infection.

Analyzing outpatients with ARTI, we mentioned, that 688 (43.2%) were female, and 865 (56.8%) male. The 1021 (67%) were from Yerevan and 502 (33%) from regions. Patients were divided to four age groups 0–1 years old 388 (25.5%), 1–3 years 565 (37.1%), 3–7 years 422 (27.7%), and above 7–14, 9 (9.7%).

1247 (81.9%) patients of 1523 applied up to 3 days of diseases, 181 (11.9%)–4–5 days and 95 (6.2%) more than 6th day. High temperature up to 38.0°C had 1182 patients, 38.1–40.0°C 336 and more than 40.1–5, 77.6%, 22.1% and 0.3% respectively. The main symptoms at the moment of admission were cough 1025 (67.3%), catarrhal symptoms-575 (37.8%), vomiting-28 (1.8%) and diarrhea-12 (0.8%).

Cheek X-ray were done in 152 cases, and in 50 cases pneumonia was established (1.9%).

Among hospitalized patients pneumonia had 191 (17.1%)

Conclusion We find out that patients with ARTI applied in first 3 days of disease, with subfebrile temperature and cough and were children up to 7 years old (90.7%). Only 1.9% of outpatients had pneumonia.

As we mentioned children who admitted to the hospital didn’t have severe complications. And education of population and some training courses for pediatricians of primary care can decrease hospital application rate.
Case presentation We report a 2.5 year-old Caucasian female who presented with sudden onset right- hemiplegia and irritability. She had minor head trauma earlier that day but no loss of consciousness. She had a history of recurrent upper respiratory tract infections, fatigue, poor diet and constipation over the preceding months but no recent illnesses. These symptoms followed a trip to Rwanda where she had a bout of gastrointestinal infection. Blood tests were noteworthy for a reduced Haemoglobin of 6.4 g/dl with a repeat Hb of 5.7 g/dl (normocytic, normochromic), reduced reticulocyte count of 3.9 and platelet count of 614 but normal liver function. Borellia, Varicella, Mycoplasma and Parvovirus B19 serology were negative.

Discussion

Previous case-control studies have suggested that the risk of childhood arterial ischaemic stroke is increased transiently in the context of acute infection. A multi-centre study in 2017 (Vascular effects of Infection in Paediatric Stroke, VIPS) Study found serological evidence of Parvovirus B19(PVB19) in 6% of cases of childhood arterial ischaemic stroke. Parvovirus B19 is a DNA virus can cause sub-clinical infection or manifest with flu-like symptoms. Infection is typically mild, but complications can include chronic anaemia.

It has been hypothesised in previous studies that Parvovirus may injure cardiac and arterial endothelium, promoting thrombus or arterial stenosis. However, it is worth noting that neither stenosis nor thrombus were detected in our patient.

Conclusion

Parvovirus B19 is an important consideration in cases of stroke in children in particular in the context of reticulocytopenia and normocytic normochromic anaemia. She still maintained periorbital edema and had a painful palpable liver edge. The abdominal ultrasound showed hepatosplenomegaly. She repeated the blood tests two weeks after and had lymphocytosis (5190/ul; 66.5%), elevated aminotransferases and lactate dehydrogenase, and she was EBV VCA IgM and IgG positive, which confirmed active infectious mononucleosis. The testing for autoimmune disease, thyroid disease, and human immunodeficiency virus (HIV) and hepatitis viruses were negative.

Conclusion

EBV can affect virtually any organ system and periorbital edema can be the first symptom of infectious mononucleosis. This is an atypical case for there was a lack of other more classic symptoms, like sore throat and lymphadenopathy, and the serology was negative at the beginning of the disease. This lead to a more exhaustive investigation in order to exclude autoimmune and thyroid diseases and viral infections like hepatitis and HIV.