

COMMUNICABLE DISEASES

1.10 A Case Control study of opium addiction and recurrence of pulmonary tuberculosis.

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OBJECTIVES

1. To find out if Opium Addiction increases risk of default in DOTS.
2. To find out if Opium Addiction increases risk of recurrence of pulmonary tuberculosis.

PROGRESS

For Objective 1- One matched control was selected for each of ten interviewed cases of default. Thus one to one matching was carried out for age, sex, literacy and habit of alcohol consumption. These cases and controls were contacted and interviewed. Out of ten cases of default, four were opium addicts and out of their ten matched controls five were opium addicts, the Odds Ratio was 0.67 (95% CI =0.08 to 5.51) indicating no significant association between opium addiction and default in DOTS.

For Objective 2- Patients were selected from list of cases registered for DOTS in TB Register of TB Unit, Balesar of Jodhpur district, who completed treatment or were cured. TB registers from year 2007 to year 2011 were used for this purpose. Only those rural males with age group of 20 years or more were selected for whom TC (Treatment completed) or cured was recorded in TB Register. There were 1362 such cases for whom TC or cured was recorded. Their village-wise list was prepared and field work was started to visit villages and residences of these patients. Villages, namely Agolai, Shekhala, Setrawa, Ootamber, Khudiyala, Birai, Jhinhinyala, Bawarli, Jiya Beri, Ghudiyala, Belwa, Surani, Duggar, Bhayla, Tulesar Charna, Bhatelai Charna, Dooda Bera, Charani Bhandu, Jati Bhandu, Bastawa, Deriya and Meriya were visited. Two hundred ninetythree patients were followed in these villages, out of which 121 could be interviewed, 71 had died and 101 were not available at their residence at time of visit. Rapport was established with all 121 patients at their residences and they were interviewed after obtaining their written informed consent.

Out of 121 patients interviewed, those who gave history of development of recurrence of tuberculosis disease for which they were again registered for DOTS, were taken as cases (of recurrence) and those who did not develop recurrence since completion of their treatment, were taken as controls. Out of 21 patients, 66 were cases of recurrence and 55 did not develop recurrence (controls). One matched control was chosen for each case, thus one to one matching was carried out. Total 40 pairs of cases (of recurrence) and matched controls could be made for case-control analysis. Table 1 shows final case control analysis of all matched pairs of cases and controls. Only 12 (30.0%) of 40 cases of recurrence

gave history of opium addiction as compared to 19 (47.5%) of 40 matched controls of these cases. The Odds Ratio was 0.47 (95% CI =0.19 to 1.19).

Table 1. Distribution of matched cases and controls according to opium addiction

	Case of Recurrence	Matched Controls (no Recurrence)	TOTAL
Opium Addiction = YES	12 (30.0%)	19 (47.5%)	31
Opium Addiction = NO	28 (70.0%)	21 (52.5%)	49
TOTAL	40 (100.0%)	40 (100.0%)	80

Odds Ratio=0.47 (95% CI =0.19 to 1.19)

Table 2 shows distribution of all 121 patients interviewed, as per their occupational history. Out of 55 cases of recurrence, 44 (80.0%) gave history of working in stone quarries where they were exposed to inhalation of silica rich dust. Out of 66 unmatched controls of these cases, 60.6% gave history of working in stone quarries. The difference was statistically significant (p=0.035).

Table 2. Distribution of 121 patients (interviewed) according to occupational history

	Case of Recurrence	Unmatched Controls (no Recurrence)	TOTAL
Worked in Quarries = YES	44 (80.0%)	40 (60.6%)	84
Worked in Quarries = NO	11 (20.0%)	26 (39.4%)	37
TOTAL	55 (100.0%)	66 (100.0%)	121

*Yates corrected p=0.035

Table 3 shows distribution of all 121 patients interviewed, as per history of opium addiction. Out of 55 cases of recurrence, 18 (32.7%) gave history of opium addiction as compared to 40.9% of unmatched controls. The difference was not statistically significant (p=0.4).

Table 3: Distribution of patients interviewed according to opium addiction

	Case of Recurrence	Unmatched Controls (no Recurrence)	TOTAL
Opium Addiction = YES	18 (32.7%)	27 (40.9%)	45
Opium Addiction = NO	37 (67.3%)	38 (57.6%)	75
Quit Opium	0	1 (1.5%)	1
TOTAL	55 (100.0%)	66 (100.0%)	121

*p=0.4

Conclusion

The preliminary retrospective data collected in three months did not support the hypothesis that opium addiction increases risk of default in treatment of tuberculosis or it increases chances of development of recurrence of tuberculosis after cure or completion of treatment. The study was therefore not continued further.