Influenza A (H1N1) virus induced-Septic Shock and Multiple Organ Dysfunction Syndrome (MODS) in Renal Transplant Children

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Objective. The influenza A (H1N1/09) virus was especially threatening for renal transplant patients\(^1\) they present high risk for complications, prolonged infection and mortality. We report a first case of H1N1 induced septic shock in immunocompromised children after kidney transplant.

Methods: A 9-year old boy received a cadaveric renal allograft in March, 2009. Four months latter the patient presented in the hospital emergency room with a 8-day history of high fever (38.5°C), cough, dyspnea, tachycardia, tachypnea, bronchospasm and significant impairment of general condition. After 24 hours, he was admitted in the pediatric intensive care due to deteriorating oxygenation status, septic shock, kidney failure, convulsion, progressive acute respiratory distress syndrome and MODS. Nasopharyngeal swab was collected and reverse transcriptase polymerase chain reaction was positive to H1N1.

Results: The main laboratory tests after mechanical ventilation were: pH 7.20; PaO\(_2\) 63mmHg; Base excess -11; PaO2/FiO2 ratio 63mmHg; Hematocrit 23%; WBC 1100 mm\(^3\); 147000/mm\(^3\) platelets; Activated partial thromboplastin time 52.2 sec; Creatinine 1.13 mg/dL. Chest X-ray showed bilateral interstitial infiltrate and echocardiography ejection fraction 67% and pulmonary hypertension (32 mmHg). Treatment with oseltamivir was immediately started as well as haemodynamic support for paediatric septic shock\(^2\). His condition has improved gradually and was discharged after 40 days of hospitalization.

Conclusion. Immunocompromised patients present high risk for septic shock, early diagnosis and fast treatment including earlier antiviral agents and ACCM/PALS guideline should be instituted to improve the prognosis

\(^1\) NDT Plus 2010;3: 383
\(^2\) Crit Care Med. 2009;37:666