

IMPACT OF POSITIVE ASPERGILLUS ANTIBODY ON QUALITY-OF-LIFE OF PATIENTS WITH SMEAR AND/OR GENXPRT NEGATIVE PULMONARY TUBERCULOSIS

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INTRODUCTION

Pulmonary tuberculosis (TB) is a fatal lung disease with significant impact on quality-of-life (QoL) patients. The low quality of life in TB patients might cause by co-infection of fungal diseases, such as aspergillosis.

OBJECTIVE

The study aimed to evaluate the impact of *Aspergillus* antibodies of patients with smear and/or Genxpert negative pulmonary tuberculosis on the score of QoL.

RESULTS

A total of 250 patients with median age 46 years old were studied. Overall, 10.4% (n=26) of the patients showed positive results of *Aspergillus* antibodies. The median score of QoL in patients with positive *Aspergillus* antibody was lower (67.5, IQR 50-76.25) compare with those with negative *Aspergillus* antibody (70, IQR 60-80) (p=0.095) although this was not statistically significant. Pulmonary cavity was the most common radiological finding both in positive antibody (n=10, 38.5%) and negative antibody group (n=80, 35.9%). The rate of asthma was higher (11.5%, n=3) in positive antibody group compared to negative antibody group (2.2%, n=5) (p=0.039). The 24-months follow up were conducted on 43 patients (15 *Aspergillus*-positive antibody and 28 *Aspergillus*-negative antibody). The mortality rate in were 20% and 7.1% (p=0.324) in positive and negative *Aspergillus*-antibody group, respectively. The number of clinic attendance was 8.3 and 7.3 in positive and negative *Aspergillus*-antibody group, respectively.

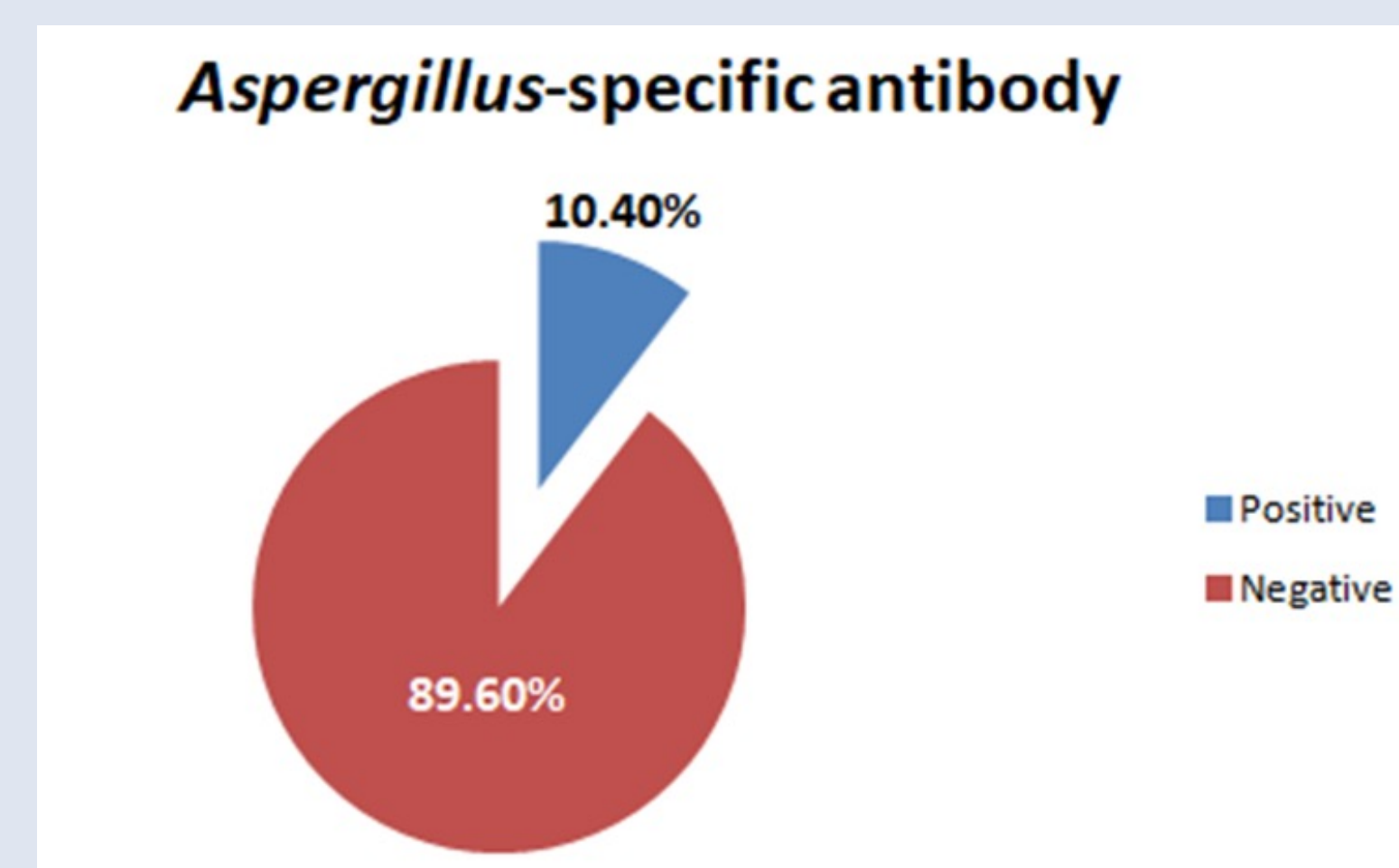


Fig 1. The proportion of positive antibody aspergillosis compared to negative results antibody

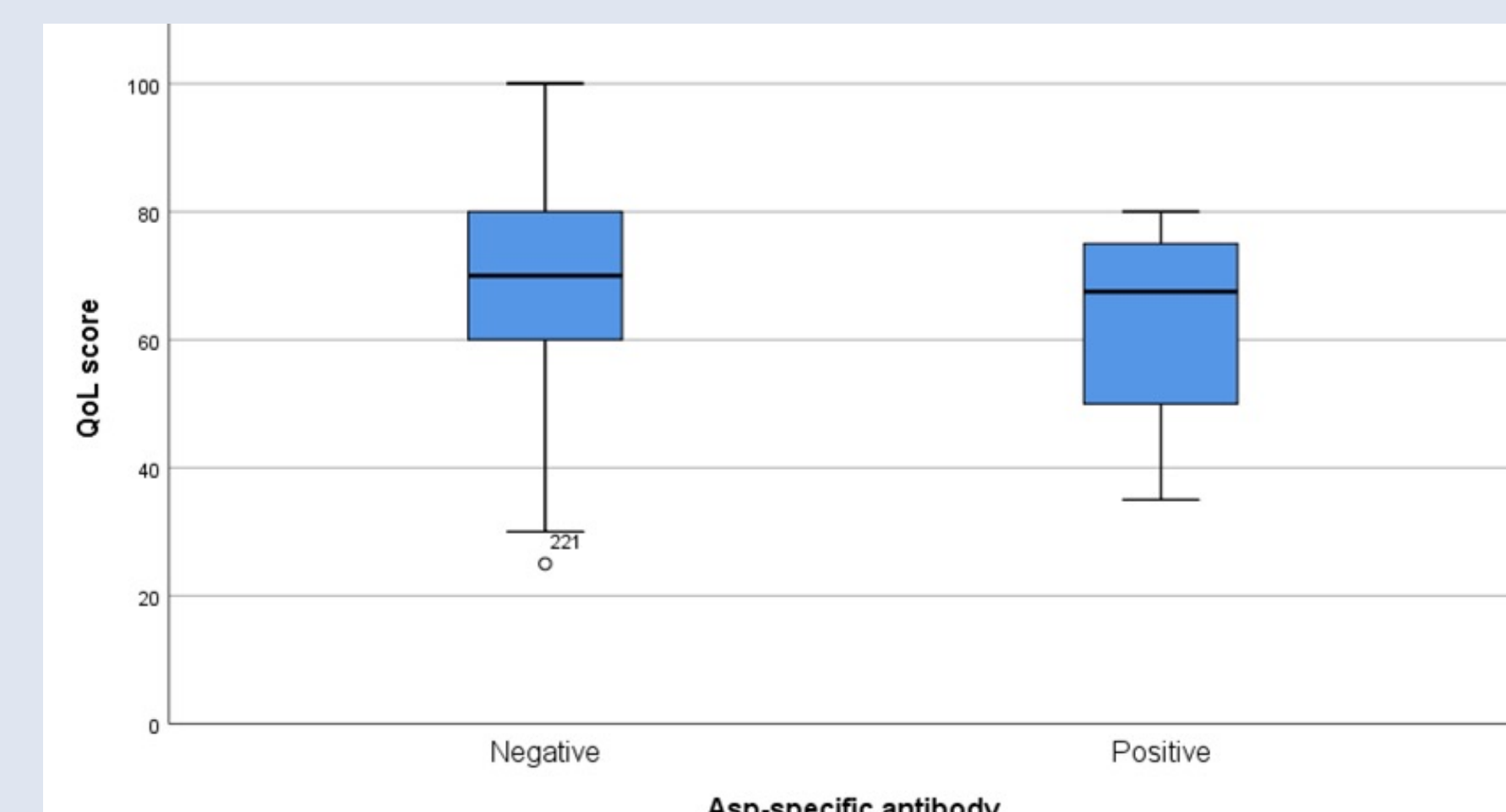


Fig 2. The median score of QoL in patients

METHOD

All patients were on anti-tuberculous therapy in the early phase (0-2 months). Clinical profiles and radiology findings were collected from hospitals in Jakarta and Depok, Indonesia. *Aspergillus* antibodies were measured using immunochromatography (ICT) LDBio, France. Visual analog scale was used to measure QoL. A subset of patients was evaluated at 24 months after the first appointment

Table 1. Radiological findings in positive antibody and negative antibody group

	Total	Positive antibody (n=26)	Negative antibody (n=224)	p
Cavities	90 (36.1%)	10 (38.5%)	80 (35.9%)	0.795
Paracavitary fibrosis	45 (18.1%)	6 (23.1%)	39 (17.5%)	0.433
Pleural thickening	69 (27.7%)	10 (38.5%)	59 (26.5%)	0.196
Aspergilloma	18 (7.2%)	4 (15.4%)	14 (6.3%)	0.103

Table 2. Diseases-associated in both positive and negative antibody aspergillosis

	Total	Positive antibody (n=26)	Negative antibody (n=224)	p
Asthma	8 (3.2%)	3 (11.5%)	5 (2.2%)	0.039
COPD	10 (4%)	2 (7.7%)	8 (3.6%)	0.605
Diabetes	38 (15.2%)	4 (15.4%)	34 (15.2%)	1
Hypertension	26 (10.4%)	2 (7.7%)	24 (10.7%)	1

CONCLUSIONS

Aspergillus spp is a deadly fungal pathogen that might cause co-infection in TB patients. The significance of positive *Aspergillus*-specific antibodies results requires further studies to evaluate the risk of pulmonary aspergillosis in smear and/or Genxpert negative pulmonary tuberculosis patients. The coexistence of multiple chronic lung diseases such as tuberculosis, aspergillosis, and asthma might decrease QoL of patients