

1.11 A Case Control study of opium addiction and recurrence of pulmonary tuberculosis -

Principal Investigator: *Dr. Murli Lal Mathur, Scientist 'F'*

Co-Investigator: *Dr. N. K. Choudhary, District Tuberculosis Officer, Jodhpur*

Commencement: March 1, 2013 **Duration:** 03 months **Status:** Completed

Funding: Desert Medicine Research Centre (Intramural)

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 OF WORK

Addresses and details of male patients who were registered for DOTS therapy under RNTCP at tuberculosis unit, Balesar from 2007 to 2011, were noted from TB Registers and entered in excel. These were then sorted for village of residence.

Home visits to residences of these patients were started. Those found at home were contacted. Rapport was established with them and their written informed consent was obtained for participation in the study. They were then interviewed. History of treatment and past history of treatment was elicited. Whether they completed the DOTS therapy of defaulted. Whether they again developed TB and were again registered for DOTS therapy. How many courses of DOTS therapy they have taken and after how much lapse of time? Their history of personal habits was elicited carefully. It included their smoking status. Leading questions were also asked if they had ever consumed crude opium, if yes, did they use it daily, if yes for how long? How many tolas (or grams) of opium they used per month. Total duration of regular use of opium in their life time was elicited. Leading questions were also asked if they forget to use opium on some day, does it lead to development of specific withdrawal symptoms. Leading questions were also asked if they had ever worked in stone quarries or construction sites, if yes for how many years. Data will be entered in excel and will be analyzed.

Study Part-I:

- To find out if opium addiction increases risk of default in DOTS

Selection of cases: Cases were selected from list of cases registered for DOTS who defaulted. Only those rural males with age group of 20 years or more were selected.

Selection of Controls: Controls were rural male cases who completed DOTS successfully in Jodhpur district in age group of 20 years or more.

Criteria for matching of cases and controls: Age, Sex, Literacy, Alcoholism.

So far seven patients who had defaulted have been interviewed. In addition, nine patients who had completed treatment have also been interviewed:

Out of seven patients who had defaulted, matched controls have been selected for four. These controls had completed the treatment. One to one matching was carried out between cases and controls. Cases and controls were matched for age, literacy and habit of alcohol use.

Table 1. Analysis of matched cases and controls

Opium addiction	Cases who defaulted	Controls who did not default and completed treatment	Total
Opium addiction present	2	2	4
Opium Addiction not observed	2	2	4
Total	4	4	8

Odds Ratio = $ad/bc = (2 \times 2) / (2 \times 2) = 1.0$

Study Part-II:

- To find out if opium addiction increases risk of recurrence of pulmonary tuberculosis

Selection of cases: Patients who were registered for DOTS between 2007 and 2011 were followed by home visits. Those who gave history of developing recurrence were again registered for DOTS therapy as cases of recurrence.

Selection of Controls: Controls were selected from list of cases cured or treatment completed in Jodhpur district obtained from records of DTC, Jodhpur and have not still developed recurrence.

Matching of cases and controls: Cases of relapse were matched with controls. One to one matching was carried out. Each case was matched with its control for following criteria:

1. Age
2. Sex
3. Category of treatment received

4. Time after completion of treatment
5. Smoking status and
6. Habit of Alcohol use
7. Occupational history of working in stone quarries or construction sites

Houses of patients registered for DOTS under RNTCP between 2007 and 2011, in area of TB unit Balesar (District Jodhpur) are being visited. Those available at home were contacted. Their written informed consent was taken. They were then interviewed.

So far residences of 129 patients have been visited out of which 29 had died, 42 were not available and 61 gave consent to be interviewed. So far 61 patients who had completed treatment have been interviewed. Striking observation is that 31 out of 61 have given history of recurrence and 30 told that they have not developed recurrence so far. Those who had developed recurrence were taken as cases and those who did not develop recurrence were taken as controls.

One to one matching between cases and controls was carried out. So far only 12 such pairs of matched case and control have been made. It will be possible to make more pairs when some more patients will be interviewed. Then case control analysis of matched cases and controls will be carried out and Odds Ratio will be calculated. The study is continuing.

Table 2. Analysis of matched cases and controls

Opium addiction	Cases (who developed recurrence)	Controls (who did not develop recurrence)	Total
Opium addiction (Yes)	4	4	8
Opium addiction (No)	8	8	16
Total	12	12	24

$$\text{Odds Ratio} = \text{ad/bc} = (4 \times 8)/(4 \times 8) = 1.0$$