

Ultrasonic Diagnostics of Lymphogranulomata Spreading in Children

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Abstract

192 patients have been examined for the purpose of exposing diagnostic means of ultrasonic with Lymphogranulomata in children. Splenomegalia has been observed in 75 children, Hepatomegalia- in 13 ones. Affection of spleen had characteristics of the hearth. Lesion of liver has been defined to 4 patients. From the retroperitoneal lymphatic knots, para-aortal ones have been more often affected (87,0%), lesion of iliac lymphoknots has rarer been observed (35,2%). Decrease of frequency of lymphatic knots affection including para-aortal and iliac ones is the evidence of spreading Lymphogranulomata towards kranio-caudal direction. Besides, the evidence gained by us is indicative of great possibilities of ultrasonic under the certain stage of lymphogranulomata in children.

Keywords: *lymphogranulomata, children, ultrasonics, spleen, liver*

Introduction

Lymphogranulomata is considered as one of the most spread problems among the oncological diseases at the age of childhood, which needs thorough investigation and it draws the attention of specialists from different fields. The quality of Lymphogranulomata spreading acquires decisive significance (7), hence, for defining the tactics of treatment, for assessing its efficiency and for prognosticating the development of disease, it is necessary to work out such diagnostic methods which will give us chance to determine the quality of disease accurately and to control its development (2,4).

Consequently, the significant task is to implant such methods in clinical practice which will provide the children diseased with Lymphogranulomata with multiple examinations and at the same time it will be absolutely safe for patients (it will not be invasive and will not be connected to radiate load). Such method represents ultrasonic diagnostics which is successfully

utilized in testing the abdomen and retroperitoneal when the malignant lymphomas occurs as for stating the stage of disease during the primary examination, also in dynamic observation, for defining the effect of treatment and for revealing previous relapses (1,3,5).

In spite of certain success of ultrasonic results, the major shortcoming of the mentioned investigation is that the patients affected with Lymphogranulomata but not with hojkin lymphoma are united in one group, the relationship between echoscope picture and morphological variants is not determined, the peculiarities of ultrasonic examination of Lymphogranulomata in children is not stated (7), at the same time the special importance should be attached to correct interpretation of echographical data, as the incorrect conclusion of below spreading the Lymphogranulomata diaphragm may cause inexcusable treatment that will be dangerous for life of children (6,8).

The aim of the work is to refine the method of ultrasonic diagnostics in order to expose the affection of below

located organs and lymphatic knots, also to define the meaning of evidence given at assessment of Lymphogranulomatous process spreading.

With this purpose, for implementation it is necessary to solve the following tasks:

1. The methods of ultrasonic diagnostics of retroperitoneal and lymphatic knots of abdomen should be improved. The symptocomplex of echographical data of liver, spleen and kidneys affection should be studied and worked out.
2. The sequence of diagnostic examinations for establishing the stage of Lymphogranulomata should be fixed.
3. The role of ultrasonic scanning and computer tomography in complex diagnostics and for defining the efficiency of treatment should be determined.
4. The semiotics of ultrasonic diagnostics should be revealed among the children affected with Lymphogranulomata.

Materials and Methods

For implementation of objects that have been set by us, 192 children diseased with Lymphogranulomata have been examined, they had been made ultrasonic testing and the spreading of process below the diaphragm had been determined.

In all cases, the diagnosis of Lymphogranulomata has been verified by the morphological examination of lymphatic knots biopsies of neck, armpit and pelvis (lower part of the belly) area.

Ultrasound examination had been carried out to sick children in hungry condition, in standard position (on back or on side lying position). Ultrasonics was made in real regime of time by means of 3,5 and 5 mpc passing - on the apparatus of "Aloka 500" and "Toshiba- SAL - 38 AS".

Among 192 patients examined by ultrasonic diagnostics, 75 ones were affected with Splenomegalia, but 13 ones with - Hepatomegalia.

Results

Lesion of spleen which was observed in our patients, was characteristic to the hearth, as a rule hearth was multiple from 0,3 cm to 2,5 cm diameter. Its compactness was always less than the parenchyma's one, which gave the chance of exposing them on ultrasonograms.

Hearth affection of liver was determined to 4 patients. The hearth was reduced like round - shape echogenor, its size was from 5 mm to 1,5 cm.

As the analyze of ultrasonic diagnostics results showed, from retroperitoneal lymphatic knots paraaortal lymphatic knots are more often affected - 87%, lymphatic knots of hams were less seldom observed - 35,2%. Their simultaneous affection was noticed only in 22,2%. Isolated lesion of paraaortal lymphatic knots took place in 28,8%, but lesion of lymphatic knots of hams - in 7,3%. Dimension of lesion frequency from paraaortal lymphatic knots to lymphatic knots of lower part of belly must prove crano-caudal direction of spreading Lymphogranulomata process. Such conclusion is in compliance with other researchers' results. For ascertaining the correctness of this outlook, we considered it suitable to study quantitative ratio of affected lymphatic knots of various localization.

The gained results are presented in *Tab.1*. As the table shows, one-sided affection of lymphatic knots was more often observed (79,5%), in addition, left side was more frequently affected (44,4%) than right side (35,1%). 64,8% of the patients was affected by lesion of lymphatic knots of loins, but isolated lesion of lymphatic knots of hams was noticed in 13%, which proves that the spreading of malignant process on retroperitoneal lymphatic knots takes place to the crano-caudal direction.

More trustworthy arguments were made by studying the frequency dependence of affected retroperitoneal lymphatic knots exposed by ultrasonic diagnostics, in connection with the duration of out-of- treatment current disease (*Tab.2*), simultaneously, as a result of this research a new factor was worked out, that proves the great role of ultrasonic in case of Lymphogranulomata assessment.

LOCALIZATION	ON THE RIGHT		ON THE LEFT		BOTH-SIDED		IN ALL	
	Abs. Number	%	Abs Number	%	Abs. Number	%	Abs .Number	%
Toils	13	24,1	16	29,6	6	11,1	35	64,8
Hams	2	3,7	3	5,6	2	3,7	7	13,0
Toils+Hams	4	7,4	5	9,2	3	5,6	12	22,2
Whole Number of Patients	19	35,1	24	44,4	11	20,4	54	100

Tab.1 *Distribution of affected retroperitoneal lymphatic knots according to localization.*

NUMBER OF EXAMINED PATIENTS	LENGHT OF DISEASE	NUMBER	
		Abs. Number	%
29	Up to a month	5	16,1
85	From 1 to 3 months	21	24,7
32	From 3 to 6 months	9	28,1
16	More than 6 months	6	37,5
30	More than 1 year	13	43,3

Tab.2 *Frequency of retroperitoneal lymphatic knots lesion according length of disease.*

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Ультразвуковая диагностика распространения лимфогранулематоза у детей.

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Р Е З Ю М Е

В целях выявления диагностических возможностей ультразвукографии при лимфогранулематозе у детей было обследованно 192 больных. Спленомегалия отмечалась у 75 детей, гепатомегалия у 13. Поражение селезенки имело очаговый характер. Поражение печени было определено у 4-х больных. Из ретроперитонеальных лимфатических узлов чаще всего были поражены параортальные (87,0%), реже отмечалось поражение подвздошных лимфоузлов (35,2%). Уменьшение частоты поражения лимфатических узлов от параортальных до подвздошных свидетельствует о распространении лимфогранулематоза в краниокаудальном направлении. Кроме этого полученные нами данные свидетельствуют о больших возможностях ультразвукографии в определении стадий лимфогранулематоза у детей.

Ключевые слова: *лимфогранулематоз, дети, ультразвукография, селезенка, печень*