

Article

Prospective Study on Tuberculosis in Basrah During the Period from the First of January to the End of December 2018 with Respect to Risk Factor

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Abstract: Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis primarily affects lungs and causes Pulmonary TB. The incidence of TB in Basrah had been 58.1% from 136 cases in 2001. This study aim to demonstrate the incidence and risk factors of TB in Basra, Iraq regarding age, gender, family history, risk factors, types of TB and treatments results. The data were collected by examining patients in attending Basra TB control center referred from all primary health care centers, hospitals and private sectors during 2018. 772 patients were enrolled in this study. The male to female ratio was 2:1, the majority were in age group 18-25 years, 70% were having pulmonary TB and 30% had extrapulmonary TB. Smocking and DM were the main risk factors. The majority of cases were living in the city cener (30%). Treatment success rate was 85% for pulmonary TB and 92% for extrapulmonary cases. Positive family contact history was noted in only 25% of cases.

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1. Introduction

Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis primarily affects lungs and causes Pulmonary TB. It can also affect intestine, meninges, bones and joints, lymph glands, skin and other tissues of the body. [1]

Tuberculosis account for 2.5% of the global burden of diseases over the world [2]

Iraq is located eight in (EMRO) rank according to incidence in 2011. (4) there were an estimated 15000 incident cases of the all new and relapse cases of TB in Iraq. On other hand, the incidence of TB in Basrah had been 58.1% from 136 cases in 2001(5), 58.6% from 232 cases in 2004 [3], and 63.8% in 2007[4].

Reasons for the increasing incidence of pulmonary TB in developing countries include HIV particularly urban, population increase (75% predicated increase in India over 30 year), lack of access to health care, poverty civil unrest in effective control programs, drug resistance (MDR TB) [5].

Aim of study:

To demonstrate the incidence rate of TB in Basrah governorate during 2018 with respect to risk factors [6].

The study design :

This is prospective study including all tuberculosis patient send to Basrah TB control center from different health facilities (P.H.C and hospitals and privet sector).the period of study was from the first of January 2018 to end of December 2018

2. Materials and Methods

Source of Data:

772 TB case were examined at TB control center for each case the following were obtained directly from the patient:

Age. Sex, addressee, type and site of TB case, type of extra pulmonary TB. Family history of TB, risk factor (smoking, diabetes, malnutrition,. respiratory disease, heart disease, renal disease, immune deficient y disease blood dyscrasia, drug abuse, alcoholism, malignancy)

Then follow up : cure. Failure or relapse, defaulter, death. Transportation, other) and body weight, number of room in their house sand collected data were tuberculosis regarding e supplement by linear graph, bar diagram or pic diagram, calculation were made using poked calculation

3. Results

Two third of cases (around 61%) were male and the male to female ratio 2:1.the majority of tuberculosis cases were between 25- 35 year old (33%) followed by 18 -25 year old (18%) with only 6% of cases that occurred in patients less than 15 year old [7].

Pulmonary TB represent 70 % of cases, Extra pulmonary(30 %)

pulmonary TB case sorted according to sputum smear microscopic examination as follow:

1. Sputum positive smear (63%) = active pulmonary TB
2. Sputum negative 17% = Non active TB
3. Relapse pulmonary TB = (2.5%)
4. Failure pulmonary TB = (0.02%)

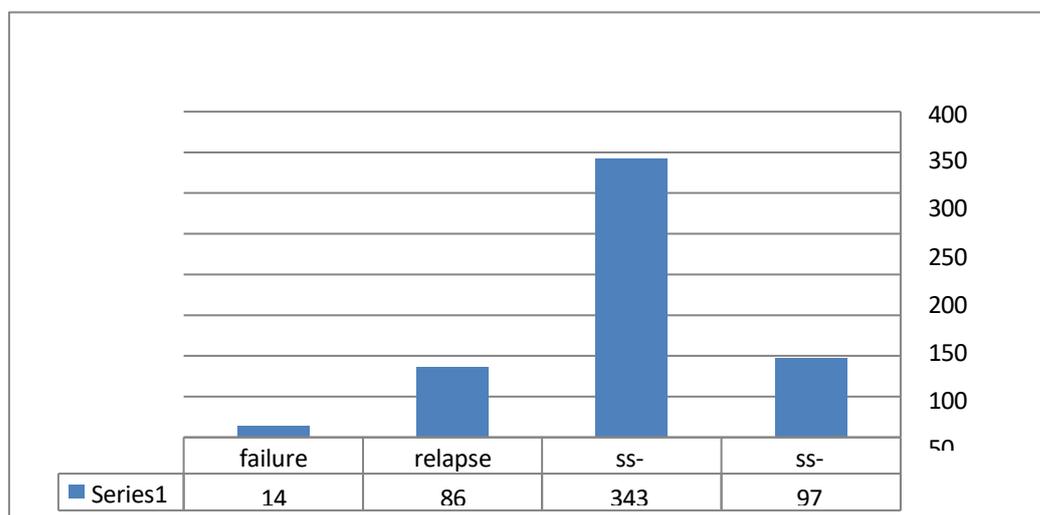


Figure 1. the distribution of pulmonary TB cases

While extra pulmonary include the following:

1. pleural effusion 93 (40%)
2. Lymph node 70 (30%)
3. skin and soft tissue 18 (7%)
4. vertebra and joint 17 (7%)
5. Peritoneum and intestine 14 (%)
6. Meningitis 7 (%)
7. Military 4
8. Precordium 2

- 9. Urinary 1
- 10. Larynx 1
- 11. skin 1

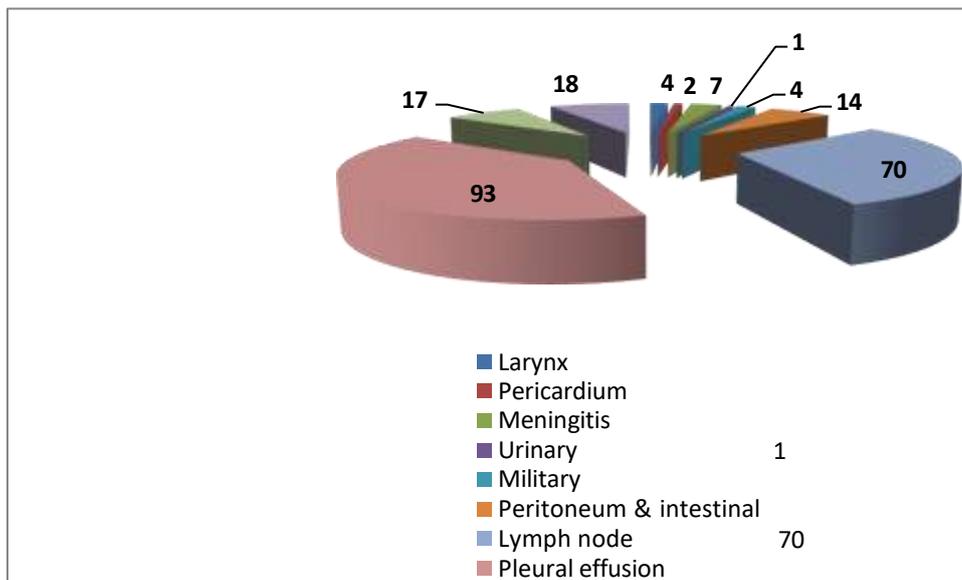


Figure 2. the distribution of extra pulmonary TB

Table 1. The results of treatment of TB case in Basrah during 2018:

cases	NO.	Cur ed	comp lete	Died	Fiuler	Interrup ted	transfe rred	Cure Rate	Succes s Rate
Active pul. tb	343	282	10	10	7	25	9	82%	85%
Relapse	86	48	17	3	6	10	2	55%	75%
Sucess pul. Tb	97	-	87	7	-	10	-		87%
Extra pul. tb	232	-	215	3	-	2	2		92%
Failure interrept ed	-12	2	7	-	1	2	-		-
Totale	772								

Table 2. Distribution of cases according to occupation:

Jobs	NO. of cases	
Free worker	301	39%
Hose wife	257	33.3%
Governmental work	96	12.4%
Retiment	53	6.86%
Student	39	5.05%
Child	26	3.36%
Total	772	100%

Smoking and diabetes were found the most risk factor to tuberculosis (32%) and 13%) respectively.

Table 3. Distribution of TB cases according to the risk factor

Risk factor	NO of cases	%
Smoking	250	32.64
Diabetic	101	13.08
Respiratory dis.	50	6.47
Heart Dis.	23	2.67
Drug abuse	16	2.7
Alcoholism	11	1.42
Malignancy	3	0.38
Malnutrition	3	0.38
Liver dis.	1	0.12
Pregnancy	5	0.64
None	307	39.76
total	772	100

Most of TB cases in patient weighted 50 kg and more (63.08%)while less than 50 kg was (36.91 %)

the Basrah city center was moistly affected by TB cases (43%) followed by AL – ZUBIER SECTER (18%) also Shatt Al -Arab 2%

Table 4. the distribution of TB cases according to different regions of Basra. Majority of TB cases have negative family history (75.25%) while the case have

Health of sector	NO of cases	%
1st health center city sectors	198	26.065
2nd health center city sectors	178	23.873
Medina	82	5.359
Qurna	59	11.449
Zubair	141	8.647
Shut-	22	3.045
Abu al-kassib	46	5.846
Out of bashra	46	5.846
Total of case	772	100

positive family history 24.74%)

Table 5. Distribution TB cases according to the contact history

contact history	No. of cases
Positive family history	191
negative family history	581
total	772

Not well education patient (69%) and married (64%) are the most demographic feature of tuberculosis patient.

4. Discussion

1. According to the prospective study the approximant annual incident rate of TB in Basrah during the 2018 was found to 31 per 100000 population [8], [9]. And this mean low detection rate, which must reach near 45 per 100000 according to WHO report (2).
2. the low incidence rate of TB in Basrah according to the present study may be due to many individuals treated in private health sector and consider as missing cases, and also inadequate diagnosis of TB due to inadequate health facilities at peripheral area and control out of Iraq therapy.
3. the majority of TB cases were in the age group 25 -35 year old (33%) followed by 15 – 25 year and 18 % this my indicted higher incidence among adolescent and young adult compared to other age group [10]. This similar findings to many developing countries (10)(11).
4. the distribution of TB patient by the location according to health sector showed that 43% were from Basrah center especially first government sector 23 %, followed by zubier health sector 18%, and least heath sector is shat
5. alarab 2%.the distance makes an important obstacle especially for woman (the accessibility to health facilities) [11], [12].

*weigh the patient more then 50 kg and this mean tuberculin less at low weigh patient below 50 kg which against the fact that TB more in malnutrition patient [13], [14].

*Positive family history (24.74%) leas the negative family history (75.25%) mean that TB speared in scotty not restart history [15].

5. Conclusion

the incidence rate of TB in Basrah was about 37.8 per 100000 during year 2018 with total population 2.490.322. The majority TB cases were occurred at young and adolescent male. most of those cases come from Basrah center followed by AL-Zuber sector. pulmonary tuberculosis cases still occurred more than extrapulmonary with Pleural effusion and lymph node were found the most the extrapulmonary TB cases. Smoking and diabetes were found the most risk factors to tuberculosis.

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