



УДК: 616-002.5-053.2 : 612.392.64 (477.87)

EPIDEMIC SITUATION BY TUBERCULOSIS AMONG CHILDREN IN THE ZAKARPATTYA REGION WITH IODINE DEFICITE

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Background

The situation by tuberculosis is problem in many countries of the world. The situation is most difficult by tuberculosis is observed in low countries, in countries with the low level of life. Ukraine at now is included to the group of countries with the high level of morbidity by tuberculosis and has a higher level of morbidity to European countries. We identified substantial positive changes in epidemic situation by tuberculosis in Ukraine and in an area at few last years. But epidemic situation by tuberculosis is ambiguous, as morbidity and death rate from this diseases remain at epidemic level. The chemioresistent forms of tuberculosis spread on this base [1,2,4,8,9].

A problem of health of children is a result of socio-economic, ecological and medical situation of population and society on the whole. As a result of biological features of child organism adaptation possibilities are limited in child's age, a sensitiveness is enhanceable to the external factors. The health is original the indicator of the epidemiology state of child population. Children are most inclined to morbidity on tuberculosis. The level of morbidity from children tuberculosis have a one of prognoses signs of epidemic situation in a region. Epidemic situation among child's population in an whole area and on Ukraine is relatively favourable [3,5,6,7].

Methods

The results of health job in domestic tubercular hearths and among contact persons which surround a patient are analyzed in the article. Recommendations of prophylactic plan are resulted. In the investigation was used laboratory, bacteriological, statistic methods.

Result

Morbidity on tuberculosis of child's population (0-14 years of age include) in Ukraine

for a few last years has some tendency to the decline from 9,1 in 2008 year to 8,9 in 2009 year and 7,8 on 100 thousand child's population in 2010 year. Morbidity on tuberculosis among child's population of area is stable during a few last years. Its level considerably below than middle index in Ukraine. Index of morbidity on tuberculosis among children in an area in 2010 was 4,3 in 100 thousand child's population (in 2009 – 4,3, 2008 - 4,2).

Among children morbidity on tuberculosis in 2010 prevail 90% boys, in 10% cases – girls, the correlation girls: boys in 2009 year was 50:50. The structure of children morbidity there were : 60% for 1-4 years, 5-9 years – 10%, 10-14 years – 30% children. The prevalence high percent of children morbidity by tuberculosis were between 1-4 years and have tendency to decline from 80% in 2009 year to 60% in 2010 year. Among the Children with tuberculosis in 70% cases they lived in non satisfactory domestic situation.

In the structure of morbidity on tuberculosis the pulmonary forms of tuberculosis is prevail among children (70%). The morbidity of tuberculosis among children is correlated between of pulmonary and extrapulmonary forms of tuberculosis. A percent of tuberculosis of extrapulmonary localization was 30%, to a percent of extrapulmonary tuberculosis in adult (6,9%). In the structure of extrapulmonary tuberculosis among children a percent of tuberculosis of breathing organs was 66,7%, extrapulmonary tuberculosis of other organs contained 33,3%.

Analysing the cases of the first diagnosed tuberculosis was identificate that the local forms of tuberculosis prevail (90%). Distributing for to the forms of tubercular process in cases of the first diagnosed tuberculosis in children was following: primary tuberculosis complex - 50%, tuberculosis exsudate pleurisy - 10%, tuberculosis of intrathoracic lymph nodes -



10%, tuberculosis pulmonum focalis - 10%, disseminative tuberculosis - 10%, tuberculosis of peripheral lymph nodes - 10%.

Destructive forms of pulmonary tuberculosis in children not registered, in 1 case is registered elimination *M. tuberculosis* (10%).

70% of children had associated pathology with the first diagnosed tuberculosis. There were: in 10% cases was gastritis, in 30% - hypotrophy, in 22% deviation from normal of physical development (0 -1years age), ferum deficite anaemia in 40% cases, 10% - AIDS. In 1 case (10%) was identificate viral hepatitis B.

Morbidity on tuberculosis among teenagers (15-17 years) in an area in 2010 was increase and contain 24,2 on a 100 thousand population, in 2009 – 20,2 on a 100 thousand population. In Ukraine morbidity on tuberculosis of teenagers is higher to area and contain 29,9 on a 100 thousand population (in 2009 - 31,2 on 100 000 teenagers).

The gender differentiation among the teenagers in the 2010 were following: boys was in 53,8%, girls – in 38,5% (in 2009 year: boys – 58,3%, girls - 41,7%). 53,8% teenagers lived in non satisfactory situation. Amount 61,5% cases of tuberculosis were identificate among teenagers by prophylactic observation. Pulmonary tuberculosis process in teenagers was prevaile (76,9%), extrapulmonary tuberculosis was registered in 23,1%.

For the teenagers was characteristically local forms of tuberculosis (92,3%). Among the cases of tuberculosis among teenagers 15,4% include tuberculosis pulmonum focalis, 61,5% - tuberculosis infiltrative, 15,4% - exsudate pleurisy, 7,7% - tuberculosis peritoneum. Destruction of pulmonary tissue was found in 50% cases of pulmonary tuberculosis, elimination of *Mycobacterium tuberculosis* with sputum was confirmed in 60% cases of pulmonary tuberculosis. In one case Pulmonary tuberculosis was complicated by tpectoration of blood.

Anamnesis is burdened by risk factor on tuberculosis was identificate in 5 persons (38,5%). 2 teenagers (15,3%) had contact with patients on tuberculosis (by the members of families), They annually used a prophylactic observation and preventive treatment.

5 teenagers had associated pathology (38,5%). There were: 20% viral hepatitis, 20% acute pyelonephritis, 40% ferum deficite anaemia.

Prophylactic work is from tuberculosis. The specific prophylaxis of tuberculosis is vaccination of BCG (*Bacille Calmette Guerin*) of new-borns.

Long time for a vaccination was used the vaccine of BCG (productions are Russia). From 2008 year used of vaccine of BCG SSI (Danish culture) is begun in Ukraine. The percent of vaccination in 2010 for specific prophylaxis of new-born was 97,4%, in 2009 year the percent of vaccination contained – 98,3%.

In morbidity by tuberculosis among children a high value has a powerful reservoir of tubercular infection, which caused by *Bacterium* elimination. Result of presence of such location is penetration of *Mycobacterium tuberculosis* to the organism – infecting. One with the most widespread method of determination of the changed reactivity of organism, which arose up as a result of infecting *Mycobacterium tuberculosis* or vaccination of BCG there is tuberculin diagnostica.

Tuberkulin diagnostika among children (age between 1 – 14 year) do possible early exposure of tuberculosis, exposure and forming of groups of enhanceable risk of disease on tuberculosis, to the selection of contingents for revaccination, study of infected as epidemiology index. Tuberkulin diagnostika among children Russia is conducted with application of tuberculin of production. At the end of 2010 year in practice the leadthrough of test of Mantoux is inculcated with application of tuberculin of SSI (productions are Denmark), intended for a leadthrough Tuberkulin diagnostik at the children They used the Danish vaccine of BCG. Percent of children in age between 1 - 14 year as result of Tuberkulin diagnostika have tendency to decrease in 2010 year and contained 90,4% (in 2009 – 90,9%).

A percent of first identified patients with tuberculosis of children as result of Tuberculosis skin test (TST- Mantoux) was diagnosed in 60%. It is discovered during the We investigated 1826 children with the psitive of Tuberculosis skin test (TST- Mantoux) and percent was 0,92%, in 2009 – 0,95%. The first identified patients with tuberculosis used preventive treatment.

Treatment of children most feel like a disease on tuberculosis (risk group) theated on the base of regional child's tubercular sanatorium and preschool of sanatorium type. 663 children from the groups of enhanceable risk of disease on tuberculosis in used treatment in complex with heterospecific and rehabilitation treatment in 2010 year. 206 children from the groups of risk got treatment in the conditions of preschool of sanatorium type, other - in ambulatory terms.



Summary. It is set on the basis of the above-mentioned analysis, that an epidemic situation from tuberculosis among child's population in an area is relatively stable during a few last years. A leadthrough of measures on a prophylaxis and treatment of tuberculosis among child's population is only part of work in a fight against the epidemic of tuberculosis. The basic contingents of supervision in Phthisiatry are groups of enhanceable risk diseases on tuberculosis, discovered during the leadthrough of Tuberkulin diagnostika. Exactly prophylactic treatment of these children is valuably conducted prevents development of tuberculosis and positively influences on an epidemic situation in a region.

Key words: tuberculosis, children, epidemic situation, treatment, prophylactic measures.

Епідемічна ситуація на туберкульоз серед дітей з йододефіцитом у Закарпатській області

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Резюме. Епідемічна ситуація з туберкульозу серед дитячого населення в області є відносно стабільною на протязі останніх декількох років. Проведення заходів з профілактики та лікування туберкульозу серед дитячого населення є лише частиною роботи в боротьбі з епідемією туберкульозу. Основними контингентами спостереження у фтизіопедіатрів залишаються групи підвищеного ризику захворювання на туберкульоз, виявлені при проведенні туберкулінодіагностики. Повноцінно проведене профілактичне лікування цих дітей запобігає розвитку туберкульозу та позитивно впливає на епідемічну ситуацію в регіоні.

Ключові слова: туберкульоз, діти, епідситуація, лікування, профілактичні заходи

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