Parainfluenza 4 associated with myopericarditis mimicking acute coronary syndrome detected in the screening for influenza A virus infection

Dear Editor,

Based on clinical recommendations, we have started screening viruses involved in respiratory tract infections since the onset of influenza A pandemic. When a patient is suspected of being infected by influenza A, a multiplex PCR screening (CLART PneumoVir, Genomica S.A.U., Coslada, Madrid, Spain) is performed for viruses from upper respiratory tract samples, including influenza A virus (types nH1N1, H1N1, H3N2), influenza B virus, influenza C virus, parainfluenza 1 virus, parainfluenza 2 virus, parainfluenza 3 virus, parainfluenza 4 virus, respiratory syncytial A virus, respiratory syncytial B virus, metapneumovirus, coronavirus, rhinovirus, enterovirus, adenovirus, and bocavirus.

After reading the case published by Şahin et al. [1] and other similar articles [2,3], we performed a viral screening in one of our patients admitted to intensive care unit with a clinical diagnosis of myopericarditis and found a parainfluenza 4 virus infection.

This 38-year-old male patient, without any cardiovascular risk factors, had sudden-onset chest pain mimicking acute coronary syndrome, following a two-day history of flu-like symptoms: fever, arthralgia, and malaise. We observed electrocardiographic abnormalities (diffuse T wave inversions in leads V2-V6 and unconstant, 1-2-mm, saddle-shaped ST-segment elevations in leads II, III, aVF), and maximum elevations in serum CK (687 U/l, reference range [rr] 39-308 U/l), CK-MB (62 U/l, rr 2-25 U/l), and troponin I (12.2 ng/ml, rr <0.04 ng/ml). Leukocyte count was 7,000 (42.6% neutrophils and 20.4% monocytes), serum CRP was 3.68 mg/dl (rr 0.01-0.5 mg/dl), and only fibrinogen (835 mg/dl, rr 200-450 mg/dl) was elevated in coagulation tests. No hemodynamic instability or other complications were present at any time of his clinical course. Treatment with high-dose aspirin was effective, resulting in good medical condition at discharge.

To rule out acute coronary syndrome and to evaluate underlying coronary artery disease, we offered the patient coronary angiography, but he refused the procedure.

Human parainfluenza virus has been mainly recognized as a cause of respiratory tract infections. Small series of patients described in the literature presented with upper or lower respiratory syndrome [4], but in none of them myocarditis was due to parainfluenza 4 virus [5]. This is the first reported case in which parainfluenza 4 virus was associated with myopericarditis mimicking acute coronary syndrome.

In conclusion, parainfluenza 4 virus infection should be suspected if myocarditis is present. Although a specific treatment for parainfluenza virus has not been approved for humans yet, complicated parainfluenza A infection can be treated in the way influenza A is treated.

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1. Şahin DY, Demir M, Kurtaran B, Usal A. A case of myocarditis mimicking acute coronary syndrome associated with H1N1 influenza A virus infection. Türk Kardiyol Dern Arş 2010;38:572-5.