



Tuberculosis among children and adolescents in Odessa, Ukraine 2017



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Background: Ukraine has one of the highest indicators of tuberculosis (TB) globally. However, few researches have paid attention to early diagnosis of TB in young children, though this part of population is at risk.



Fig1: Results of the intensive TB treatment phase

Method: approximately 3260 pediatric cases (age 0-18 years) with suspected TB were examined at the Regional TB Hospital in Odessa during 2017. Thorough medical examination, HIV testing, mycobacterial cultures, GeneXpert-RIF and drug susceptibility tests were carried out.

Results and discussion: TB was confirmed in 91 cases. Of these 91, 89 cases had pulmonary and 2 cases had extra-pulmonary TB; 13 cases had HIV-TB co-infection and 29 cases had multi drug resistant (MDR) TB; in 4 cases surgery was carried out due to severe pathology (formation of tuberculoma).



Fig2.: Results of the intensive TB treatment phase

Diagnosis of TB in children is demanding and challenging, with incidents of extra-pulmonary and meningeal diseases. The study showed that rates of TB and especially drug-resistant TB in children have significantly increased compared to 2016 and 2015 (Fig3, Fig4 and Fig5). This may be due to the increased poverty of the population in the recent years. Other factors may be: low priority of children's tuberculosis in public health; lack of normative base in the prevention, diagnosis and treatment of TB in children; absence of BCG and tuberculin vaccine for a long period of time; difficulties in isolating adult patients with active tuberculosis; unwillingness of parents to recognize TB in their children and the need to treat them in a hospital for a long time; absence of reanimation department for children with common forms of tuberculosis and meningitis; a sharp growth of drug-resistant forms of TB; the lack of a regulatory framework in order to prepare children dosage forms (powders) at the outpatient stage of treatment; and high incidence of HIV and TB among the population.

Conclusion:

All the patients with TB successfully recovered after completing the appropriate course of active phase treatment (Fig1. and Fig.2), and were consequently dismissed from the hospital to continue the second phase of treatment at home. Screening programs with focus on diagnostics of TB and HIV-TB co-infection in pediatric cases should be developed and funded in Odessa region.

Fig.3: MDR TB 2016

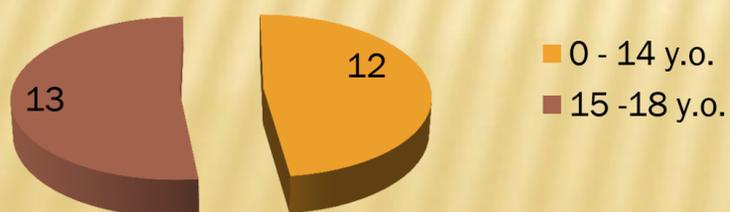


Fig4.: MDR TB 2017



Fig5.: Total number of children with TB disease/year