CURRENT EPIDEMIOLOGICAL ASPECTS OF TUBERCULOSIS AND THE IMPACT OF THE DOTS STRATEGY IN DISEASE CONTROL

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This article aims to present the current situation of tuberculosis and how the DOTS (Directly Observed Treatment Short Course) strategy has impacted national tuberculosis control programs worldwide, in Latin America and in Brazil. Data reveal a tendency towards a slow decline in disease rates (1%) around the world in 2003. In Brazil, data indicate a constant downward tendency of approximately 3% a year in incidence levels. The DOTS strategy has been recommended to all countries. Brazil needs to improve its tuberculosis surveillance efforts, particularly in terms of confirming negative sputum smear results at the end of treatment.

DESCRIPTORS: tuberculosis, epidemiology; nursing

ASPECTOS EPIDEMIOLÓGICOS ACTUALES DE LA TUBERCULOSIS Y EL IMPACTO DE LA ESTRATEGIA DOTS EN EL CONTROL DE LA ENFERMEDAD

La finalidad de este artículo es dibujar la situación actual de la tuberculosis y el impacto de la estrategia DOTS (Directly Observed Treatment Short Course) en los Programas Nacionales de Control de la enfermedad en el mundo, en América Latina y en Brasil. Los datos evidencian una tendencia a la caída lenta de la enfermedad en el mundo (1%) en 2003. En Brasil, los datos indican una tendencia descendente constante en la incidencia, con caída aproximada de unos 3% al año. La estrategia DOTS ha sida recomendada a todos los países. El Brasil necesita mejorar la vigilancia de la enfermedad, principalmente con relación a la confirmación de la conversión de la baciloscopia al término del tratamiento.

DESCRIPTORES: tuberculosis, epidemiología; enfermería

ASPECTOS EPIDEMIOLÓGICOS ATUAIS DA TUBERCULOSE E O IMPACTO DA ESTRATÉGIA DOTS NO CONTROLE DA DOENÇA

O artigo tem por objetivo apresentar a situação atual da tuberculose e o impacto da estratégia DOTS (Directly Observed Treatment Short Course) nos Programas Nacionais de Controle da doença no mundo, na América Latina e no Brasil. Os dados evidenciam tendência de declínio lento da doença no mundo (1%), em 2003. No Brasil, os dados indicam tendência descendente constante na incidência, com queda aproximada de 3% ao ano. A estratégia DOTS tem sido recomendada a todos os países. O Brasil necessita melhorar a vigilância da doença, principalmente em relação à confirmação da conversão da baciloscopia ao término do tratamento.

DESCRITORES: tuberculose, epidemiologia; enfermagem

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INTRODUCTION

Tuberculosis (TB) remains an international sanitary concern [1-2] mainly due to factors such as: the carelessness of governments about disease control; badly administered tuberculosis control programs (TCP); poverty; population growth and migration; and the significant increase in cases in regions with a high prevalence of Human Immunodeficiency Virus (HIV)[2-3]. With the aim of improving conditions related to TB control, the 44th World Health Assembly (1991)[4] presented and recommended the DOTS Strategy (Directly Observed Treatment Short Course) to all countries. The DOTS Strategy consists of five pillars, considered essential to disease control: administrative commitment; identification of cases through sputum exams; standardized treatment schemes and supervised treatments (ST); a regular and continuous supply of standard medications; and the system of case register and report [2, 5]. In view of the threat posed by TB on global societies, it is important to seek and disseminate up-to-date information about its epidemiologic situation in the world, Latin America, and Brazil, as well as about the impact of the DOTS strategy on disease control.

CURRENT TUBERCULOSIS SITUATION

Information from the WHO, based on surveillance data and forms sent in by various countries, provided the basis for the following statistic: in 2003 8.8 million new TB cases (40/100,000 inhabitants) should have been reported, of which 3.9 million (62/100,000) would be smear-positive cases and 674,000 (11/100,000) infected with HIV. It was estimated that 1.7 million people (28/100,000) would die of TB in 2003, including HIV co-infection cases[6]. However, among the 199 countries that sent reports to the WHO, only 4.4 million TB cases were reported, of which 1.9 million (44%) were smear-positive cases. This indicates a possible underreporting of approximately 50%. For the 22 HBCs (high burden countries), there were 3,382,474 new cases reported in 2003. In this group, India ranked 1st place with 1,073,065 cases, Brazil came in 15th place with 80,204, and Cambodia in last with 28,216 cases. If countries were to be ranked by incidence rate, Zimbabwe, which ranks 19th according to the total number, would be in 1st place with 418/100,000 inhabitants, and Brazil would move to 22nd, with 44/100,000 inhabitants[6-7].

The region of the Americas is responsible for 4% of TB reports at the global level, with 227,551 reported TB cases for all TB forms at a rate of 26.0/100,000 inhabitants[6]. The same document shows that in Brazil 83,575 new cases were reported in 2003 with an incidence of 47.3/100,000 inhabitants, ranging from 18.7/100,000 in Tocantins and 79.6/100,000 in Rio de Janeiro[6]. There were 5,159 TB deaths in 2003, and the mortality rate was 3.0/100,000 inhabitants[6,8-9].

EPIDEMIOLOGIC TENDENCIES OF TUBERCULOSIS

The 9th WHO Report[6] showed that the TB incidence rate in 2003 had decreased or remained stable in five of the six WHO regions. However, there was a global increase at a rate of 1% per year, except in Africa where the incidence has risen rapidly due to higher prevalence of HIV infection. In Latin America rates of TB showed a relative decrease between 1999 and 2002. Currently there are only three countries with a rate above 85/100,000 inhabitants[8]. In Brazil the latest data show a continuous downward tendency of TB incidence, falling at approximately 3% per year for all smear-positive cases specifically, as well as all TB cases in general[10].

THE IMPACT OF THE DOTS STRATEGY ON PROGRAM RESULTS

Eighty-two countries implemented the DOTS strategy in 2003. At the end of that year, 77% of the world population lived in countries covered by the DOTS strategy. The world-wide program using DOTS reported 3.7 million of all TB cases, of which 1.8 million were new smear-positive cases, which represents a detection rate of 45%[6-8].

In the region of the Americas, 78% of the population is covered by the DOTS strategy. With 142,409 new TB cases, this represents a rate of 16/100,000 inhabitants[7-9].

In Brazil, in 2002, only 35% of the population had access to the DOTS strategy. However, in 2003 there was a 34% increase in coverage. Case detection rate increased by 18%. This meant a detection rate of 55% in the areas with DOTS coverage. The rate of

treatment success using DOTS in 2002 was 75%, with 18% of patient default or transfer. A high percentage (29%) of patients finished treatment with no evidence of conversion in their sputum exams[6-9].

FINAL CONSIDERATIONS

TB numbers in the world, and specifically in Brazil, are a matter of concern. Efforts have been made to improve the situation, and the DOTS strategy is a feasible and efficacious alternative to reaching goals set by the WHO[11]. Brazil has made a special effort to include the DOTS strategy in its 315 priority cities. Nonetheless, efforts must be channeled into making Brazil's routine disease surveillance system the major instrument for monitoring tendencies of TB cases and deaths, and to evaluate the future impact of control measures[12]. In addition, special attention must be given to the confirmation of sputum conversion at the end of treatment, which is a crucial action in preventing multidrug resistance[6,9].

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