

## **Multi Drug Resistant Tuberculosis at Dr Zainoel Abidin Hospital (A Case Study After 13 Years of Tsunami Disaster in Aceh)**

M. Mulyadi<sup>1</sup>, R. Mulia<sup>2</sup>, T. Mamfaluti<sup>1</sup>; <sup>1</sup>Faculty of Medicine Syiah Kuala University/dr. Zainoel Abidin Hospital, Banda Aceh, Indonesia, <sup>2</sup>Faculty of Medicine Syiah Kuala University, Banda Aceh, Indonesia.

**Corresponding author's email: mul.0862@gmail.com**

**Background:** Spontaneous mutations into multi-drug resistant Tuberculosis (MDR-TB) in the Mycobacterium tuberculosis (TB) genome occur in very rare frequencies. Most of MDR-TB are man-made phenomenon associated with the regularity of taking medicine and comorbid factors. This is also influenced by social factors, economic recession, industry, conflict and natural disasters. Increased cases of TB and MDR-TB post conflict and natural disasters were reported by Raviv (2010), Kanamori et al (2011), and WHO (2013). Thus, the province of Aceh that has experienced conflicts since 1998-2004 and tsunami in 2004 is the area with the increased risk of MDR cases in Indonesia. **Method:** This research was conducted at dr. Zainoel Abidin Hospital in Banda Aceh as the MDR-TB referral center in Aceh Province. The purpose of this study was to determine what contributed to the occurrence of MDR-TB. An analytical observational study with cross sectional design was performed from September to November 2017 on 49 MDR-TB patients undergoing treatment. Primary data were obtained through interviews using questionnaires, while the secondary data were gathered from medical records. **Results:** The availability of drugs and regularity of taking anti-tuberculosis medication (OAT) are the main factors contributing to MDR-TB (multivariate analysis using logistic regression:  $p=0.035$ ). Other influencing factors are: economic status ( $p=0.041$ ) and comorbid Diabetes Mellitus ( $p=0.040$ ). **Conclusion:** MDR-TB cases in dr. Zainoel Abidin Hospital is primarily associated with the availability of regimens and regularity of taking OAT. As an area in the post-conflict and tsunami recovery period, Aceh is the area with the potential for increasing TB and MDR - TB cases. Stronger efforts are required in case findings, identification and comprehensive treatments to reduce TB morbidity and mortality and to prevent MDR-TB in Aceh Province. **Keywords:** disaster affected areas, tuberculosis, multi-drug resistant Tuberculosis

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