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Children`S Tuberculosis of High Risk Groups in Samarkand Region of Uzbekistan

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Abstract: In article the current situation reasons on tuberculosis among children are analyzed, new approach to identification of respiratory tuberculosis by a digital fluorography in the high risk groups is considered.

Keywords: respiratory tuberculosis, tuberculosis of intrathoracic lymph nodes, digital fluorography, high risk groups.

Introduction: Nowadays a priority problem of children's phthisiology and an effective way of the prevention complicated and progressive course of tuberculosis, is well-timed identification, particularly in children and adolescents with the high risk of developing tuberculosis. [1, 17]. Planned, regular tuberculin skin test had of great importance for identification of tuberculosis at children and adolescents in out-patient department. But now it is carried out in insufficient volume that, undoubtedly, complicates well-timed diagnostics of initial manifestation of tuberculosis and it is negatively reflected on indicators of early identification. The majority of patients comes to light not always well-timed, at the recourse to medical-preventive institutions as a result of disease. For last 5 years identification according to the address increased from 13,0% to 46,8% [3, 12]. In this occasion search of new approaches to identification of local forms of tuberculosis at children and adolescents is actual. Use of the modern X-ray diagnostic equipment based on digital technologies, allows reducing dose of the irradiation in 10 and more times [2, 102]. In this regard, the organization of examination of children of younger and middle school age from high risk groups with use of a low dose digital X-ray equipment for the purpose of identification of respiratory tuberculosis is represented priority. To conduct the comparative analysis for the first time the revealed tuberculosis of local forms of respiratory tuberculosis at children who have been actively detected in risk groups and recourse for a medical care and to study diagnostic value of a digital fluorographic method in children and adolescents with tuberculosis risk.

Material and methods. By the digital fluorographic equipment "ProScan-2000" surveyed 525 children and adolescents aged 7-14 years of contact with tuberculosis patients. Inspection included studying anamnesis, an assessment of results of objective survey, digital fluorographic examination.

Children and adolescents, which revealed by digital fluorographic examination, were included to 1st group of observation.

In 2nd group of observation were included 30 children and adolescents of the similar age groups, recourse to medical-preventive institutions (general health care facilities) with symptoms of an inflammatory respiratory disease.

Results and discussion. According to digital fluorographic examination, pathological changes in lungs and a mediastinum were not found at 369 (70,3%) children. Intrathoracic tuberculous adenopathies were found at 156 (29,7%) children, at 2 children was found the primary tuberculous complex, i.e. about a third surveyed by a method of a digital fluorography had not tuberculosis of intrathoracic lymph nodes.

In 19 cases (3,6%) lymph nodes were presented by formations of the inhomogeneous soft-tissue density, a diffuseness, an illegibility of an outline lungs hilus, and the reference for tuberculosis of intrathoracic lymph nodes in an infiltration phase. At 2 (0,4%) children was diagnosed the primary tuberculous complex in an infiltration phase – infiltrative, low-intensive shadings, with more or less outlined external borders. In 24 of cases (4,6%) older process with the calcinations foci, complicated by connective tissue consolidation of a hilar tissue was found. In 111 (21,1%) of children with calcinate Intrathoracic lymph nodes, are revealed calcinate peripheral lymph nodes of a neck and axillary area.

Thus, into the 1st group of observation entered 21 children and adolescents, with newly detected active respiratory tuberculosis.

Among children of both groups the number of boys (52,9%) and girls (47,1%) authentically did not differ. Children of 7-10 years (77,1%) were prevailing age group. Children and adolescents of 11-14 years there were 22,9%.

In the 1st group of observation all children had a contact with tuberculous patient, 52,4% of them had contact with patient with bacterial isolation, 33,4% of children had a constant contact and 19,0% - periodic.

In the 2nd group of patients, contact with bacteria-isolated person was established in 6,7% of cases, in the majority – constant, with parents and the close relatives.

Among the patients of the 1st group, detected at digital fluorographic examination, were prevailed children with tuberculosis of intrathoracic lymph nodes (90,5%). The primary tuberculous complex was detected only in 9,5% of cases.

In the patients of 2nd group, identified on their referral to general health care facilities, were detected such forms of tuberculosis as tuberculosis of intrathoracic lymph nodes in the phase of infiltration (53,3%), primary tuberculosis complex (23,3%), disseminated tuberculosis (13,3%), tuberculous pleurisy (6,7%) and fibrous-cavernous tuberculosis (3,3%).

Thus, among patients, who were detected at examination of risk groups, tuberculosis of intrathoracic lymph nodes was a prevailing clinical form, while in patients of 2nd group, this form of tuberculosis was identified 1,7 times less often, and the primary tubercular complex – is 2,5 times more often.

In 1st group in 18 cases (85,7%) of 21, the disease was commonly asymptomatic or unexpressed. Mild or moderate signs of total disorders syndrome – paleness of skin and decrease of appetite, were prevalent in the clinical picture, and that did not allow estimating them as tuberculous intoxication.

At the same time in 2nd group in 22 cases (73,3%) of 30, the course of tuberculosis was accompanied by moderately expressed, expressed and permanent intoxication and bronchopulmonary symptoms of a disease. They had such symptoms, as decrease of appetite, deficiency of weight of a body, decrease in a skin turgor, fatigue and lability of nervous system.

The majority of patients had a combination of 4 or more signs that allow us to speak about existence of the complete symptom complex of intoxication with signs of astenisation and neurovegetative dystonia.

Thus, patients who were detected by method of digital fluorographic examination had small and restricted changes in a parenchyma and the course of disease, as a rule, had oligosymptomatic character.

In patients, who were identified at general health care facilities, on the contrary, course of disease was accompanied by the expressed clinical manifestations with larger, than at patients of the 1st group, inflammatory changes in parenchyma of lungs.

In 1st group 1 (3,3%) patient had had bacterial isolation which was determined by method of smear microscopy and was confirmed by cultural method, whereas in the 2nd group – the bacterial isolation was not revealed.

Small pathological changes were detected in blood analysis of 42,9% children of 1st and 76,7% children of 2nd group. However, no significant differences were found.

Accompanying diseases were noted in 52,4% cases of 1st group and in 70,0% cases of 2nd group of observations: respiratory viral infections and bronchopulmonary inflammations (25,5 and 43,1%, respectively), enterobiasis (12,7 and 17,8%), damage of nervous system (6,5 and 8,9%) and gastrointestinal tract (6,1% and 4,4%).

In 33,3% cases of 1st group and in 46,7% cases of 2nd group was conducted a radiographic examination and ineffective treatment of bronchopulmonary diseases a month before the observation.

Conclusions. One third children and adolescents examined by method digital fluorography have an intrathoracic tuberculous adenopathies.

In 4,0% of cases tuberculous process was active.

The method of digital fluorography, allows identifying respiratory tuberculosis in high risk groups small, restricted changes in lungs parenchyma, with asymptomatic or oligosymptomatic course of disease, negative – without bacterial isolation, which is more typical for an initial period of tuberculosis. In condition of the insufficient volume tuberculin skin test, diagnostic value of digital fluorographic examinations in children and adolescents increases, particularly in group of contact with tuberculosis patients.

From general practitioners requires phthisiological alertness and high-quality diagnostic of tuberculosis, especially among patients who visit general health care facilities with symptoms of an inflammatory respiratory disease.

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