

Survival Analysis: The Factors Associated To The Mortality of HIV-TB Patients

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Backgrounds

- The Prevalence of HIV among TB patients in Denpasar City has increased from 8.8% to 16.8% in 2013.
- The mortality of TB patients also increased from 7.9% to 10.2%
- 35.1% of them died because of HIV-TB co-infection.
- This fact shows that HIV-TB and its impact in improving mortality should get a priority to solved.



Objective

- To calculate the survivor rate of HIV-TB patients
- To identify factors associated to the mortality of HIV-TB patients.



Methods

- Design: longitudinal study based health facilities.
- The populations: all HIV-TB patients who seek treatment at PHC and Hospital in Denpasar on the follow-up until 2014.
- The total samples: 260 patients.
- All the variables obtained from the integrated information system for tuberculosis.
- Data analysis using Kaplan-Meier survival estimates and Cox regression.

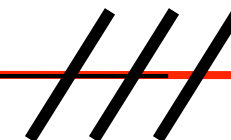


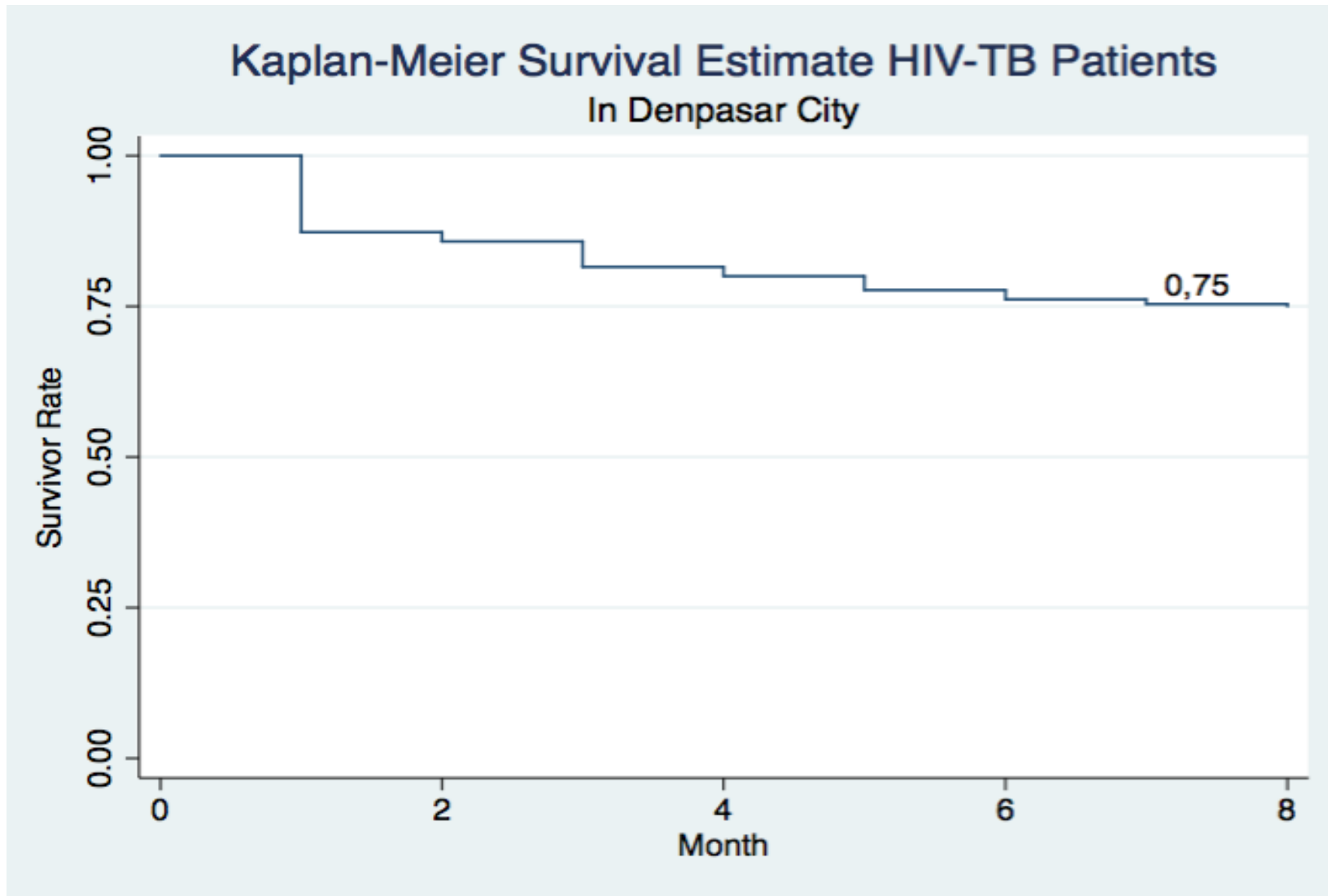
Results



The Characteristic of Subject

| Characteristic | | (n = 260) |
|--------------------|-----------------------|----------------|
| Age | | 32,5 (28-39,5) |
| | < 45 yo | 223 (85,8) |
| | ≥ 45 yo | 37 (14,2) |
| Sex | Female | 66 (25,4) |
| | Male | 194 (74,6) |
| Health Facilities | Public health centers | 32 (12,3) |
| | Hospital | 228 (87,7) |
| TB Classification | Extra pulmonary | 29 (11,2) |
| | Pulmonary | 231 (88,8) |
| AFB Result (n=231) | | |
| | AFB - | 165 (71,4) |
| | AFB + | 66 (28,6) |





The survivor rate is 75% or

The mortality until end of observation (8 months) is 25%.



The results of multivariable analysis using Cox regression

| Variable | Hazard Ratio (HR) | 95% Confident Intervals | |
|----------------------|-------------------|-------------------------|-------------|
| | | Lower level | Upper level |
| Hospital | 2.795 | 1.042 | 7.493 |
| Pulmonary TB | 2.143 | 0.792 | 5.800 |
| New patients | 0.584 | 0.315 | 1.081 |
| HIV detected earlier | 0.680 | 0.418 | 1.108 |



Discussions ⁽¹⁾

- The risk of mortality of HIV-TB patients who are identified and treated in a hospital 2.795(2.8) times than in the PHC
- HIV-TB patients who are identified and treated in hospital is late diagnosis
- Mostly they came to the hospital at advance stage
- This result show the important of early detection and prompt treatment especially in PHC



Discussions (2)

- The risk of mortality of HIV-Pulmonary TB 2,143 (2.1) times compared to extra pulmonary.
- This indicate the progressive impact of the co-infection.
- And the important of prompt treatment especially HIV patients with pulmonary TB infection.



Discussions (3)

- The risk of mortality of New HIV-TB patients 0.584 times (protective) than others (history lost to follow-up, failure, chronic and relapse)
- And HIV detected earlier 0.68 times (protective) than TB is detected after HIV.
- This result show the important of adequate counseling and continue to HIV testing as soon as possible to those with risk factors.
- Treatment monitoring of TB patients is very important to ensure regularity, preventing lost to follow-up, relapse, treatment failure and chronic.



Conclusions

- The survivor rate of HIV-TB patients in Denpasar is relatively low 75% compare to the target 100% (zero death related HIV)
- The factors associated to the mortality of HIV-TB patients:
 - Late detection indicated by higher risk at those who found in hospital
 - The progressivity of pulmonary TB infection
 - History lost to follow-up, failure, chronic and relapse



Recommendations

- These results show the importance of early detection and prompt treatment of HIV-TB patients in primary health care.
- TB patients with the HIV risk factor should get adequate counseling and continue to HIV testing.
- Treatment monitoring of TB patients is very important to ensure regularity, preventing lost to follow-up, relapse, treatment failure and chronic.



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Thank You Terimakasih

