



Original Article

Smear Positive Tuberculosis Cases in Rajshahi District A Comparison Between Rural and Urban Areas

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Abstract

This study was designed to know the case finding of sputum smear positive tuberculosis in Rajshahi district and also to see whether case finding was different in urban and rural settings. Our study reveals that case finding rate of smear positive tuberculosis cases in the city corporation area and rural areas of Rajshahi district are 52% and 28% respectively. Case detection rate of total Rajshahi district was 33%. Stronger efforts are needed to reach the national target of detecting 70% new smear positive TB cases by the end of 2005.

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Introduction

Tuberculosis (TB) is a major public health problem in Bangladesh. A recent analysis by the World Health Organization indicated that Bangladesh ranked fifth (after India, China, Indonesia and Nigeria) amongst the top 22 high burdened countries¹. In Bangladesh about 300,000 new cases of TB are estimated to occur annually with 70,000 deaths². Smear positive tuberculosis cases are responsible for spreading the disease in the community. This study was designed to know the case finding of sputum smear positive TB cases in Rajshahi district and also to see whether case finding was different in urban and rural settings.

Materials and methods

This study was carried out in the Chest Disease Hospital, Rajshahi, Chest Disease Clinic, Rajshahi, DOTS corner, Rajshahi Medical College

Hospital and nine Upazilla Health Complexes of Rajshahi district. Study period was from January 1999 to December 2003. Only the sputum smear positive cases were included in this study.

Results

Total 2398 smear positive cases were detected in nine Upazilla health complexes in the study period with an average of 480 cases per year. On the other hand in urban centers i.e. Chest Disease Hospital, Chest Disease Clinic and DOTS corner of RMCH a total of 1283 smear positive TB cases were recorded with an average of 257 cases per year.

Estimated smear positive TB cases in Bangladesh is 99 per 100,000³. Population of Rajshahi district is 22,58000 (17,58000 in the Upazillas and 500000 in the city corporation area). So estimated smear positive case in the district will be 2235 (1740 in the Upazillas and 496 in city area).

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Table 1: Case detected in nine Upazilla health complexes.

| Year | Smear positive cases |
|-----------------------|----------------------|
| 1999 | 487 |
| 2000 | 579 |
| 2001 | 610 |
| 2002 | 599 |
| 2003 | 523 |
| Total cases | 2398 |
| Average case per year | 480 |
| Case detection rate | 28% |

Table 2: Case detected in chest disease hospital, chest clinic, and DOTS corner, RMCH

| Year | Smear positive cases |
|-----------------------|----------------------|
| 1999 | 263 |
| 2000 | 258 |
| 2001 | 249 |
| 2002 | 246 |
| 2003 | 267 |
| Total cases | 1283 |
| Average case per year | 257 |
| Case detection rate | 52% |

Case detection rate of total Rajshahi district in the study period was 33%.

Discussion

Objective of national TB control program is to detect at least 70% of new smear positive cases by the end of 2005. Our study results point out that, Rajshahi is still far behind our national target. Case detection rate in city area was much better than the rural areas. The discrepancy might be explained by the fact that, in City Corporation area chest disease hospital, chest disease clinic and DOTS corner of Rajshahi Medical College Hospital are working side by side to diagnose and treat tuberculosis cases, whereas in the Upazillas, only Upazilla health complex and a few non-

governmental centers are fighting tuberculosis. Consciousness of city dwellers, easily available specialist service and good referral system might also be responsible for higher case finding rate in urban area. Low case detection in rural setting is thought to be partly caused by an insufficient number of appropriately equipped microscopy centers. One microscopy center per 100,000 populations is recommended in high-burden countries, but a 2004 WHO report indicates that in Bangladesh each Upazilla (sub-districts with a population of approximately 300,000) is served by only one microscopy Center³. This proportion is a third that recommended.

Conclusion

Awareness campaign directed to both the physicians and the general population is likely to improve the case finding rate. Physicians must have a high index of suspicion; every patient having cough for more than three weeks, fever, haemoptysis or weight loss should be advised to have their sputum checked for acid-fast bacillus. Population awareness program should be further strengthened by using mass media, leaflets, posters and other methods. Given that private practitioners and NGOs provide a significant portion of health services of Bangladesh, a good collaboration between government, NGO projects, and private practitioners remains paramount.

References

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