

The value of echocardiographic exam for the diagnosis of cardiac involvement in non-Hodgkin lymphoma in child

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Background.

Clinical signs and symptoms of cardiac involvement in non-Hodgkin lymphoma(NHL), is frequently undetected and diagnosis could be missed unless a routine echocardiographical investigation might be performed.

Objective:

to reveal the value of echocardiographic investigation for diagnose and follow up the cardiac involvement in NHL in child, other than that determined by the specific treatment.

Methods.

Patients: 38 children, 21 males and 17 females, aged between 3month and 17 years with NHL, hospitalised in in a 8 years period. In all cases were performed: clinical exam,ECG, chest X-ray and Doppler echocardiography(echo).

Results

Cardiac involvement was proved in 6 cases (15, 8%) of T-cell (5 cases) and B-cell(1 case) NHL. Clinical signs on onset like asthenia, dyspnea, cough, superior vena cava syndrome have been assigned to the base disease.

ECG revealed: low voltage of QRS complexes and T waves

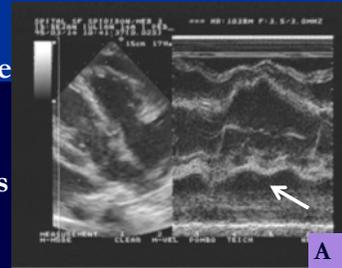
Chest X-ray: mediastinal involvement (5 cases), massive right-side pleural effusion (2 cases), cardiomegaly (5 cases)

Ecocardiographic aspects of cardiac involvement were:

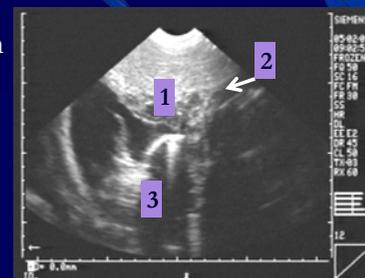
- ◆ pericardial effusion(4 cases) to cardiac tamponade (2)
- ◆ pericardial tumor (1 case).
- ◆ In 2 cases was revealed in first echo exam intracardiac masses, without the possibility of specify the initial starting point for the lymphoma: case 1 with a tumoral mass filling the right atrium with implantation base towards superior vena cava, case 2 - tumoral mass extending from the free wall of the right atrium to the septal tricuspid valve leaflet, associated with massive pericardial effusion.

Cardiac modifications found in echocardiographycal exam in case 1 were confirmed later in the autopsy.

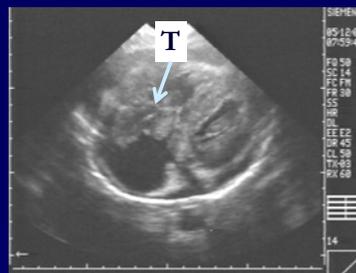
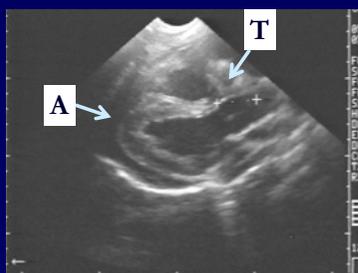
Excluding patients who died, in all cases pericardial effusions and intracardiac masses decreased or disappeared by specific cytostatic treatment.



C.N 12 years
Non Hodgkin malignant lymphoma
A-mode M echocardiography;
B,C: 2 D echocardiography
Pericardial effusion to cardiac tamponade



A.M 11 years
Non Hodgkin malignant lymphoma
2 D echocardiography
1.Pericardial tumor
2.Pericardial effusion
3.Pleural effusion and tumor



G.P 11 years
Primitive Non Hodgkin malignant lymphoma
2 D echocardiography
A.Pericardial effusion
T.Tricuspidian tumor

Conclusions

Because of high incidence of cardiac involvement in non Hodgkin malignant lymphoma in child and often difficulties of diagnosis in the early stages of evolution , echocardiographic exam is necessary in all cases at the first exam of patients, even if cardiac involvement signs are missing, in order to prevent the evolution to cardiac tamponade or other cardiac emergency. Echocardiography is the most important investigation to diagnosis and follow-up the cardiac involvement in NHL in child.