EPIDEMIOLOGICAL CONTROL FOR INFLUENZA PANDEMIC IN KHARKOV, UKRAINE

Lyutaya E., Makarova V.

Academic adviser: Chumachenko T., M.D., Ph.D., Professor, Kharkov National Medical University, Kharkov, Ukraine

Background: In April 2009, a novel strain of influenza A H1N1 was identified from Mexico and the United States. The H1N1 pandemic has highlighted the treat of emerging viral pathogens to global health.

Aim and tasks: We reviewed epidemiological feathers of influenza A H1N1 and the effectiveness of the preventive and anti-epidemic measures in the pandemic influenza 2009–2010 in the industrial region of 2.782 mln population to determine potential lessons for public health action.

Materials and methods: We reviewed Kharkiv surveillance reports for influenza.

Results: In pre-epidemic period the sanitary-epidemiological service of Kharkiv has developed and implemented a comprehensive plan to control the influenza outbreak. Increasing of the incidence in the season 2009-2010 began earlier than usual in October 2010. The maximum level of incidence of influenza and acute respiratory infections (ARI) in Kharkiv was registered on the 52-nd week of the year and it was 31,4 per 10 thousand of population. Vulnerable groups included pregnant women, patients with morbid obesity and those with chronic respiratory disease. Because of the timely introduction of restrictive measures in schools and out-of-school institutions, the incidence of influenza and ARI exceeded the epidemic thresholds among the school-age children only on the 51st and 52nd weeks of the year. Somatic hospitals of the city have been restructured to provide qualified medical care of cases of influenza and ARI with severe disease and complications and to treat pregnant women. Carrying out other organizational-methodical, preventive and anti-epidemic measures helped to limit the epidemic spread of the influenza A H1N1 virus in Kharkiv, where the incidence of influenza in this period was several times lower in the Ukraine.

Conclusions: The organizational, methodological work of public health surveys and preventive and anti-epidemic measures have gave the possibility to prevent epidemic spread of influenza and ARI in Kharkiv. These lessons for public health action improved timely the understanding of the characteristics and impact of the pandemic. Such measures can be implemented in other areas of the country.

Key words: influenza, A H1N1, preventive measures, anti-epidemic measures, surveillance.

CHRONIC RESPIRATORY FAILURE IN OBSTRUCTIVE VENTILATORY DYSFUNCTION

Huzum Simona-Cerasela, Balan Ilie

Academic adviser: Lovin Sanziana, M.D., Assistant Professor, "Dunărea de Jos" University, Galati, Romania

Introduction: The obstructive ventilatory dysfunction characterized by increased resistance to airflow in expiration develops belatedly in the evolution of chronic broncho-obstructive diseases and represents the starting point of an important disability and deterioration of quality of life.

We present the preliminary results of a validation study of Dijon score and St. George score in correlation with obstructive ventilatory dysfunction and its sub-pathologies.

The study is based on establishing a final score that depends on the physical activity and respiratory capacities of the patients.

The indices denoting the physio-pathological disorder are represented by: VEMS (forced expiratory volume in one second), IT (VEMS/CV) and the correlation with the scores of quality of life and physical activity self-declared.

Background and aim of the study is to highlight the correlation between functional indices and the subjective statement of the patients on an alteration of their daily activities.

Materials and Methods: We assessed 50 patients diagnosed with the obstructive ventilatory dysfunction, bronchial asthma or COPD (chronic obstructive pulmonary disease). In median age patients (53.21) VEMS, CV, VER, IT were evaluated in order to establish the difficulties regarding the respiration and level of physical activity of the patients using Dijon score and St. George score. Dijon score represents self-declared physical activity (the maximum score of 30 represents a good physical activity, and St. George score represents the alteration of life quality in chronic patients, a high score meaning a more severe impairment (3 domains: symptoms, activity, impact)

Results and Discussion: In the studied patients, the correlation between the age and symptoms gives a negative value (r = -0.035). It was noticed that older patients (>60) have a higher symptomatic index. The most marked symptom is cough associated with heavy breathing. Patients aged over 50 years shows a moderate or small physical activity, the correlation between age and activity having an index <1 (0.03). The severity of all symptoms is directly proportional with the age. It was noticed in COPD patients that the correlation between VEMS and symptomatology had a strongly negative value (r = -0.034), found in chronic bronchitis characterized by reduced physical activity. Most patients with IT < 0.5 have been diagnosed with COPD, the main symptom that influences health being dyspnea. Contrary to expectations, the patients with IT between 0.5 - 0.2 have normal VEMS accompanied by a decreased vital capacity. For the group of patients analyzed the average Dijon score is 13, age being directly proportional to its values while symptomatology is inversely proportional to the same values. In patients with Dijon score <11 physical activity causes fatigue due to important lack of air, the main symptom being dyspnea. The best correlation was noticed between IT and IMPACT score of ST G (r = -0.77).

Conclusions: Dijon score approach with respiratory indices (VEMS, CV, IT) represents a stable method of analysis for respiratory failure and their associated diseases. The impact score of the questionnaire of St George is a good indicator of the obstructive level.

Keywords: Bronhical asthma, correlation, St George, Dijon, impact.

TO PREDICT INFLUENZA RELATED PNEUMONIA - A CONTINUOUS CHALLENGE DURING PANDEMICS

Chesov Dumitru

Academic adviser: Botnaru Victor, M.D., Ph.D., Professor, State Medical and Pharmaceutical "Nicolae Testemițanu", Chisinau, Republic of Moldova

Background: The last influenza pandemic showed the importance of the early beginning of antiviral therapy for a successful outcome of influenza related to pneumonia (IRP). Thus the ability to differentiate the influenza pneumonia from the bacterial one, during the first hours after the patient's admission, is crucial for further management of the case. A study was performed to investigate whether adults with severe H_1N_1 pneumonia could be distinguished clinically form patients with non-H_1N_1 community acquired pneumonia (CAP).

Methods: Clinical and epidemiological data of 75 adults admitted for severe H_1N_1 IRP were com-