**Supplements**

Supplemental Table S1. Comparison of characteristics between subjects with and without cavitary lesion on chest radiography

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Cavity (+)****(N= 34)** | **Cavity (-)****(N=63)** | **P-value** |
| **Age** |  | 42.0(30.25-61.75) | 50.0(30.5-70.5) | 0.49 |
| **Male sex** | 　 | 24(70.6%) | 37(59.7%) | 0.38 |
| **BMI** |  | 20.39 ± 3.56 | 21.09 ± 2.56 | 0.27 |
| **Smoking** | 　 |  |  | 0.88 |
|  | Current | 7(20.6%) | 6(17.6%) |  |
|  | Ex- | 6(17.6%) | 9(14.5%) |  |
|  | Never | 21(61.8%) | 38(61.3%) |  |
| **Drinking** | 　 |  |  | 0.33 |
|  | Heavy | 1(2.9%) | 3(4.8%) |  |
|  | Social | 11(32.4%) | 26(41.9%) |  |
|  | None | 22(64.7%) | 30(48.4%) |  |
| **Underlying disease** |  |  |  |
|  | Diabetes | 10(29.4%) | 8(12.5%) | 0.08 |
|  | Lung ds | 5(14.7%) | 2(3.1%) | 0.09 |
|  | Heart ds | 2(5.9%) | 2(3.1%) | 0.63 |
|  | Liver ds | 0(0%) | 3(4.7%) | 0.50 |
|  | Kidney ds | 2(5.9%) | 2(3.1%) | 0.89 |
|  | Prev TB Hx | 11(32.4%) | 12(18.8%) | 0.12 |
| **Symptom** |  |  |  |
|  | Cough/sputum | 18(52.9%) | 29(46.0%) | 0.77 |
|  | Dyspnea | 5(14.7%) | 11(17.5%) | 0.80 |
|  | Chest pain | 4(11.8%) | 6(9.5%) | >0.99 |
|  | Hemoptysis | 2(5.9%) | 2(3.2%) | 0.92 |
|  | Fever | 2(5.9%) | 6(9.5%) | 0.81 |
|  | Weakness | 0(0%) | 1(1.6%) | >0.99 |
|  | Weight loss | 1(2.9%) | 9(14.3%) | 0.16 |
|  | Asymptomatic | 12(35.3%) | 18(28.6%) | 0.65 |
| **Social Hx**　 |  |  |  |
|  | Occupation | 16(47.1%) | 37(58.7%) | 0.66 |
|  | Marriage | 12(35.3%) | 21(33.3%) | 0.18 |
|  | Family | 3(8.8%) | 20(31.7%) | 0.03 |
|  | Medicaid | 2(5.9%) | 5(7.9%) | >0.99 |
| **CPA** | 　 |  |  | 0.24 |
|  | Unilateral | 9(26.5%) | 45(71.4%) |  |
|  | Bilateral | 12(35.3%) | 17(27.0%) |  |
| **AFB smear**  |  |  | <0.001 |
|  | Positive | 23(67.6%) | 14(21.9%) |  |
| **MDR** |  |  |  | <0.001 |
|  |  | 14 (41.2%) | 4 (6.3%) |  |
| **Mode of development** |  |  | 0.03 |
|  | New case | 19(55.9%) | 51(81.0%) |  |
|  | Recurred | 8(23.5%) | 9(14.3%) |  |
|  | Retreatment | 5(14.7%) | 1(1.6%) |  |
|  | Default | 1(2.9%) | 1(1.6%) |  |
| **Treatment regimen** |  |  | 0.001 |
|  | HREZ | 24(70.6%) | 44(73.3%) |  |
|  | HRE | 1(2.9%) | 11(18.3%) |  |
|  | Others | 9(26.5%) | 8(12.7%) |  |
| **Treatment compliance** |  |  | 0.56 |
|  | Good | 28(82.4%) | 54(85.7%) |  |
|  | Poor  | 6(17.6%) | 9(14.3%) |  |

BMI, body mass index; ds, disease; Hx, history; R, resistance; INH, isoniazid; RFP, rifampin; MDR, multi-drug resistance

Supplemental Table S2. Comparison of characteristics between compliant and non-compliant subjects

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Tx success****(N=50)** | **Good compliance****(N=37)** | **Poor compliance****(N=15)** | **P-value** |
| **Age** |  | 44.0(31-66) | 52.0±20.2 | 37.5±18.1 | 0.02 |
| **Male sex** | 　 | 28(56.0%) | 27(73.0%) | 11(73.3%) | >0.99 |
| **BMI** |  | 21.1 ± 2.88 | 21.5 ± 3.1 | 19.3 ± 2.5 | 0.02 |
| **Smoking** | 　 |  |  |  | 0.98 |
|  | Current | 10(20.0%) | 9(24.3%) | 4(26.7%) |  |
|  | Ex- | 10(20.0%) | 5(13.5%) | 2(13.3%) |  |
|  | Never | 30(60.0%) | 23(62.2%) | 9(60.0%) |  |
| **Drinking** | 　 |  |  |  | 0.92 |
|  | Heavy | 3(6.0%) | 2(5.4%) | 1(6.7%) |  |
|  | Social | 19(38.0%) | 13(35.1%) | 6(40.0%) |  |
|  | None | 24(48.0%) | 22(59.5%) | 8(53.3%) |  |
| **Underlying disease** |  |  |  |  |
|  | Diabetes | 5(10.0%) | 12(32.4%) | 2(14.3%) | 0.3 |
|  | Lung ds | 3(6.0%) | 4(10.8%) | 0(0%) | 0.57 |
|  | Heart ds | 1(2.0%) | 3(8.1%) | 0(0%) | 0.44 |
|  | Liver ds | 2(4.0%) | 1(2.7%) | 0(0%) | >0.99 |
|  | Kidney ds | 1(2.0%) | 3(8.3%) | 0(0%) | 0.55 |
|  | Any other ds |  | 15(40.5%) | 4(28.6%) | 0.53 |
|  | Prev TB Hx | 8(16.0%) | 16(43.2%) | 3(21.4%) | 0.02 |
| **Symptom** |  |  |  |  |
|  | Cough/sputum | 20(40.0%) | 19(51.4%) | 10(66.7%) | 0.37 |
|  | Dyspnea | 10(20.0%) | 4(10.8%) | 3(20.0%) | 0.4 |
|  | Chest pain | 7(14.0%) | 0(0%) | 3(20.0%) | 0.02 |
|  | Hemoptysis | 1(2.0%) | 2(5.4%) | 1(6.7%) | >0.99 |
|  | Fever | 5(10.0%) | 3(8.1%) | 0(0%) | 0.55 |
|  | Weakness | 0(0%) | 1(2.7%) | 0(0%) | >0.99 |
|  | Weight loss | 6(12.0%) | 3(8.1%) | 1(6.7%) | >0.99 |
|  | Asymptomatic | 17(34.0%) | 13(35.1%) | 2(13.3%) | 0.18 |
| **Social Hx**　 |  |  |  |  |
|  | Occupation | 18(36.0%) | 15(40.5%) | 8(53.3%) | 0.7 |
|  | Marriage | 28(56.0%) | 25(67.6%) | 8(53.3%) | 0.44 |
|  | Family | 31(62.0%) | 32(86.5%) | 13(86.7%) | 0.79 |
|  | Medicaid | 6(14.0%) | 1(2.7%) | 0(0%) | 0.59 |
| **CPA** | 　 |  |  |  |  |
|  | Cavity (+) | 8(17.0%) | 20(54.1%) | 6(40.0%) | 0.25 |
|  | Unilateral | 26(56.5%) | 16(44.4%) | 7(46.7%) |  |
|  | Bilateral | 17(37.0%) | 20(55.6%) | 7(46.7%) | 0.28 |
| **AFB smear**  |  |  |  | 0.37 |
|  | Positive | 11(23.4%) | 21(56.8%) | 6(40.0%) |  |
| **MDR** |  |  |  |  | >0.99 |
|  |  | 0(0%) | 12(36.4%) | 5(38.5%) |  |
| **DST** | 　 | 37(74.0%) | 31 | 15 | 0.42 |
|  | All S |  | 11(35.5%) | 4(26.7%) |  |
|  | Any R |  | 2(6.5%) | 2(13.3%) |  |
|  | R to H | 2(4.0%) |  |  |  |
|  | R to R | 1(2.0%) | 1(3.2%) | 1(6.7%) |  |
|  | MDR |  | 13(35.1%) | 6(40%) |  |
| **Mode of development**　 |  |  |  | 0.11 |
|  | New case | 42(84.0%) | 20(54.1%) | 9(60.0%) |  |
|  | Recurred | 8(16.0%) | 9(24.3%) | 3(20.0%) |  |
|  | Retreatment | 0(0%) | 7(18.9%) | 0(0%) |  |
|  | Default | 0(0%) | 1(2.7%) | 2(13.3%) |  |
| **Treatment regimen** |  |  |  | 0.01 |
|  | HREZ | 38(76.0%) | 30(81.1%) | 5(38.5%) |  |
|  | HRE | 11(22.0%) | 2(5.4%) | 0(0%) |  |
|  | Others | 1(2.0%) | 3(9.1%) | 5(45.5%) |  |

BMI, body mass index; ds, disease; Hx, history; R, resistance; INH, isoniazid; RFP, rifampin; MDR, multi-drug resistance

Supplemental Figure S1. No association between age and body mass index in both sexes



Blue dots mean male sex and red dots mean female sex

Supplemental Figure S2. Overlapping of non-compliance and presence of multi-drug resistance tuberculosis among subjects of treatment failure



MDR, multidrug resistance

Supplemental Figure S3. Receiver operating curve for predicting treatment failure in subjects without multidrug resistant tuberculosis

