

RELAPSING TUBERCULOSIS IN BAGHDAD DURING 2001-2004+

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دراسة دقة ونوعية فحص القشع المباشر وفحص الاليزا في تشخيص التدرن الرئوي في محافظة النجف
الإشراف من ٢٠٠٤/١١/١١ الى ٢٠٠٥/١١/١١

Abstract:

The records of 1374 patients labeled as relapsing TB cases, out of a total 5662 records labeled as positive TB cases (new positive cases+relapsed cases), in Baghdad City during the period 2001-2004 (24.26%), were studied regarding the age groups, sex trends (numbers of patients through age groups and percentages) ratios (relapsed/total positive, relapsed/new positives and male/female). The study reveals that numbers of relapsing TB cases and percentages are increasing with time for both sexes. The highest figure (1078) and percentage (84.5%) are among age groups ranging from (15-45 years old) and male /female ratios are ranging two to three times along the years of study. Percentages of the relapsed cases to the total positive cases are increasing with years of study as (16.5%, 19.9%, 28.5% and 30.9%) respectively.

المخلص:

تمت دراسة ١٣٧٤ حالة تدرن رئوي مشخصة بانها حالات تدرن ناكس من مجموع ٥٦٦٢ حالة تدرن موجبة في بغداد للفترة من ٢٠٠١-٢٠٠٤. ومن خلال الدراسة تم تصنيفهم حسب الفئات العمرية، الجنس والوقت خلال سنين الدراسة. تبين الدراسة ان حالات التدرن الناكس في زيادة واضحة وذات دلالة في الفئات العمرية الواقعة ما بين ١٥-٤٥ سنة حيث هي الاعلى عدداً (١٠٧٨) ونسبة (٨٤%)، كما كانت نسبة الذكور الى الاناث من ٢-٣ مرات ونسبة عدد الحالات الناكسة الى مجموع الحالات الموجبة مع سنين الدراسة كالتالي وعلى التوالي، (١٦,٥%، ١٩,٩%، ٢٨,٥% و ٣٠,٩%).

Introduction:

Tuberculosis (TB) continues to be a devastating disease worldwide and is believed to be present in about one third of the world's population (1). Ninety- five percent of TB cases and 98% of TB deaths are in developing countries (2). Among major problems facing any TB control program especially in developing countries, are non-compliance, defaulters and relapsing cases (3). Factors that might lead to increasing numbers of relapsing TB cases; 1st shortage and /false

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interpretation of methods or tests results used to give a cure certificate for a TB patient. 2nd presence of another debilitating disease accompanied TB. 3rd health state of contacts of the cured patient. 4th no or unsupervised rehabilitation period provided. 5th life style of the patient and his habits and many other factors (4+5).

Aim of the study:

To spotlight on the trends of relapsing TB cases in Baghdad.

Epidemiology:

In Iraq pulmonary TB constitutes 80% of all cases of TB and being the most infectious type (5). Tuberculosis incidence in Iraq has increased from 90.8/100000 in 1980 to 133.4/100000 in year 2000(6). Iraq has an intermediate incidence of 110/100000 (7,8). number of TB cases has jumped in Iraq from 1637 in 1980 to 13123 in 2004, then restarted to increase again despite the figures reported annually (9,10). Non adherence to treatment, irregular delivery, shortage of drugs, absence or incomplete resistance tests, no or weak follow up program, are the main factors for the emergence of drug resistance, defaulters and relapsing TB (11). Non-compliance or defaulter patients in developing countries are quiet frequent as a consequence of drug delivery, treatment system, follow up programs, methods of diagnosis and treatment out comes judgment, health education etc(12).

Definitions : the following definitions are the WHO standard definitions (6,13).

Smear –positive patient:

Tuberculosis in a patient with at least two initial sputum smear examinations (direct), positive for acid fast bacilli, or TB in a patient with one sputum smear examination (AFB+) and radiographic abnormalities consistent with active pulmonary TB as determined by the treating medical officer, or TB in a patient with one sputum specimen(AFB+) and culture positive.

According to the presence or absence of history of taking anti-TB drug, these cases are classified into:-

- a- New patient(new positive patient).
- b- Retreatment patient and this includes (treatment failure cases and relapsed cases).

Relapsed TB case:

A patient who has been declared cured of any form of TB in the past by a physician, after one full course of chemotherapy, and has become sputum smear positive again.

Cured patient:

Sputum smear positive patient who completed treatment and had negative sputum smear results on at least two occasions during the continuation phase, one of which at completion of treatment.

Patients and Methods:

Records of 1374 TB patients diagnosed as relapsed TB patients(registered in Baghdad institute for chest and respiratory diseases), in Baghdad City during the period 2001-2004. Records were reviewed and studied through classification them according to age, sex and time trends.

Statistics used : statistical tables (age and sex groups with time),percentages of age group and sex with time, ratios Male/Female with time and test of significance between(male, female) numbers with time and patients numbers with time.

Results :

1-Age groups: The highest numbers of relapsed TB found were among age groups of(15-24), (25-34) and (35-44) years old, and are significant between sexes for those age groups along the years of study($P<0.05$), table one.

2- The numbers of relapsing TB patients is increasing with years of study and in both sex, and was significant between sexes ($P<0.05$) in each year of study, but the difference between years was not significant ($P>0.05$), and male/female ratios were almost twice or more during the years of study, table two.

3- Percentages of relapsing patients numbers to the numbers of newly smear positive patients are increasing with years of study, but the differences were not significant($P>0.05$), table three.

Table one: the numbers of relapsed TB during the years of study, classified according to age groups and sex.

year	0-4		5-14		15-24		25-34		35-44		45-54		55-64		60<		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
2001	0	0	0	3	30	13	50	20	40	9	25	7	9	5	6	4	215
2002	0	0	2	4	35	14	80	21	55	10	20	18	9	6	4	5	283
2003	0	0	5	5	45	15	110	21	78	19	55	16	24	10	5	10	418
2004	0	0	2	8	42	31	85	47	67	41	47	36	18	18	15	10	458
Total	0	0	9	20	152	73	325	109	340	79	147	77	60	39	30	29	1374

$P<0.05$

Year	Male	Female	Total	M/F ratio
2001	160	55	215	2.9

2002	205	78	283	2.6
2003	322	69	418	3.3
2004	267	191	458	1.4
Total	954	420	1374	2.3

Table two: showing the number of relapsed TB patients according to sex and male/female ratios during the year of study.

P<0.05

Table three: showing the percentages of the relapsed TB in the total positive patients (No. of the new smear positive+ the No. of the relapsed patients) in each year of the study.

Year	New positive TB	Relapsed TB	Total	Percentage of relapsed in the total
2001	1092	215	1303	16.5 %
2002	1125	281	1406	19.9%
2003	1047	418	1465	28.5%
2004	1028	460	1488	30.9%
Total	4292	1374	5662	24.3%

P>0.05

Discussion :

This study found that relapsing TB cases percentage is almost one third (30.9%) of the total positive and about the half of the new positive patients, more among males than among females and the highest numbers of patients are within the range of productive age groups(15-45) years. If those young and active age patients could stand commitment to treatment regimen until they had been declared cured patients, so what happened to them to have relapsing of the disease, and in such fright full increase, despite many years since the application of recent anti-TB program?

In a seriously killer disease like TB especially in endemic developing country like Iraq, missing of one open TB case is regarded a serious problem especially within the situation of the country now. The real figures denoting that TB is frightfully increasing so far (2). Defaulters, drug-resistant, treatment system, methods and tests used for diagnosis and out comes judgment, drug delivery , relapsing, society traditions and others are a well known obstacles that could interfere with achieving the goals of TB controlling programs. This study reveals that relapsing cases of TB, is increasing dramatically with time and in both sex especially among productive age groups. Relapsing state is a serious problem in regarding infectious process, financial(new treatment), new rehabilitation, work absence or frequent absenteeism, possibility of drug-resistance emergence and many others. So this problem needs a thorough follow up of the factors that might lead to it's incidence. Starting from the beginning , 1st step is when we declare that the TB patient is cured; since we completely rely on one test (direct sputum smear examination), which is well known it has a low sensitivity, so we have to think of those patients who cannot give sputum sample or give a false sample(saliva), especially at late stages of treatment(usually there

is no cough or unproductive cough), the skills of personnel and efficacy of equipments used. 2nd presence of a debilitating disease accompanied TB, like diabetes, chest and other steroid dependent diseases, personal habits like smoking, alcoholism and others. 3rd No or unsupervised rehabilitation. 4th Health state regarding TB of cured patient's contacts. 5th Lifestyle, standard of living, wedges and habits of the cured patient. I couldn't find a similar study concerning the relapsing TB cases alone.

Conclusions:

- 1- Despite of all measures taken through anti-TB program, yet TB is frightfully increasing in Iraq including the unexpected high numbers of relapsing TB cases.
- 2- The highest figures of relapsing TB are among young active age groups and much more among males than females.
- 3- There are many factors that could make a cured TB patient to be relapsed.

Recommendations:

- 1- Serious consideration of using direct smear examination alone as a diagnostic test and in final judgments for TB treatment outcomes.
- 2- Advanced laboratories and very well skilled personnel are urgently needed for all steps of diagnosis, drug-resistance, management monitoring and treatment outcomes decisions.
- 3- Continuous surveillance for drug delivery, frequency of direct observation on drug intake, compliance and follow up of cured TB patients with other debilitating diseases.
- 4- Advanced and thorough study of relapsing TB factors is necessary.

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