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Treatment outcomes of daily anti-tuberculosis treatment in HIV-infected patients seeking care at a private clinic in India

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SUMMARY

SETTING: Little is known about outcomes of patients co-infected with human immunodeficiency virus (HIV) and tuberculosis (TB) who are treated in the private sector in India.

OBJECTIVE: To describe the treatment outcomes of daily anti-tuberculosis treatment (ATT) and their determinants among HIV-TB co-infected patients treated at a private clinic in Pune, India.

DESIGN: Data on adult HIV-TB co-infected patients treated with daily ATT were analysed using logistic regression and Cox model to assess risk factors for default and death.

RESULTS: Of 769 cases, 78% were aged <45 years, 71% were males, 64% had CD4 < 200 cells/mm^3, 67% were antiretroviral treatment (ART) naïve at TB diagnosis, 53% had extra-pulmonary TB, and 12% had a past history of TB. ATT was successfully completed by 58.5%, 34.3% defaulted (i.e., discontinued ATT for >2 months) and 3.9% died during ATT. The risk of default was higher among males (aOR 1.67, 95%CI 1.17–2.39), ART-naïve patients (aOR 1.91, 95%CI 1.34–2.73) and those with a past history of TB (aOR 1.86, 95%CI 1.15–3.01). Survival probability at 365 days was 95% (95%CI 93–97). The risk of death was higher among patients with CD4 < 50 cells/mm^3 (aHR 4.63, 95%CI 1.47–14.65) than in those with CD4 > 200 cells/mm^3.

CONCLUSIONS: Low overall mortality was seen with daily ATT in HIV-TB co-infected patients. High default rates in private facilities warrant urgent attention.

KEY WORDS: HIV-TB co-infection; daily ATT; treatment outcomes; private health care sector

HUMAN IMMUNODEFICIENCY VIRUS (HIV) and tuberculosis (TB) are two major public health challenges being faced globally.[1] India, which has the third highest number of people living with HIV (PLHIV), also has a high TB burden. The World Health Organization (WHO) estimates that 2.1 million new TB cases occur annually in India,[2] 120 000 of whom are co-infected with HIV. The synergistic association can worsen the prognosis for both diseases.[3–5] Overall, TB is estimated to cause about 25% of all deaths among PLHIV in India. Death rates as high as 15–18% are reported among HIV-infected TB cases notified under the Revised National Tuberculosis Control Programme (RNTCP).[6]

A systematic review on anti-tuberculosis treatment (ATT) among PLHIV revealed that daily ATT during the intensive phase, compared to thrice-weekly regimens, was associated with lower failure and relapse rates.[7] A trend towards higher relapse rates was observed if rifampicin (RMP) containing regimens were used for 6 months vs. 8 months.[7] Compared to the standard RNTCP 6-month regimen, extended ATT for 9 months was observed to be superior in reducing recurrence.[8] Concurrent antiretroviral treatment (ART) and ATT was associated with lower mortality, relapse rates and acquired RMP resistance.[9–11] However, the effect of extended and/or daily ATT in the presence of ART remains unclear.[12]

The 2010 WHO guidelines recommend daily ATT for PLHIV with active TB, at least during the intensive phase, and the initiation of ART as soon as possible. According to the guidelines, some experts promote prolonged ATT under certain conditions.[13] Because of the paucity of national evidence and operational ease, the RNTCP in India uses intermittent (thrice-weekly) supervised ATT of 6 months' duration, i.e., DOTS, among PLHIV.[14] It has recently started piloting daily DOTS in HIV-TB co-infected patients. RNTCP data show higher mortality among PLHIV than in patients not infected by HIV. It also reports higher death (25%) and default (10%) rates among PLHIV who were not on ART at the time of ATT compared to those already on ART (14% and 3%, respectively).[15] Data on the effectiveness of daily DOTS among PLHIV are not available from RNTCP settings.

In India, more than 50% of patients with active TB attend private facilities for TB care.[16,17] Many private

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practitioners use unsupervised daily ATT.[18] Little is known about outcomes in patients treated with unsupervised daily ATT in the private sector, particularly among those with HIV-TB co-infection.

The present paper describes treatment outcomes with daily unsupervised ATT among HIV-TB co-infected patients accessing care through the private sector in India and factors influencing outcomes.

METHODS

Study setting

The study clinic, Prayas Amrita Clinic (Pune, India), run by a non-government organisation based in Pune, India, provides out-patient clinical care for PLHIV. Care is provided at low or no cost based on family income. All patients are informed about the availability of free ART and ATT in public sector facilities. HIV is diagnosed and managed according to national guidelines.[19] TB is diagnosed based on clinical examination and radiological or ultrasonography (USG) investigations. Further investigations, such as sputum, biopsy, fine-needle aspiration cytology and cerebrospinal fluid examination, are performed when required to establish a diagnosis. Daily ATT over an extended period of time is prescribed. The duration of ATT is individualised in a 3-month intensive phase, followed by a 9-month continuation phase; the decision to stop ATT is guided by symptom improvement and clearance of lesions on radiological and/or USG investigations. The data are maintained in paper and electronic format.

Study population and design

This is a retrospective analysis of HIV-infected adults enrolled at the study clinic from January 2004 to June 2013. De-identified electronic data were shared with the study investigators and the data were checked for inconsistencies. Queries were addressed by the clinician after referring to medical charts, and data in the electronic files were updated accordingly.

Inclusion criteria and definitions

All adult HIV-infected patients detected with active TB at any time during follow-up at the clinic were considered for analysis. The first TB episode after enrolment at the clinic for which daily ATT was initiated was assessed for short-term outcomes. The following outcome definitions were used: 1) treatment completed: ATT completed over the prescribed duration; 2) treatment default: the discontinuation of ATT for >2 months; the last date on which ATT was prescribed to the patient was considered the date of default;[13] 3) treatment failure: worsening of lesions and/or bacteriological evidence that required change of ATT regimen at/after 2 months of ATT; 4) death: death while receiving ATT; and 5) transferred out: transfer to another clinic while on treatment, usually to government TB clinics, due to financial constraints. The ATT initiation date was used as a proxy for TB diagnosis.

Statistical analysis

A descriptive analysis was undertaken to understand the sociodemographic and clinical profiles of the patients, and short-term ATT outcomes. Logistic regression analysis with the stepwise selection procedure was used to analyse the association of study variables with default compared to completion of ATT. Patients who died during ATT were not considered for the analysis. Effects were entered into and removed from the model at $\alpha = 0.15$.

Survival probability was estimated using Kaplan-Meier curves. The outcome event was death during ATT. The observation was censored at the time of obtaining any outcome other than death (i.e., completed, transferred out, failure or default). Among defaulters, follow-up and outcomes if ATT was re-initiated after default were not considered. The log-rank test was used to compare survival curves. The risk factors for death were assessed using Cox's semi-parametric regression model. Covariates with $P < 0.1$ were entered to build the multivariate model. The proportionality of hazard ratio (HR) was confirmed using analysis of Schoenfeld residuals.

Anticipating some amount of misclassification of outcomes among defaulters with uninformed censoring, sensitivity analysis was conducted by assuming three outcome scenarios for defaulting cases with uninformed censoring: 1) all (irrespective of CD4 count at TB diagnosis) had died; 2) all those with CD4 $<$ 200 cells/mm^3 had died; and 3) all those with CD4 $<$ 50 cells/ mm^3 had died.

Statistical analysis was performed using SAS, version 9.4 (Statistical Analysis System, Cary, NC, USA). As this was a secondary analysis of de-identified data, the requirement for ethical approval was waived.

RESULTS

Study population

Of the total 4226 adult PLHIV enrolled at the clinic during the study period, 1467 patients were ever diagnosed with TB (prior to or after enrolment); 769 cases had active TB during follow-up after enrolment and were treated with daily ATT. The treatment outcomes of the first active TB episode after enrolment at the clinic were assessed for outcomes (Appendix Figure A.1).* The median CD4 count on presentation to the clinic was 125 cells/mm^3 (interquartile range [IQR)] 62–240 cells/mm^3).

* The appendix is available in the online version of this article, at http://www.ingentaconnect.com/content/iuatld/ijtld/2016/00000020/000000010/art00017

Table 1 Demographic and clinical profile of HIV-TB co-infected patients seeking care at the study clinic, 2004–2013

Variable	Total *n* (%)
Total	769 (100)
Sex	
Female	220 (28.1)
Male	549 (71.4)
Age at TB diagnosis, years	
<45	597 (77.6)
⩾45	172 (22.4)
Years of enrolment at clinic	
2004–2006	256 (33.3)
2007–2009	296 (38.5)
2010–2013	217 (28.2)
Site of lesion	
Only PTB	256 (33.3)
Only EPTB	405 (52.7)
PTB + EPTB	108 (14.0)
CD4 count at TB diagnosis, cells/mm^3	
>200	216 (28.1)
50–200	350 (45.5)
<50	142 (18.5)
Missing value	61 (7.9)
Previous history of TB	
No	672 (87.4)
Yes	97 (12.1)
ART status at TB diagnosis	
Already on ART	252 (32.8)
Not on ART	517 (67.2)

HIV = human immunodeficiency virus; TB = tuberculosis; PTB = pulmonary TB; EPTB = extra-pulmonary TB; ART = antiretroviral treatment.

The sociodemographic profile of the patients and clinical characteristics at the time of TB diagnosis are given in Table 1. The majority of the patients were males (n = 549, 71%). The median time to TB diagnosis after enrolment at the clinic was 2 days (IQR −1 to 75). At the time of TB diagnosis, the majority of patients were aged <45 years (n = 597, 78%), had CD4 < 200 cells/mm^3 (n = 492, 64%) and were not on ART (n = 517, 67%). Ninety-seven patients (12%) had a past history of TB. Past history of TB was more often reported among males than among females (15% vs. 8%, P = 0.009) and among those on ART than among those not on ART (21% vs. 8%, P < 0.001). Overall, 33% (n = 256) had pulmonary TB only (PTB), 53% (n = 405) had extra-pulmonary TB (EPTB) and 14% (n = 108) had both PTB and EPTB. Although the proportion of PTB and PTB + EPTB was higher among patients with CD4 count <50 cells/mm^3, the difference was not statistically significant (P = 0.35).

Treatment outcomes

Of the 769 patients, 450 (58.5%) completed the prescribed duration of ATT, 264 (34.3%) defaulted and 30 (3.9%) died. There were 6 (0.8%) failures and 19 (2.5%) were transferred out (Appendix Table A). The median duration of treatment for 'completed' cases was 384 days (IQR 357–451). It did not differ by patient profile. The median duration of treatment after which patients defaulted was 73 days (IQR 30–145). Multivariate logistic regression analysis revealed that males were more likely to default than females (adjusted odds ratio [aOR] 1.67, 95% confidence interval [CI] 1.17–2.39), those who were ART-naïve at TB diagnosis more than those already on ART (aOR 1.91, 95%CI 1.34–2.73), and those with a past history of TB more than those who were newly diagnosed with TB (aOR 1.86, 95%CI 1.15–3.01) (Table 2).

A total of 30 deaths occurred during ATT. The median time to death from ATT initiation was 112 days (IQR 61–208). Survival probability at 180 days and 365 days was respectively 96% (95%CI 95–97) and 95% (95%CI 93–97). Appendix Figure A.2 shows the Kaplan-Meier survival curves overall and by CD4 count categories at the time of TB diagnosis. The log-rank test was statistically significant for age at TB diagnosis (P = 0.02), CD4 count at TB diagnosis (P = 0.006), ART status at TB diagnosis (P = 0.02) and previous history of TB (P = 0.01).

As shown in Table 3, age >45 years, enrolment in later years, CD4 < 50 cells/mm^3, already being on ART at TB diagnosis and previous history of TB were statistically significant risk factors for death in the univariate Cox model. In multivariate analysis, CD4 count < 50 cells/mm^3 (adjusted HR [aHR] 4.63, 95%CI 1.47–14.65) compared to CD4 count >200 cells/mm^3 was the only statistically significant risk factor for death.

Among defaulters (n = 264), 70% were permanently lost to follow-up (LTFU). There was no information about the survival rates among these patients, leading to uninformed censoring. We compared profiles of cases with uninformed censoring with those whose survival status after default was known. The proportion of uninformed censoring was higher among females, patients with PTB + EPTB, those with CD4 count <200 cells/mm^3 and a previous history of TB. However, the difference was not statistically significant. The sensitivity analysis of survival probability at 365 days, as described in the Methods, for assumed outcome scenarios 1, 2 and 3, was respectively 71% (95%CI 67–74), 75% (95%CI 72–78) and 88% (95%CI 85–90).

DISCUSSION

A large number of TB patients in India seek care in the private sector.[17] To the best of our knowledge, this is one of the first reports on treatment outcomes of HIV-TB co-infected patients seeking care in the private sector in India.

At the time of TB diagnosis, the majority of the patients had low CD4 counts and were not on ART. Almost half had only EPTB, highlighting the importance of using a screening tool that combines symptom assessment with USG of the abdomen

Table 2 Predictors of default from ATT among HIV-TB co-infected patients seeking care at the study clinic, 2004–2013

Variable	Defaulted from ATT *n* (%)	Completed ATT *n* (%)	OR (95%CI)	*P* value	aOR (95%CI)	*P* value
Sex						
Female	59 (26.8)	147 (66.8)	1		1	
Male	205 (37.3)	303 (55.2)	1.69 (1.19–2.39)	0.003	1.67 (1.17–2.39)	0.004
Age at TB diagnosis, years						
<45	214 (35.9)	345 (57.8)	1			
⩾45	50 (29.1)	105 (61.1)	0.77 (0.53–1.12)	0.16		
Year of enrolment at clinic						
2004–2006	85 (33.2)	159 (62.1)	1			
2007–2009	105 (35.5)	173 (58.5)	1.14 (0.79–1.62)	0.48		
2010–2013	74 (34.1)	118 (54.4)	1.17 (0.79–1.74)	0.42		
Site of lesion						
Only PTB	84 (32.8)	154 (60.2)	1		1	
Only EPTB	131 (32.4)	244 (60.3)	0.98 (0.70–1.38)	0.927	0.96 (0.68–1.36)	0.81
PTB + EPTB	49 (45.4)	52 (48.2)	1.73 (1.08–2.77)	0.023	1.61 (0.99–2.61)	0.053
CD4 count at TB diagnosis, cells/mm^3						
>200	62 (28.7)	139 (64.4)	1			
50–200	131 (37.4)	203 (58)	1.45 (1.00–2.10)	0.05		
<50	52 (36.6)	71 (50)	1.64 (1.03–2.62)	0.03		
Missing value	19 (31.2)	37 (60.7)	1.15 (0.61–2.16)	0.66		
Previous history of TB						
None	225 (33.5)	407 (60.6)	1		1	
Yes	39 (40.2)	43 (44.3)	1.64 (1.03–2.61)	0.03	1.86 (1.15–3.01)	0.01
ART status at TB diagnosis						
Already on ART	62 (24.6)	161 (63.9)	1		1	
ART-naïve	202 (39.1)	289 (55.9)	1.82 (1.29–2.56)	0.001	1.91 (1.34–2.73)	0.0004

ATT = anti-tuberculosis treatment; HIV = human immunodeficiency virus; TB = tuberculosis; OR = odds ratio; CI = confidence interval; aOR = adjusted OR; PTB = pulmonary TB; EPTB = extra-pulmonary TB; ART = antiretroviral treatment.

and CD4 count in HIV-TB co-infection settings.[8] It is also important to routinely implement active TB screening at all private facilities providing care to PLHIV.[6]

A higher default rate was seen in this study cohort than in the RNTCP (34% vs. 4.4–15%).[15,20,21] The majority of private clinics in India provide unsupervised ATT. A typical treatment-seeking pathway has

Table 3 Predictors of death during ATT among HIV-TB co-infected patients seeking care at the study clinic, 2004–2013

Variable	Total, *n* (%)	Dead, *n* (%)	HR (95%CI)	*P* value	aHR (95%CI)	*P* value
Sex						
Female	220 (100)	7 (3.2)	1			
Male	549 (100)	23 (4.2)	1.38 (0.59–3.21)	0.459		
Age at TB diagnosis, years						
<45	597 (100)	18 (3.0)	1		1	
⩾45	172 (100)	12 (7.0)	2.24 (1.08–4.64)	0.03	2.09 (0.99–4.41)	0.05
Years of enrolment at clinic						
2004–2006	256 (100)	7 (2.7)	1		1	
2007–2009	296 (100)	9 (3.0)	1.25 (0.46–3.38)	0.67	1.03 (0.36–2.93)	0.96
2010–2013	217 (100)	14 (6.5)	2.73 (1.08–6.93)	0.03	2.14 (0.8–5.69)	0.12
Site of lesion						
Only PTB	256 (100)	8 (3.1)	1			
Only EPTB	405 (100)	17 (4.2)	1.35 (0.58–3.14)	0.482		
PTB + EPTB	108 (100)	5 (4.6)	1.63 (0.53–4.99)	0.389		
CD4 count at TB diagnosis, cells/mm^3						
>200	216 (100)	4 (1.9)	1		1	
50–200	350 (100)	10 (2.9)	1.69 (0.53–5.41)	0.37	1.76 (0.55–5.69)	0.34
<50	142 (100)	12 (8.5)	4.95 (1.56–15.35)	0.006	4.63 (1.47–14.65)	0.009
Missing value	61 (100)	4(6.6)	3.51 (0.87–14.11)	0.07	3.33 (0.82–13.6)	0.09
Previous history of TB						
No	672 (100)	22 (3.3)	1		1	
Yes	97 (100)	8 (8.3)	2.65 (1.17–5.98)	0.01	1.94 (0.83–4.57)	0.12
ART status at TB diagnosis						
Already on ART	252 (100)	16 (6.4)	1		1	
ART-naïve	517 (100)	14 (2.7)	0.45 (0.22–0.94)	0.03	0.58 (0.27–1.25)	0.16

ATT = anti-tuberculosis treatment; HIV = human immunodeficiency virus; TB = tuberculosis; HR = hazard ratio; CI = confidence interval; aHR = adjusted HR; PTB = pulmonary TB; EPTB = extra-pulmonary TB; ART = antiretroviral treatment.

been observed in TB patients in India: an initial consultation with pharmacist or informal health care provider, generally followed by one or more visits to private providers,[22] and finally, after much delay, TB diagnosis and treatment in the public sector.[17] This partly explains the high default rate seen in our study. Attrition during the pre-ART phase has also been a challenge for HIV programmes in the country. Many PLHIV detected in the early stage of HIV disease are LTFU and return to care only when symptomatic.[23] In the present study, ART-naïve patients were more likely to default than those already on ART at TB diagnosis; 18% of ART-naïve patients did not receive ART, and a large proportion (86%) of them had defaulted. Similar findings were reported from public health facilities in Mysore, India,[20] where only 56% of eligible TB patients received ART. It is anticipated that strategies such as 'test and treat'[24] can address this problem to some extent, and therefore have important implications for TB control efforts. The other risk factors for default in the present study, such as being male and having a previous history of TB, are consistent with other studies.[25–29] In addition to defaulters, 102 patients diagnosed with TB were LTFU, without any information as to whether or not they initiated ATT. There is an urgent need to identify strategies to strengthen links and retention of TB patients detected in the private sector. Use of mHealth technology or facilitating links to RNTCP-monitoring mechanisms through intermediary organisations could be helpful,[17] and should be explored further.

The mortality rate in the study cohort was lower than reported by the RNTCP. This could be attributable to the daily use of ATT for an extended period. However, misclassification of the outcome cannot be ruled out among those who defaulted and were LTFU. In the worst case scenario of sensitivity analysis assuming that all those who defaulted and were LTFU had died, the mortality rate was found to be higher than that of the RNTCP. However, this is an unlikely scenario in view of the findings from other studies, which report that most patients LTFU may have sought care from other health care facilities, public or private.

As seen in other studies,[30] the majority of the deaths occurred within the first 4 months of ATT. Low CD4 count was a risk factor for death. Other studies have established similar associations.[31] It is now known that ART reduces mortality and relapse among TB patients.[12,32] However, the evidence also suggests[31,33] that ART is not effective in reducing mortality if the CD4 count remains low despite the use of ART. In the current study, all patients who were already on ART at TB diagnosis and who died during ATT had very low CD4 counts due to poor ART adherence. Stratified analysis among ART-naïve patients diagnosed with TB showed no deaths in the group that could not be started on ART. Contrary to existing evidence,[9] the proportion of deaths was lower among those initiating ART after 8 weeks of TB diagnosis than in those starting earlier. These findings are possibly due to attrition bias[34] and immune reconstitution inflammatory syndrome (IRIS), and therefore need to be interpreted with caution. The new HIV management guidelines are shifting towards higher CD4 cut-offs for ART initiation.[35,36] This transition is expected to strengthen TB control efforts in PLHIV. However, these benefits may accrue only with sustained ART adherence and retention in care over the long term.

This study was based on a large sample from the private sector. Less is known about daily ATT outcomes among PLHIV in programmatic settings. The study succeeds in bridging this gap to some extent.

The study has several limitations. The findings may not be representative of the entire private sector. Some misclassification in identifying 'treatment failure' is likely. A high default rate increases the likelihood of misclassification and attrition bias, thus favouring the overestimation of survival probability. A sensitivity analysis was performed to address this issue.

In conclusion, the present study indicates that daily ATT can achieve low mortality rates among PLHIV. More evidence would be needed to confirm these findings. A high default rate seen in this study indicates the need to identify newer strategies for the private sector to overcome these challenges.

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APPENDIX

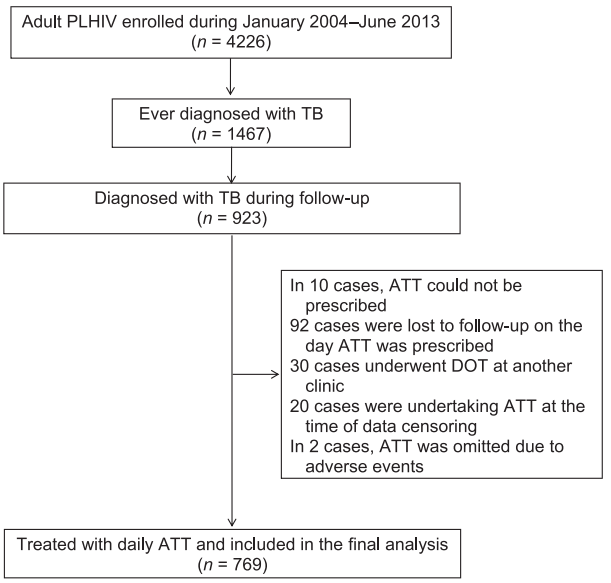

Figure A.1 Cases included in the analysis. PLHIV = people living with the human immunodeficiency virus; TB = tuberculosis; ATT = anti-tuberculosis treatment; DOT = directly observed treatment.

Table A Outcomes of daily ATT among HIV-TB co-infected patients seeking care at the study clinic, 2004–2013

	ATT outcome, *n* (%)					
Variable	Completed	Failure	Death	Default	Transferred out	*P* value
Total	450 (58.5)	6 (0.8)	30 (3.9)	264 (34.3)	19 (2.5)	
Sex						
Female	147 (66.8)	1 (0.5)	7 (3.2)	59 (26.8)	6 (2.7)	0.005
Male	303 (55.2)	5 (0.9)	23 (4.2)	205 (37.3)	13 (2.4)	
Age at TB diagnosis, years						
<45	345 (57.8)	5 (0.8)	18 (3.0)	214 (35.9)	15 (2.5)	0.29
⩾45	105 (61.1)	1 (0.6)	12 (7.0)	50 (29.1)	4 (2.3)	
Years of enrolment at clinic						
2004–2006	159 (62.1)	2 (0.8)	7 (2.7)	85 (33.2)	3 (1.2)	0.1
2007–2009	173 (58.5)	2 (0.7)	9 (3.0)	105 (35.5)	7 (2.4)	
2010–2013	118 (54.4)	2 (0.9)	14 (6.5)	74 (34.1)	9 (4.2)	
Site of lesion						
Only PTB	154 (60.2)	3 (1.2)	8 (3.1)	84 (32.8)	7 (2.7)	0.09
Only EPTB	244 (60.3)	3 (0.7)	17 (4.2)	131 (32.4)	10 (2.5)	
PTB + EPTB	52 (48.2)	0	5 (4.6)	49 (45.4)	2 (1.9)	
CD4 count at TB diagnosis, cells/mm^3						
>200	139 (64.4)	3 (1.4)	4 (1.9)	62 (28.7)	8 (3.7)	0.03
50–200	203 (58)	0	10 (2.9)	131 (37.4)	6 (1.7)	
<50	71 (50)	2 (1.4)	12 (8.5)	52 (36.6)	5 (3.5)	
Missing value	37 (60.7)	1 (1.6)	4 (6.6)	19 (31.2)	0	
Previous history of TB						
No	407 (60.6)	5 (0.7)	22 (3.3)	225 (33.5)	13 (1.9)	0.003
Yes	43 (44.3)	1 (1.0)	8 (8.3)	39 (40.2)	6 (6.2)	
ART status at TB diagnosis						
Already on ART	161 (63.9)	3 (1.2)	16 (6.4)	62 (24.6)	10 (4.0)	0.01
Not on ART	289 (55.9)	3 (0.6)	14 (2.7)	202 (39.1)	9 (1.7)	

ATT = anti-tuberculosis treatment; HIV = human immunodeficiency virus; TB = tuberculosis; PTB = pulmonary TB; EPTB = extra-pulmonary TB; ART = antiretroviral treatment.

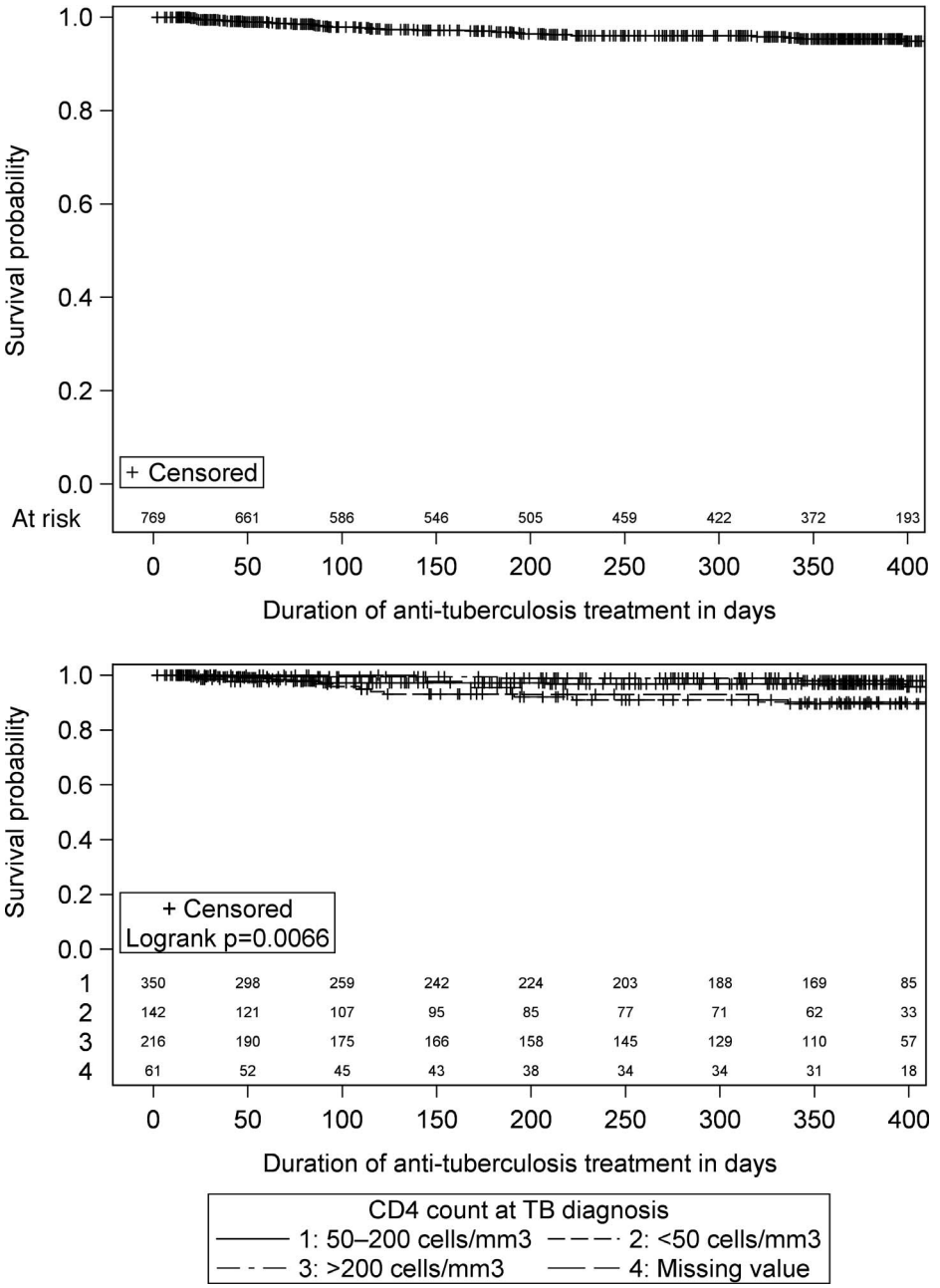

Figure A.2 Probability of survival in a cohort of TB-HIV co-infected patients receiving daily ATT **A)** among all patients, and **B**) by CD4 count at TB diagnosis. TB = tuberculosis; HIV = human immunodeficiency virus; ATT = anti-tuberculosis treatment.

RESUME

CONTEXTE : On connaît peu de choses sur le devenir des patients co-infectés par le virus de l'immunodéficience humaine (VIH) et la tuberculose (TB) et traités dans le secteur privé en Inde.

OBJECTIF : Décrire les résultats d'un traitement antituberculeux (ATT) quotidien et leurs déterminants parmi des patients co-infectés par VIH-TB traités dans une clinique privée de Pune, Inde.

SCHÉMA : Les données des patients adultes co-infectés par VIH-TB traités par ATT quotidien ont été analysées grâce à une régression logistique et au modèle de Cox afin d'évaluer les facteurs de risque d'abandon et de décès.

RÉSULTATS : Sur 769 cas, 78% étaient âgés de <45 ans, 71% étaient des hommes, 64% avaient un comptage de CD4 < 200 cellules/mm^3, 67% n'avaient pas eu du traitement antirétroviral (ART) lors du diagnostic de TB, 53% avaient une TB extrapulmonaire, et 12% avaient des antécédents de TB. L'ATT a été terminé avec succès par 58,5%, 34,3% ont abandonné (c'est-à-dire, ATT suspendu pendant >2 mois) et 3,9% sont décédés pendant l'ATT. Le risque d'abandon a été plus élevé chez les hommes (OR ajusté [ORa] 1,67 ; IC95% 1,17–2,39), chez les patients qui n'avaient jamais eu d'ART (ORa 1,91 ; IC95% 1,34–2,73) et chez ceux ayant des antécédents de TB (ORa 1,86 ; IC95% 1,15–3,01). La probabilité de survie à 365 jours a été de 95% (IC95% 93–97). Le risque de décès a été plus élevé chez les patients ayant des CD4 < 50 cellules/mm^3 (HR ajusté 4,63 ; IC95% 1,47–14,65) par rapport à ceux qui avaient des CD4 > 200 cellules/mm^3.

CONCLUSION : Les patients co-infectés par VIH-TB et bénéficiant d'un ATT quotidien ont eu une faible mortalité. Le taux élevé d'abandon dans les structures privées mérite une attention urgente.

RESUMEN

MARCO DE REFERENCIA: Se conoce poco sobre los desenlaces clínicos de los pacientes coinfectados por el virus de la inmunodeficiencia humana (VIH) y la tuberculosis (TB) en el sector privado de la India.

OBJETIVO: Describir los desenlaces terapéuticos del tratamiento antituberculoso (ATT) diario y sus factores determinantes en los pacientes coinfectados por el VIH y la TB que reciben tratamiento en un consultorio privado de Pune, en la India.

METODOS: Se examinaron los datos de los pacientes coinfectados por el VIH y la TB que recibían ATT diario, mediante un análisis de regresión logística y el modelo de Cox, con el fin de evaluar los factores de riesgo de abandono y muerte.

RESULTADOS: En los 769 casos, el 78% de los pacientes era <45 años de edad, el 71% era de sexo masculino, el 64% presentó recuentos de linfocitos CD4 < 200 células/mm^3, el 67% no había recibido tratamiento antirretrovírico (ART) en el momento del diagnóstico de la TB, el 53% presentó TB extrapulmonar y el 12% tenía antecedentes de ATT. El ATT diario se completó con éxito en el 58,5% de los pacientes, la tasa de abandono fue 34,3% (interrupción del ATT durante >2 meses) y el 3,9% falleció durante el ATT. El riesgo de abandono fue más alto en los hombres (OR ajustado [ORa] 1,67; IC95% 1,17–2,39), en los pacientes que nunca habían recibido ART (ORa 1,9; IC95% 1,34–2,73) y en quienes presentaban un antecedente de TB (ORa 1,86; IC95% 1,15–3,01). La probabilidad de supervivencia a los 365 días fue 95% (IC95% 9–97). El riesgo de muerte fue más alto en los pacientes con recuentos de linfocitos CD4 <50 células/mm^3 (HR ajustado 4,63, IC95% 1,47–14,65), en comparación con los pacientes con recuentos de CD4 > 200 células/mm^3.

CONCLUSION: Se observó una baja mortalidad global en los pacientes coinfectados por el VIH y la TB que recibían el ATT diario. Es preciso prestar una atención especial a las altas tasas de abandono en los establecimientos del sector privado.