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ORIGINAL ARTICLE

RECOMMENDATIONS AND EFFECTIVENESS OF CHEMOPROPHYLAXIS OF LATENT INFECTION BY MYCOBACTERIUM TUBERCULOSIS

RECOMENDAÇÕES E EFETIVIDADE DA QUIMIOPROFILAXIA DA INFECÇÃO LATENTE PELO MYCOBACTERIUM TUBERCULOSIS

RECOMENDACIONES Y LA EFICACIA DE LA QUIMIOPROFILAXIS DE LA INFECCIÓN LATENTE POR MYCOBACTERIUM TUBERCULOSIS

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ABSTRACT

Objective: identifying the recommendation and the effectiveness of the treatment of Latent Infection by Mycobacterium tuberculosis (LTBI) according to national and international studies. ***Method:*** a descriptive, exploratory study of a quantitative approach with predetermined stages, with searches in LILACS, MEDLINE and IBECS. ***Results:*** chemoprophylaxis is recommended in Brazil and other countries; however, in some countries, its achievement is not limited to the restricted use of isoniazid, as in Brazil, but isolated rifampin, or associating them with and in shorter treatment duration, usually three months. ***Conclusion:*** given so many favorable results to the use of anti-tuberculosis chemoprophylaxis does not justify the non-implementation of this therapy from the part of professionals tuberculosis service workers in Brazil, considering that there has been little reporting or record about this therapy in Brazilian Health Units. ***Descriptors:*** Primary Health Care; Chemoprophylaxis; Latent Tuberculosis.

RESUMO

Objetivo: identificar a recomendação e a efetividade do tratamento da Infecção Latente pelo Mycobacterium tuberculosis (ILTB) conforme estudos nacionais e internacionais. ***Método:*** estudo descritivo, exploratório com abordagem quantitativa, com etapas pré-determinadas, com buscas na LILACS, MEDLINE e IBECS. ***Resultados:*** a quimioprofilaxia é recomendada no Brasil e em outros países, contudo, em alguns países, sua realização não se limita ao uso restrito da isoniazida, como no Brasil, mas sim da rifampicina isolada, ou associando-as, e em menor tempo de duração de tratamento, geralmente três meses. ***Conclusão:*** diante de tantos resultados favoráveis ao uso da quimioprofilaxia antituberculose, não se justifica a não implementação desta terapêutica por parte dos profissionais trabalhadores de serviços de tuberculose no Brasil, tendo em vista que pouco se tem de relato ou de registro acerca desta terapêutica nas Unidades de Saúde brasileiras. ***Descritores:*** Atenção Primária à Saúde; Quimioprofilaxia; Tuberculose Latente.

RESUMEN

Objetivo: identificar la recomendación y la eficacia del tratamiento de la Infección Latente por el Mycobacterium tuberculosis (ITL) como estudios nacionales e internacionales. ***Método:*** este es un estudio descriptivo, exploratorio con enfoque cuantitativo con medidas predeterminadas, con búsquedas en LILACS, MEDLINE y IBECS. ***Resultados:*** la quimioprofilaxis se recomienda en Brasil y otros países, sin embargo, en algunos países, su logro no se limita al uso restringido de la isoniazida, como en Brasil, pero aislada rifampicina, o asociarse con, y más corto la duración del tratamiento, por lo general tres meses. ***Conclusión:*** en frente de tantos resultados favorables al uso de la quimioprofilaxis contra la tuberculosis no se justifica la no aplicación de esta terapia de la parte de los profesionales trabajadores de los servicios de la tuberculosis en Brasil, teniendo en cuenta que ha habido pocos informes o registro acerca de esta terapia en las Unidades de Salud de Brasil. ***Descriptores:*** Atención Primaria de Salud; Quimioprofilaxis; Tuberculosis Latente.

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INTRODUCTION

Tuberculosis (TB) is a contagious infectious disease caused by the Mycobacterium tuberculosis, which mainly affects the lungs but can also affect other organs of the body such as bones, kidneys and meninges. Although it is known for centuries, yet it meets the prioritization criteria of a complaint in public health, which are of great magnitude, transcendence and vulnerability.[1] Though in the last two decades, the number of TB incidents in Brazil has been falling slowly but steadily, from 51,4 cases per 100.000 person-years in 1990 to 38,2 cases per 100.000 person-years in 2007, as well as mortality, 3,6 deaths per 100.000 person-years spent to 1,4 deaths per 100.000 person-years, it is still worrying, because in the country there are large regional differences in the incidence and mortality from the disease in Brazil. [2-4]

Although there are technological resources and measures for the prevention and control of TB, innovative and effective strategies such as DOTS, English Directly Observed Treatment Short-course (DOTS), funding and political involvement in this area are precarious, with no further prospect of getting in the close future, its elimination as a public health problem unless new vaccines or medicines are developed. The Directly Observed Treatment (DOT) for TB is one of the main points of the DOTS strategy to strengthen accession to and preventing drug resistance, and consequently achieve the goal of reducing the abandonment of treatment (less than 5%) and increased the incidence of healing (85% of patients).[1]

Considering that the prevention of acquired drug resistance depends on the rapid identification of cases and effective care, the standard treatment and the provision of free medicines to patients is essential to prevent the development of this resistance. In Brazil, multidrug resistance (MDR) appears to be strongly associated with retreatment, probably due to the irregularity or the abandonment of treatment by patients.[6]

Of all people with TB in Brazil, it is estimated that 6,0% are infected with strains resistant to isoniazid (H) and 1,4% are infected with strains resistant to both isoniazid as rifampicin (R).[5-7]

The Latent Infection with Mycobacterium tuberculosis (LTBI) occurs later in the primary infection and prior to the beginning of the disease (active TB) in an infected individual and PPD + (Purified Protein Derivative) after rule out active disease. Treatment of LTBI with isoniazid (H) at a dose of 5mg/kg to 10mg/kg body weight up to a maximum dose of 300mg/day for a minimum of six (6) months reduces by 60% to 90% the risk of illness, which varies according to the level of adherence to treatment. To be more relevant, the number of doses taken from the time of treatment, there is also evidence that the use of nine months protects more than the use of six months. However, it is important to emphasize that TB active disease should be removed accurately before starting the treatment of LTBI. The greatest risk of illness occurs in children, adolescents and people newly infected with depressed cellular immunity.

Therefore, in an attempt to prevent the illness, prevention of LTBI with H in newborns (primary chemoprophylaxis) and treatment of LTBI in children, adolescents and adults (secondary prophylaxis) cohabitants case bacillus index is recommended in Brazil. The criteria for therapy are well defined, varying according to the age and comorbid conditions that increase the risk of development of active TB (i.e., HIV infection, diabetes, corticoids, etc.). Nevertheless, it is still not possible to make an assessment of the extent to which this recommendation is being implemented and on its impact on TB control, the completion rates of treatment and the occurrence of adverse events, as it was implemented only in 2009, in Brazil.[8]

The fight against TB is entered as one of the Millennium Development Goals (MDG 6), along with HIV/AIDS, malaria and other diseases. The results have already been achieved: HIV prevalence remains low (<0,5%) since 2000; eradicating almost completely of vaccine-preventable diseases (polio, measles, diphtheria), diarrhea and Chagas disease; partial success in controlling malaria, hepatitis A and B, tuberculosis and schistosomiasis; failure to control dengue and visceral leishmaniasis (data taken from the United Nations Development Programme (UNDP) Brazil, World Bank).[9]

Because there are few Brazilian studies on the subject, he felt the need to seek in foreign literature subsidy necessary to synthesize the knowledge and experiences that have to date on the treatment of LTBI in order to apply the results in practice. Given the above, this article aimed to identify the recommendation and the effectiveness of treatment of latent infection by Mycobacterium tuberculosis according to national and international studies.

METHOD

This is a descriptive, exploratory study of a quantitative approach with predetermined stages. Defined the choice of subject, the main question of the research related to the effectiveness of chemoprophylaxis for TB, the objectives, Controlled Headings (MeSH) Health Sciences, inclusion and exclusion criteria, identification of pre-selected studies and selected, categorization of the selected studies, analysis and interpretation of results and last presentation of the synthesis of knowledge review. So if asked: the anti-tuberculosis chemoprophylaxis is being recommended and effective in preventing TB?

The search was initiated in November 2012 in the Virtual Health Library (VHL) contemplating the databases of the Latin American Caribbean Health Sciences (LILACS), Index Medicus Electronic National Library of Medicine (MEDLINE) and the Spanish Bibliographic Index of Health Sciences (IBECS). To this end, the DeCS used and the combination of these were: tuberculosis and chemoprophylaxis, latent TB and chemoprophylaxis; and latent tuberculosis and primary health care at all levels, by subject and title.

As inclusion criteria there were defined: summarizes only articles in Portuguese, English and Spanish, available for free in these databases without predetermined dates, given the scarcity of publications that address the issue, as well as to establish a base comparative effectiveness of chemoprophylaxis before the adoption of the new guidelines. They were excluded from the investigative process monographs, dissertations and theses; unconventional material, conferences, classes or conferences, open educational resources, project documents; and resumes that did not address or do not mention the chemoprophylaxis for TB, proposed theme.

The searches were conducted by the authors and the pre-selection of summaries found a collective analysis was carried out by the same of all the summaries available for categorization of studies. Subsequently, tables were created in order to organize the articles obtained at each base and duplicate publications were eliminated one of them because it was observed that the articles found in the search by subject, had already been contemplated in the search for all indexes, as well as some items were repeated when the descriptors have been modified.

Descriptors	Completos	Resumos	Total
Tuberculosis and chemoprophylaxis	18	96	114
Latent Tuberculosis and chemoprophylaxis	04	04	08
Latent Tuberculosis and Primary Health Care	02	04	06
TOTAL	24	104	128

Figure 1. Relationship of the descriptors used for the search in the VHL and the full result of the search for complete articles and available only in brief in the referred databases.

After the pre-selection of items through the floating reading of the abstracts, a second analysis was honored. At this point, close reading of the pre-selected publications was performed aiming to decide the inclusion and exclusion of productions cataloged according to established criteria. At this stage, the work was done by two pairs of independent reviewers.

Thus, the analysis matrix was used to evaluate the abstracts to be included, because it is a specific instrument for concatenation of the data, which included article title, author, country, year, journal name, objectives, methodology, interventions, target audience and considerations on the effectiveness and recommendation of chemoprophylaxis for TB.

For the processing of the results, the following steps were taken: identification of abstracts to answer the main question, number of abstracts related to the issue by year of publication, type of methodology used and the interventions described in the study. Quantitative analysis consists in frequency percentage determinations and the results compiled from analysis array.

RESULTS

Following the defined strategies, the search resulted in 128 (one hundred twenty-eight) article summaries. There were found and evaluated 35 (thirty five) summaries in LILACS, 80 (eighty) in MEDLINE and 13 (thirteen) in IBECS. These publications, we selected eight (08) Abstracts in Latin American base, 21 (twenty one) abstracts in MEDLINE and 07 (seven) productions in IBECS after the defined inclusion and exclusion criteria, as shown in Table 02. First analysis found that 92 (ninety two) publications were not related specifically to the guiding question or did not meet the inclusion criteria proposed leaving therefore 36 (thirty six) summaries, which were definitely considered for the study.

It was decided to deepen the analysis of publications involving the recommendation

and effectiveness of chemoprophylaxis for TB, since this is the largest study of its focus, with 33 (thirty-three) abstracts recommending and reporting the effectiveness of anti-TB chemoprevention.

Publications / Database	Evaluated publications	Selected publications
LILACS	35	08
MEDLINE	80	21
IBECS	13	07
TOTAL	128	36

Figure 2. Quantitative analysis of the publications (abstracts) evaluated and selected according to the databases and inclusion and exclusion criteria.

It can be seen that 77,8% (n = 28) of the resumes are from international bases, which shows a much smaller percentage compared to Latin American summaries, ie, 22,2% (n = 08). Considering the distribution of productions, according to the year of publication in these bases, 17 (seventeen) of them from 2009 (year of implementation of treatment for ITBI in Brazil) and 19 (nineteen) remaining prior to 2009. Therefore five publications were from the year 2012, five relating to 2011, six relating to 2010 and only one in 2009 four publications in 2007, one in 2005, two in 2004, two in 2002, three in 2000, two in 1998 and 1997, and three each in 1996.

As publication period it appears that there is present in the theoretical framework found, given, 58,3% (n = 21) were published in 2007-2012.

Type of study	Quantidade
Non specified	15
Controled clinical tests	09
Literature reviews	04
Incidence studies	03
Case studies	03
Prevalence studies	01
Case control	01
TOTAL	36

Figure 3. Distribution of articles regarding the classification of the type of study, according to database.

As shown in Table 03, there was not observed a number (n = 04) significant for the kind review productions, occurring examples of all sorts, and the others (n = 32) presented several methods in various areas, mainly in the medical professional field. Of these, fifteen (15) were classified by the database as not specified, 09 (nine) as controlled clinical trials, 03 (three) as incidence studies, 03 (three) as case reports, 01 (one) as study prevalence and only one (01) as a case control.

Public target of the study	N	%
Young population (children and adolescents)	09	25
Association TB/HIV	07	19,4
General population (without specifications)	05	13,8
Association TB/ Rheumatoid or psoriatic arthritis	04	11,1
Contacts of TB cases	03	8,3
Health professionals	02	5,6
Inmates	02	5,6
Association TB/DM	01	2,8
Indigenous	01	2,8
University students	01	2,8
Immigrants	01	2,8
TOTAL	36	100

Figure 4. Distribution of articles regarding the population addressed in the studies.

Regarding the study participants, 25% (n = 09) of the publications addressed the younger population, with special attention to children and adolescents. A number of 19,4% (n = 07) publications associating HIV with the importance of carrying TB chemoprevention was shown. 8,3% (n = 03) of the work contacts of TB cases are portrayed. 5,6% (n = 02) of the summaries was discussed the realization of chemoprophylaxis for health professionals. Studies reporting association of arthritis, or rheumatoid (RA) or psoriatic (AP) with the completion of anti-TB chemoprophylaxis were also found among the sample resumes, with representation of 11,1% (n = 04), 8,3% (n = 03) RA and only 2,8% (n = 01) AP. As we were also found 5,6% (n = 02) studies referring to the prison population. And represented by 2,8% (n = 01) of publications each: it is suggested to prevent the development of pulmonary TB among people with diabetes mellitus; indigenous peoples; immigrants; university students. The other articles, 13,8% (n = 05) depict the general population without specifications.

Authors	Recommendations
1) Jave; Llanos-Tejada (2010) 2)David; Santat'anna; MarqueS (2000)	What measures are needed to extend the use of chemoprophylaxis for risk groups (diabetes, kidney disease, pneumoconiosis, newly infected people health professionals, users of corticosteroids and immunomodulators, transplanted, among others) that don't make use of chemoprophylaxis or in some countries, with usage restricted to this therapy.
1) Casado et al., (2002) 2) Kufa et al. (2012) 3) Alaei; Alaei; Mansouri (2002)	Safe is the realization of chemoprophylaxis in people with HIV, after verifying that only the persistence of risk factors for exposure to TB is statistically associated with the development of the disease, suggesting reinfection as the main cause of TB after prophylaxis with H, being recommended even after the beginning of anti retroviral therapy (ARVT).
1) López; Compain; Sarabia (2011) 2) Xie; Wen; Yin (2009)	It is considered extremely necessary for preventive health measures are taken to avoid chronic infections as latent TB during treatment with biological agents, and is considered safe and effective chemoprophylaxis.
1)Teruel; Castilla; Hueto (2007)	Approximately half of all active TB cases that are diagnosed have already had contact with TB bacillus patients or so that already has a high personal predisposition to develop the disease. Chemoprophylaxis is one of the keys to progress in the prevention and control of TB along with getting an early diagnosis and effective treatment of patients.
1)Nettleman; Geerdes; Roy (1997)	The proof is should be cost effective and must be an integral part of any TB control program, which along with the prophylactic isoniazid (when indicated) can more than triple the benefit of prevention.
1)Rodriguez; Palácio (2012)	The chemoprophylaxis with H isolated, for 6-9 months, is considered the scheme more studied and most effective in the fight against TB illness so far.
Pericas Bosch (2011)	The risk of Hepatotoxicity to isoniazid, principally in the treatment of ILTB are rare, but increases with age, the presence of liver disease and alcohol consumption, so that the treatment of ILTB is narrowed (recommended strict monitoring) from 35 years old, except in cases of HIV, when the benefits outweigh the risks. Children do not need liver tests before or during treatment, unless it is known prior liver disease or the presence of signs of toxicity.

Figure 5. Considerations regarding the results brought by the completion of chemoprophylaxis and recommendations to be followed.

DISCUSSION

The young population, considering children and adolescents, receiving special attention in publications, which can be understood as an attempt to prevent and translated an extra concern for this age group, considering that the diagnosis and treatment in this population is more time consuming and it requires careful monitoring, respectively.[8-17]

As recommended for children, isoniazid 5 mg/kg/day to 300 mg/day, for a period of nine months, although therapy for six months conferred acceptable protection (69%) and facilitates compliance. Therefore, for children with risk factors (bacillus family, immunocompromised or recent reinfection) recommended a nine-month therapy, as in HIV-infected, a period of twelve (12) months. It is not profitable stretch therapy for more than twelve (12) months, except in PPD + children that make concomitant use of corticosteroids or immunosuppressants and treatment of latent infection (TIL) when the INR should remain until the end of the use of immunosuppressants. The TIL is not indicated in PPD + individuals who have been treated with TB drugs, even if the treatment has been inadequate or incomplete.[8]

The diagnosis in children is considered difficult to perform, but refers to the tuberculin test (PT) as an important tool in this diagnosis when associated with radiological and epidemiological examination. As well as international proposals recommend expansion of chemoprophylaxis indications,

that are necessary measures that expand its use for risk groups (diabetes, kidney disease, pneumoconiosis, professionals newly infected health, users of corticosteroids and immunomodulators, transplant, among others) in countries such as Peru, where its use is restricted.[1,11,16]

The burden of childhood TB reflects the level of control achieved in the adult population. Children rarely contribute to the transmission of the disease, but the disease is the direct result of ongoing transmission within the community, mean that the disease is active in the adult population, when the registration of children's cases.[15]

The TB-HIV association requires greater attention in relation to the realization of TB chemoprevention.[18-24] Only persistence of risk factors for exposure to TB is statistically associated with the development of the disease, suggesting reinfection as the primary cause of tuberculosis after the prophylaxis H.[25] Yet there have been reported preventive therapy recommendations in TB with H reducing TB occurrence associated HIV, even after the initiation of antiretroviral therapy (ART), whereas chemoprevention of TB as essential.[18,23]

Considering the association of arthritis with the completion of anti-TB chemoprophylaxis, patients with RA are at increased risk of infection compared to healthy subjects and increasing this risk may be associated with the underlying disease, comorbidities and immunosuppressive treatment of RA. It is considered very necessary that preventive health measures are taken to prevent latent chronic infections such as TB and hepatitis B during treatment with biological agents, considered being safe and effective conduct anti-TB chemoprophylaxis during therapy for these types of arthritis.[25-28]

Although it has been reported, but if single, isolated, the first episode of nephrotic syndrome induced by H after initiation of chemoprophylaxis and the development of drug-induced hepatitis after chemoprophylaxis with H, administered before treatment with an anti-TNF alpha agent, which also portrayed the risk of latent TB activation with anti-TNF alpha administration start and hepatotoxicity caused by the treatment of TB, reporting that chemoprophylaxis treatment should have a good follow-up, as it may cause unwanted effects.[26-27]

Considering the contacts of TB cases, half of diagnosed cases of active TB bacillus had contact with TB patients, or else already has a high personal predisposition to develop the disease.[29] The TB control program of Germany, 2005, has prevented deaths happen at younger ages, and, since that time, considered highly safe to reduce the burden of TB in newly converted young adults and middle-aged.[30] Preventive therapy H was already considered effective in Japan in 2000 with and without the basis of tuberculin skin test; however, the criteria for preventive therapy depended greatly on the probability of infecting new TB contacts.[31]

Regarding the realization of chemoprophylaxis among health care professionals, it is considered that the tuberculin skin test is cost-effective and should be part of any TB control program, which together with H prophylactic (when indicated) can more than triple the benefit of prevention.[32] In another study comparing the follow-up of chemoprophylaxis among health professionals and hospital officials in Atlanta, showed that the first group, 74% completed the prophylaxis while only 48% of the other group concluded the anti-TB prophylaxis.[33]

When considering the prison population, it is emphasized that the best scheme to be held in the prison system would be 3HR (3 months of isoniazid association (H) and rifampicin (R)).[25]

It is suggested that the prevention of the development of pulmonary TB in individuals with diabetes mellitus may be possible through chemoprophylaxis, considering tendency and relationship between the two diseases and an average of fifteen (15) years from diagnosis of diabetes to develop Active TB.[35]

In a survey conducted in an Indian village, six months after the introduction of chemoprophylaxis mass in the group considered most at risk of disease, no positive case was reported and there has been no episode of intolerance H, it was not possible to be controlled in the village itself. However, two residents in patients with active tuberculosis homes that were not in the village during the health action, therefore, were not submitted to chemoprophylaxis, returned after three months with positive sputum smear microscopy.[36]

The effect of a cultural intervention in adherence to treatment of ITBI in Latino immigrants was positive, with Group customers taken a significantly greater number of H doses than those who did not participate in the activity.[12]

It was also referred to the academic population, emphasizing that active TB and the potential for widespread disease exist on

college campuses and was recommended chemoprophylaxis for students at high risk of infection, from the result of PT.[37]

With respect to the general population, when studies showed no specifications, 38-42 detection and treatment of people with ITBI was considered to be one of the keys to progress in the prevention and control of TB, along with getting a diagnosis early and effective treatment of patients. However, chemoprophylaxis does not confer immunity to the patient, considering that there is likelihood of a new infection if the person has contact with a new source of the disease infecting.[29]

It was revealed that prior to 2009 chemoprophylaxis in Brazil was carried out differently, for the longest duration was (twelve months), and the criteria for carrying out the therapy in high-risk groups were different to current recommendations. That was a plus point and provided a comparative basis.[42]

Although the recommendations of the Ministry of Health were easy to follow in industrialized countries, the widespread use of chemoprophylaxis in developing countries continued to be problematic, because: it is not known what proportion of patients are more likely to be re-infected in late therapy in countries where TB is endemic; it is possible that resistant bacilli may be selected due to incomplete exclusion through chemoprophylaxis performed in patients with active TB at enrollment; It is difficult to identify asymptomatic carriers of M. tuberculosis at enrollment; it is doubtful that all patients comply with the treatment regimen that lasts several months; the cost of a large chemoprevention program, whose full benefit continues to be assessed, it may be difficult to justify.[24]

Regarding the types of treatment for ITBI was found chemoprophylaxis being held in other countries such as Spain and South Africa, not only with isoniazid (H), as recommended in Brazil, but also with rifampicin (R) alone, or a combination of both, and shorter duration of treatment. Study showed the effectiveness of both chemoprophylaxis, but smaller concerns reports of adverse effects in pools and when the treatment time is reduced from 06 (six) to 03 (three) months. Although the number of completions (better adhesion) is greater in the short-term therapies, the incidence of adverse events is the same for both therapeutic as well as tolerance and therapeutic safety. They considered the H during 6-9 months the most studied scheme and the most effective in combating illness by TB.[34,39,40]

The standard dose of 5 to 10 mg/kg/day has shown similar protection treatment periods six and twelve months. The risk of developing hepatitis was less than 1%, and recommended its use with monitoring in individuals over the age of 35 years old and users of alcohol 41.

On the other hand, countries such as Peru, chemoprophylaxis for TB is indicated only for contacts of TB cases from 20 years of age and/or infected with HIV; however, medical professionals have shown interest and concern for enlargement prophylaxis coverage for other risk groups in the country.[11,19]

It was possible to show 12,1% (n = 06) of articles, reporting the discontinuous anti-TB prophylaxis by some patients due to an adverse effect to drugs, such as gastrointestinal intolerance, changes transaminasis, decrease in white blood cells, or anaphylaxis skin rash.[27,28,33,38,43]

However, the adverse effects of hepatotoxicity with H, mainly in the treatment of ITBI are rare, 10-20% are asymptomatic elevations of transaminase and only 0.1% are clinical hepatitis. The risk of hepatotoxicity increases logically with age, presence of liver and alcohol intake disease, so that treatment of latent infection is narrowed (recommended closely monitored) from 35, except in the case of HIV, where the benefits outweigh the risks. Children do not need liver tests before or during treatment, unless known prior liver disease or the presence of signs of toxicity.[08,44]

The anti-TB chemoprophylaxis can bring many benefits in the short term, for people living on social vulnerability and high risk of developing the disease and could perhaps use and indications are magnified as a specific prevention strategy for these people living on imminent risk of illness.

CONCLUSION

Given so many favorable results in the use of anti-tuberculosis prophylaxis, it is not justified the non-implementation of this therapy from professionals of TB service workers in Brazil, considering that there has been little reporting or record in Brazilian Health Units.

In countries like South Africa and Spain, there are used or are recommended other types of anti-tuberculosis chemoprophylaxis, short course, not only with H and can include it or associate it with R and fractionate the doses, which also obtained regarding the

therapeutic success, reaching even better adherence than the six/nine months in duration. In Brazil these types of therapies are not used, considering that neither is then recommended; however, may likely prove to be tested in the near future.

In the studies previously carried out in 2009, we could see that there were no strict criteria for use and prescription of chemoprophylaxis, it was necessary only to be told of confirmed case of TB and strong reactor in the tuberculin test. Whereas, even after 2009, countries such as Peru, still do not recommend chemoprevention in some age groups.

We believe that chemoprophylaxis for TB can bring many benefits in the short term, for people living on social vulnerability (the homeless, prisoners, etc.) and high risk of developing the disease, given that there are few users who can meet the standards of prevention of Tuberculosis Program (PTB) in order to prevent the illness from the nearest sick people, communicating and co-inhabitants. On the other hand, interest in chemoprophylaxis for TB is especially aimed at children, people infected with HIV, diabetics and special groups of immunosuppressed, which is understandable, but perhaps should not be restricted but expanded as a prevention strategy specific for these people living on imminent risk of illness.

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