Myocardial involvement and cardiac troponin T level in infants with Respiratory Syncytial Virus bronchiolitis.

Asleh N., Diab S., Heno N., Even L. 
Western Galilee hospital - Nahariya, Israel.

Background: Respiratory Syncytial Virus (RSV) lung disease in infants is associated with myocardial involvement. In this study we aim to investigate the prevalence and the nature of associated myocardial involvement in children with RSV bronchiolitis.

Methods: The study was a prospective observational study. We assessed the myocardial involvement in infants with RSV bronchiolitis admitted to pediatric department and intensive care unit at the Western Galilee hospital during winter season 2011-2012. Cardiac Troponin T (cTnT), C-Reactive Protein (CRP), Electrocardiogram, Chest X-ray, and Echocardiography were done for infants with RSV bronchiolitis.

Results: In our study 38 children were included. All infants were without congenital heart disease. Cardiac troponin T level was elevated in 8 infants out of 34 (23.5%). Level range was 0.056 – 0.209 Pg/ml. Seven infants out of eight (87.5%) with elevated cTnT level were younger than age of two months. Range of age was 0.75 – 2 months. Average 1.15 months. Echocardiography was possible for 24 infants. Cardiac function and rhythm were normal in all infants. Pericardial effusion was found in 11 out of 24 infants (45%). CRP was elevated in 21 infants (55%). Chest x-ray revealed pulmonary infiltrate in 13 infants. There was no significant difference between the patients with or without elevated cTnT with regard to the presence of pericardial effusion or pulmonary infiltrate, intensive care unit history or myocardial shortening fraction.

Conclusion: Myocardial involvement is common in infants with RSV bronchiolitis. Neither elevated cTnT level nor the presence of pericardial effusion were associated with myocardial dysfunction. Elevated cTnT was significantly correlated to younger than 2 months age.