**Supplementary files**

**File 1: Table S1: Socio-demographic characteristics of people living with HIV/AIDS (n=362) in relation to pulmonary tuberculosis status at Debre Tabor specialized hospital, Northwest Ethiopia from October to December 2019**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Study Variable** | **Category** | **Frequency (%)** | **Tuberculosis status** | | **COR (95%CI)** | **P-value** |
| **Positive**  **No (%)** | **Negative**  **No (%)** |
| Age (years) | < 24 | 44 (12.2) | 3 (0.8) | 41 (11.3) | 1 |  |
| 25-44 | 191 (52.8) | 10 (2.8) | 181(50.0) | 0.75 (0.19-2.86) | 0.68 |
| 45-64 | 106 (29.3) | 4 (1.1) | 102 (28.2) | 0.54 (0.11-2.5) | 0.42 |
| > 65 | 21 (5.8) | 1 (0.3) | 20 (5.5) | 0.68 (0.07-6.99) | 0.74 |
| Sex | Male | 155 (42.8) | 7 (1.9) | 148 (40.9) | 0.84 (0.32-2.23) | 0.73 |
| Female | 207 (57.2) | 11 (3.0) | 196 (54.1) | 1 |  |
| Residence | Urban | 297 (82) | 14 (3.9) | 283 (78.2) | 0.75 (0.24-2.37) | 0.63 |
| Rural | 65 (18) | 4 (1.1) | 61 (16.9) | 1 |  |
| Level of education | Illiterate | 119 (31.9) | 7 (1.9) | 112 (30.9) | 1.37 (0.34-5.5) | 0.65 |
| Literate | 20 (5.5) | 1 (0.3) | 19 (5.2) | 1.16 (0.11-11.78) | 0.9 |
| Primary (1-8) | 92 (25.4) | 5 (1.4) | 87 (24.0) | 1.26 (0.29-5.48) | 0.75 |
| Secondary school (9-12) | 62 (17.1) | 2 (0.6) | 60 (16.6) | 0.73 (0.12-4.54) | 0.74 |
| Tertiary (Diploma and above) | 69 (19.1) | 3 (0.8) | 66 (18.2) | 1 |  |
| Marital status | Single | 155 (42.8) | 7 (1.9) | 148 (40.9) | 1 |  |
| Married | 172 (47.5) | 9 (2.5) | 163 (45.0) | 1.17 (0.42-3.2) | 0.76 |
| Others\* | 35 (9.7) | 2 (0.6) | 33 (9.1) | 1.28 (0.25-6.4) | 0.76 |
| Current occupation | Student | 32 (8.8) | 2 (0.6) | 30 (8.3) | 1 |  |
| Government employ | 90 (24.9) | 5 (1.4) | 85 (23.5) | 0.8 (0.16-4.7) | 0.88 |
| Commercial sex workers | 21 (5.8) | 1 (0.30 | 20 (5.5) | 0.75 (0.06-8.8) | 0.82 |
| Farmer | 70 (19.3) | 3 (0.8) | 67 (18.5) | 0.67 (0.1-4.2) | 0.67 |
| Merchant | 81 (22.4) | 2 (0.6) | 79 (21.80 | 0.38 (0.05-2.8) | 0.34 |
| House wife | 52 (14.4) | 3 (0.8) | 49 (13.5) | 0.9 (0.14-5.8) | 0.93 |
| Others# | 16 (4.4) | 2 (0.6) | 14 (3.9) | 0.14 (0.27-16.8) | 0.47 |
| Religion | Orthodox | 278 (76.8) | 13 (3.6) | 265 (73.2) | 1 |  |
| Muslim | 30 (8.3) | 2 (0.6) | 28 (7.7) | 1.4(0.3-6.7) | 0.63 |
| Others& | 54 (14.9) | 3 (0.8) | 51 (14.1) | 1.19 (0.3-4.3) | 0.78 |

**Others**\*: divorced and widow; **others#**: driver, daily labourer, unemployed and self-employed; **others&**: adventist, protestant and catholic

File 2: Table S2: Clinical characteristics and laboratory measurements of PLWHA (n=362) concerning pulmonary tuberculosis at Debre Tabor specialized hospital, Northwest Ethiopia (October to December 2019)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **Category** | **Frequency (%)** | **Tuberculosis status** | | **COR (95%CI)** | **P-value** |
| **Positive**  **No (%)** | **Negative**  **No (%)** |
| Smoking | Yes | 39 (10.8) | 3 (0.8) | 36 (9.9) | 1.7 (0.47-6.19) | 0.4 |
| No | 323 (89.2) | 15 (4.1) | 308 (85.1) | 1 |  |
| Alcohol drinking | Yes | 54 (14.9) | 3 (0.8) | 51 (14.1) | 0.87 (0.24-3.1) | 0.83 |
| No | 308 (85.1) | 15 (4.1) | 293 (80.9) | 1 |  |
| BMI kg/m2 | Underweight | 106 (29.3) | 13 (3.6) | 93 (25.7) | 7.02 (2.4-20.2)\* | <0.001 |
| Normal weight | 256 (70.7) | 5 (1.4) | 251 (69.3) | 1 |  |
| Previous history of TB | Yes | 72 (19.9) | 11 (3.0) | 61 (16.9) | 7.3 (2.7-19.6)\* | <0.001 |
| No | 290 (80.1) | 7 (1.9) | 283 (78.2) | 1 |  |
| Family history of TB | Yes | 50 (13.8) | 3 (0.8) | 47 (13.0) | 1.2 (0.3-4.5) | 0.72 |
| No | 312 (86.2) | 15 (4.1) | 287 (82.0) | 1 |  |
| WHO clinical stage | Stage-I | 238 (65.7) | 5 (1.4) | 233 (64.4) | 1 |  |
| Stage-II | 55 (15.2) | 2 (0.6) | 53 (14.6) | 1.7 (0.3-9.3) | 0.5 |
| Stage-III | 69 (19.1) | 11 (3.0) | 58 (16.0) | 8.8 (2.9-26.4)\* | <0.001 |
| Base line CD4+ count(cells/mm3)  **(**n=345**)** | < 200 | 132 (38.3) | 13 (3.8) | 119 (34.5) | 5.5 (1.2-25)\* | 0.03 |
| 201-350 | 110 (31.9) | 3 (0.9) | 107 (31) | 1.4 (0.2-8.6) | 0.7 |
| **>** 350 | 103 (29.9) | 2 (0.6) | 101 (29.3) | 1 |  |
| Current CD4+ count(cells/mm3) | < 200 | 122 (33.7) | 8 (2.2) | 114 (31.5) | 1.8 (0.5-5.7) | 0.29 |
| 201-350 | 104 (28.7) | 5 (1.4) | 99 (27.3) | 1.3 (0.37-4.69) | 0.66 |
| > 350 | 136 (37.6) | 5 (1.4) | 131 (36.2) | 1 |  |
| ART beginning time (year) | < 1 | 243 (67.1) | 10 (2.8) | 233 (64.4) | 0.6 (0.2-1.9) | 0.42 |
| 2-5 | 40 (11.0) | 3 (0.8) | 37 (10.2) | 1.2 (0.27-5.29) | 0.81 |
| > 5 | 79 (21.8) | 5 (1.4) | 74 (20.4) | 1 |  |
| ART adherence | Good | 287 (79.3) | 13 (3.6) | 274 (75.7) | 1 |  |
| Fair | 47 (13) | 3 (0.8) | 44 (12.2) | 1.4 (0.39-5.24) | 0.58 |
| Poor | 28 (7.7) | 2 (0.6) | 26 (7.2) | 1.6 (0.34-7.58) | 0.53 |
| Hemoglobin (g/dl) | <11 | 119 (32.9) | 7 (1.9) | 112 (30.9) | 1.3 (0.49-3.49) | 0.58 |
| > 11 | 243 (67.1) | 11 (3.0) | 232 (64.1) | 1 |  |
| Viral load (copies/ml) | <1000 | 145 (77.1) | 7 (3.7) | 138 (73.4) | 1 |  |
| >1000 | 43 (22.9) | 11 (5.9) | 32 (17.0) | 6.7 (2.4-18.8) \* | <0.001 |
| HIV duration since confirmed (year) | <5 | 125 (34.5) | 2 (0.6) | 123 (34.0) | 1 |  |
| > 5 | 237 (65.5) | 16 (4.4) | 221 (61.0) | 4.45 (1-19.7) \* | 0.04 |
| Cotrimoxazole therapy | Yes | 166 (45.9) | 4 (1.1) | 162 (44.8) | 1 |  |
| No | 196 (54.1) | 14 (3.9) | 182 (50.3) | 3.1 (1-9.6) \* | 0.04 |
| Functional status | Working | 335 (92.5) | 16 (4.4) | 319 (88.1) | 1 |  |
| Ambulatory | 9 (2.5) | 0 (0.0) | 9 (2.5) | 0.00 | 0.99 |
| Bedridden | 18 (5) | 2 (0.6) | 16 (4.4) | 2.5 (0.5-11.7) | 0.26 |

**BMI**: body mass index, **COR**: crude odds ratio, **CI**: confidence interval, \* statistically significant

File 3: Table S3: Univariate and multivariate logistic regression of factors associated with TB in people living with HIV/AIDS at Debre Tabor specialized hospital, Northwest Ethiopia (October to December 2019)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **Category** | **Tuberculosis status** | | **COR (95% CI)** | **P-value** | **AOR (95% CI**) | **p-value** |
| **Positive**  **No (%)** | **Negative**  **No (%)** |
| BMI kg/m2 | <18.5 | 13 (3.6) | 93 (25.7) | 7.02 (2.4-20.2) | 0.00 | 4.2 (1.2-15.1)\*\* | 0.03 |
| 18.5-24 | 5 (1.4) | 251 (69.3) | 1 |  | 1 |  |
| Previous history of TB | Yes | 11 (3) | 61 (16.9) | 7.3 (2.7-19.6) | 0.00 | 1.3 (0.27-5.86) | 0.77 |
| No | 7 (1.9) | 283 (78.2) | 1 |  | 1 |  |
| WHO clinical stage | Stage-I | 5 (1.4) | 233 (64.4) | 1 |  | 1 |  |
| Stage-II | 2 (0.6) | 53 (14.6) | 1.7 (0.3-9.3) | 0.5 | 1.3 (0.2-7.5) | 0.8 |
| Stage-III | 11 (3) | 58 (16) | 8.8 (2.9-26.4) | 0.00 | 5.4 (1.3-22.8)\*\* | 0.02 |
| Base line CD4+ count (cells/mm3) | < 200 | 13 (3.8) | 119 (34.5) | 5.5 (1.2-25) | 0.03 | 1.9 (0.3-12) | 0.5 |
| 201-350 | 3 (0.9) | 107 (31) | 1.4 (0.2-8.6) | 0.7 | 0.5 (0.06-4.38) | 0.55 |
| > 350 | 2 (0.6) | 101 (29.3) | 1 |  | 1 |  |
| Viral load (copies/ml)  (n=170) | <1000 | 7 (3.7) | 138 (73.4) | 1 |  | 1 |  |
| >1000 | 11 (5.9) | 32 (17) | 6.7 (2.4-18.8) | 0.00 | 6.4 (1.6-25.7)\*\* | 0.009 |
| HIV duration since confirmation (year) | < 5 | 2 (0.6) | 123 (34) | 1 |  | 1 |  |
| > 5 | 16 (4.4) | 221 (61) | 4.45 (1-19.7) | 0.04 | 5.7 (1.08-30)\*\* | 0.04 |
| Cotrimoxazole therapy | Yes | 4 (1.1) | 162 (44.8) | 1 |  |  |  |
| No | 14 (3.9) | 182 (50.3) | 3.1 (1-9.6) | 0.04 | 3.4 (0.8-15.2) | 0.1 |

\*\*:statisticallysignificant on the multivariate regression analysis, **AOR**: adjusted odds ratio