WHITHER TUBERCULOSIS

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Abstract: In the absence of data on TUBERCULOSIS in Pakistan all kinds of tall claims can be made by the optimists. The disease however remains rampent. On top of this is ever-rising multi-drug resistance which is of our own doing. Case notes of 253 patients (130 males and 123 Females) consecutively diagnosed as Tuberculosis (181 Pulmonary and 72 extra-pulmonary) during the period. (31.05.97 to 31.11.97) were examined to compare the data with the published work from the department in 1989 and 1995. 75.88% patient belonged to age between 16 to 55 years compared to 85.46% between 10-49 years in published data. Direct-smear positivity was at 10.49% compared to 12.6%. 77.33% of the patients presented with moderate to advanced lesions compared to 72.9% in the previous data. The percentage of new cases was 74.03% compared to 63.7%. Compliance at six, nine and twelve months had dropped to 28.85%, 18.97% and 18.97% compared to 58.02%, 43.37% and 39.96% respectively in data published in 1989. Cure rate however improved to 93.14%, in comparison to 81.28% in those who complied with treatment. Adequate management of an individual patient found actively or passively is an important factor in the control of tuberculosis. This factor seems to have worsened. Unless serious efforts are made to improve management of a diagnosed patient, dream of T.B. free Pakistan is far-fetched.

Introduction: WHO Estimates (1990-2005) for Z.N. +ve Pulmonary Tuberculosis for Pakistan suggests progressive rise from 250/100,000 cases in 1990 to 269/100,000 cases in 2005. The estimated cases for year 2000 are 262/100,000. The population of Punjab according to 1998 census is 72585430 with an annual growth rate of 2.55% compared to National growth rate of 2.61%. It is 55.6% of total population of Pakistan. The Male / Female ratio is 52 : 48. The rural population of Punjab is 69.7% the Urban being 31.3% The Estimated number of smear Positive Pulmonary Tuberculosis patients in Punjab at the moment should be 195023. The Government of Punjab health department's reported figures for 1997 for patients with symptoms suggestive of pulmonary Tuberculosis totals at 43824, out of which 4091 (8.8%) had their sputum examined by Microscopy, 25% (1019) of these were Z.N. +ve The estimated remainder (195023 – 1019) 194004 is the unknown pool of infection free to infect 10 – 15 healthy persons per head per year. (Table-1).

The Administrative set-up of Punjab is excellent on paper (Table-2). The services of qualified trained chest physicians are however limited only to 12 Districts covering urban population partially and leaving the rural population (70%) totally un-covered. There are 49 TB clinics (Government + Private), nine TB control centers and only 36 TB beds to cover a population of nearly 74 million (Table-3).

Out of four factors responsible for control of Tuberculosis i.e. case finding, adequate Chemotherapy, BCG and Chemoproplylaxis, Adequate Chemotherapy of diagnosed TB patient is the single most important factor. Management of a Tuberculous patient depends on many factors (Table-4), none of which are in practice in Punjab.

Despite the availability to microscope and laboratory technician at RHC level and a microscope under the custody of incharge Medical Officer at all BHU's, the tuberculosis report 1997 speaks loudly for our failure (Table1 and 5). The department of Chest Diseases at PMC Faisalabad, has maintained record of its patients since 1982/83 and takes pride in doing so in the absence of Government assistance or encour-

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agement. The department does so with the help of two matriculate ward servants. The compliance rate in the department in the eighties was 39% at Nine months. The purpose of the study conducted was to look for justification for our pride. The results however, made us feel otherwise. The compliance has fallen to 19.0%.

Material, Methods and Results: Case notes of 253 Tuberculous patients consecutively diagnosed between the period 31.05.97 to 31.11.97, in our out patients were examined to campare the data with our published data a decade earlier. The males were 51.38% compared to 53.63% showing an increase of 2.24% in female patients. The affected age pattern shows no change, the working age being still badly affected (75.88% between 16 – 55 years compared to 85.46% between 10 – 49 years in published data). The ratio of pulmonary Tuberculosis has increased by 5.88% (71.54% : 65.66% and so has the number of new cases registering an increase of 10.33%. (74.03% to 63.07%). Among the extra-pulmonary Tuberculosis; pleural effusion is commoner now (56.96%) compared to TB adenitis (48.07%) in previous observation. Direct smear positivity has fallen by 2.11% (10.49% : 12.60%), patients presenting with moderate to advanced radiological shadows show an increase of 4.39% (77.33% : 72.94%). Patients as well as doctor's compliance is alarmingly poor (Table 6 & 7). Cure rate of compliant patients, however, shows encouraging result in recent study (93.14% : 81.28%) and they are left with lesser post treatment complications comparatively (Table 8).

Conclusion and Discussion: Both the conclusion drawn from our study (Table – 9) as well as the data for 1997 from government of Punjab Health Department, demand lot of head scratching. The poor result in our – patients are simply because of the sub standard attention given to passively found patient. The department is neither equipped enough in the diagnostic tools nor it has the staff to follow up the patients even through letters in case of default. The supply of medication is erratic and so is the availability of x-ray films or laboratory tests. The patients in fact are not even extended the due courtesy what to speak of importance. The practice is perhaps true for all government centres. The published data of Health management information Systems is indicative of our health services apathy towards the Tuberculosis problem about to gain epidemic momentum in no time. The health services in Punjab have an excellent infrastructure for control of Tuberculosis with doctors and microscope available at union council livel, (BHU) Basic health unit covers one union council and a rural health centre, which is very well staffed (Table – 5), cover 4-5 union councils. If one of the doctors working at (RHC) is trained to diagnose and manage TB. Patients, RHC could act as a good primary centre. Out of the 3210 beds available at 60 THQS, 10% of the beds should be allocated to medical officer TB who should be appointed at each THQ level not only to manage complicated cases referred from RHCs but also to manage patients presenting to him directly. Patients belonging to villages however should be referred back to concerned RHC for follow up. The ones belonging to town itself should be treated and followed at THQS.

The 34 DHQ's should have the facility available to do sputum culture / sensitivity for A.F.B. besides an independent chest unit which should work hand in hand with district health officer to guide, supervise and counter check the work at THQs and RHC's. The departments at DHQ's should be properly staffed headed by a chest physion (NPS. 18) with 15% of total beds (15% of 5548) made available fot TB patients. The beds should be utilized to manage patients with special problems like Hypersensitivily to drugs, Habitual defaulters, MDR TB', patients with diabetes mellitus, Hodgkin disease, lymphomas etc and patients presenting with complications like milliary TB, TBM, pneumothorax, pleural effusion.

The department in teaching hospital should co-operate with director general health not only for running refresher courses for the doctors, but also teaching and training of para-medics working, with TB patients. The departments should be made responsible for planning and conducting local multi centre studies to help improve the services offered to the patients. It should have a well equipped reference laboratory. The out patients as well as inpatients should be the ones needing very specialized care referred from DHQ's.

The NGO's working in the areas with TB patients should be encouraged to help rehabilitate the patients to make them useful citizens of society. They should work to support the government plans under guidance of health services. It is indeed about time that the government implemented anti TB control programme and formulated rules to ban counter sale of Anti TB drugs.

We consider that suggestions discussed are in no way final. They could act as basis to discuss the matter in finer details to draw up a better plan to be implemented on priority basis if we really mean business as regards control of TB in Punjab / Pakistan.

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Table 1

Tuberculosis Report

	Description	FSD Division		Punjab
		1997	1998	1997
1	Reporting rate	39%	36%	49%
2	No of new cases with >2 wks cough & sputum	5445	12762	43824
3	Sputum smear examined	03	649	4091(8.8%)
4	Positive % age	03(100%)	84(12%)	1019(25%)
0	No practice of smear taking in Lahore, Multan, Sahiwal, Faisalabad and D. G. Khan Divisions.			
0	Gujranwala & Rawalpindi took sides of ¼ of toal .			
	HMIS – 1997 Report			

Table 2

Administrative Set-up Punjab

S #	Description	Numbers
1	Civil Division	08
2	Districts	34
3	Tehsils (5 THQs)	114
4	Corporations	08
5	Municipal Comm.	67
6	Town Committees	135
7	Cantonment Boards	18
8	Rural Development Marakiz	318
9	Union Councils	2397
10	Villages	25203
	Only 12 (NPS 18) Posts of District Chest Specialists. Annual Report 1997 HMIS.	

Table 3

Health Facilities With Bed Strength Punjab

S #	Facility	Government		Local Bodies		Private		Total	
		No.	Beds	No.	Beds	No.	Beds	No.	Beds
1	TEACHING HOSPITALS	15	10890	-	-	-	-	15	10895
2	DHQ'S	31	5548	-	-	-	-	31	5548
3	THQ'S	60	3210	-	-	-	-	60(5)	3210
4	OTHERS	59	3463	21	538	46	4813	126	8814
5	RHC'S	288	5445	-	-	-	-	288	5445
6	BHU'S	2400	3934	-	-	-	-	2400	3934
7	DISPENS	213	318	975	1608	39	24	1227	1950
8	TB. CLINICS	25	36	4	-	20	-	49	36
9	TB. CONTROL CENTERS	09	-	-	-	-	-	09	-
10	SHC'S	574	-	-	-	-	-	574	-
11	MCH. CENTERS	188	-	224	-	80	-	492	-
	TOTAL	3862	32844	1224	2146	185	4837	5271	39827
								HMIS – REPORT, 1997	

Table 4

Management of a Tuberculous Patient

1. Ensuring adequate chemotherapy
2. Counselling of the patient
3. Contact examination
4. Rehabilitation once cured or during treatment
5. Hospitalized treatment of complicated disease
6. Good compliance both by the doctor as well as patient.

Table 5

Staff Rural Health Center

SMO – One	LHV – One	Nursing Sisters – Four
MO – One	Hakim – One	MT / FT + CDC Supervisors
WMO – One	X – Ray Technician – One & Vaccinator	
Dental Surgeon	Dispensers –Four	Others – 20
(One)	Lab. Technician – One	
	Dental Technician – One	
		(HMIS – Report 1997)

Table 6

Compliance (Patients)

Duration	1997-98 (N: 253)	1982-85 (N:498)
03 Months	38.73% (98)	71.28% (355)
06 Months	28.85% (73)	58.02% (289)
09 Months	18.97% (48)	43.37% (216) 10/12
12 Months	18.97% (48)	39.96% (199)

Table 7

Result of Questionnaire On Tuberculosis

Correct % age	HP (82)	MO (60)	Cons (23)	Total (165)
0-50	60 (73.17%)	38 (63.33%)	10 (43.47%)	108 (65.45%)
51-70	18 (21.95%)	22 (36.66%)	12 (52.17%)	52 (31.51%)
71-90	4 (4.87%)	00.00%	1 (4.34%)	05 (3.03)
Pakistan Journal of Chest Medicine Vol. 4 No. 2, 1998				

Table 8

Post – Treatment Complications

Compilations	97-98 (73)	1982-85 (262)
Chronic Bronchitis	2.73% (2)	12.59% (33)
Bronchiectasis	6.84% (5)	7.25% (19)
Pulmonary Fibrosis	13.69% (10)	33.06% (84)
Haemoptysis	1.36% (1)	4.19% (11)

Table 9

Conclusions

1. Both sexes are almost equally vulnerable to disease with males maintaining slight edge over the females.
2. The disease affects predominantly the working majority of patients falling between ages 16-35/55.
3. Patients present for treatment late in the course of disease as evidenced by the extent of lung involvement.
4. Despite presence of advanced disease, the percentage of Z.N +ve smears is very low. This service needs tremendous improvement.
5. Poor compliance by the patients fairly early on is perhaps due to poor initial communication with the patient / or due to poor knowledge of doctor treating the disease, thus giving wrong information to the patients.