Seroprevalence and associated factors of trichinellosis in indigenous pigs and rural communities in Northern Vietnam

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1. INTRODUCTION

Parasitic pig-borne diseases (PPBD) such as cysticercosis and trichinellosis continues a to be public health burden to LMIC. Both are neglected diseases and expected to circulate to an unknown extend among minority communities and mountainous areas in SEA including Vietnam. Current information on trichinellosis PPBD is scarce. A better understanding of the current situation for



trichinellosis is important to assist risk communication and management to further reduce the zoonotic burden of this diseases for the community.

2. METHODOLOGY Study sites

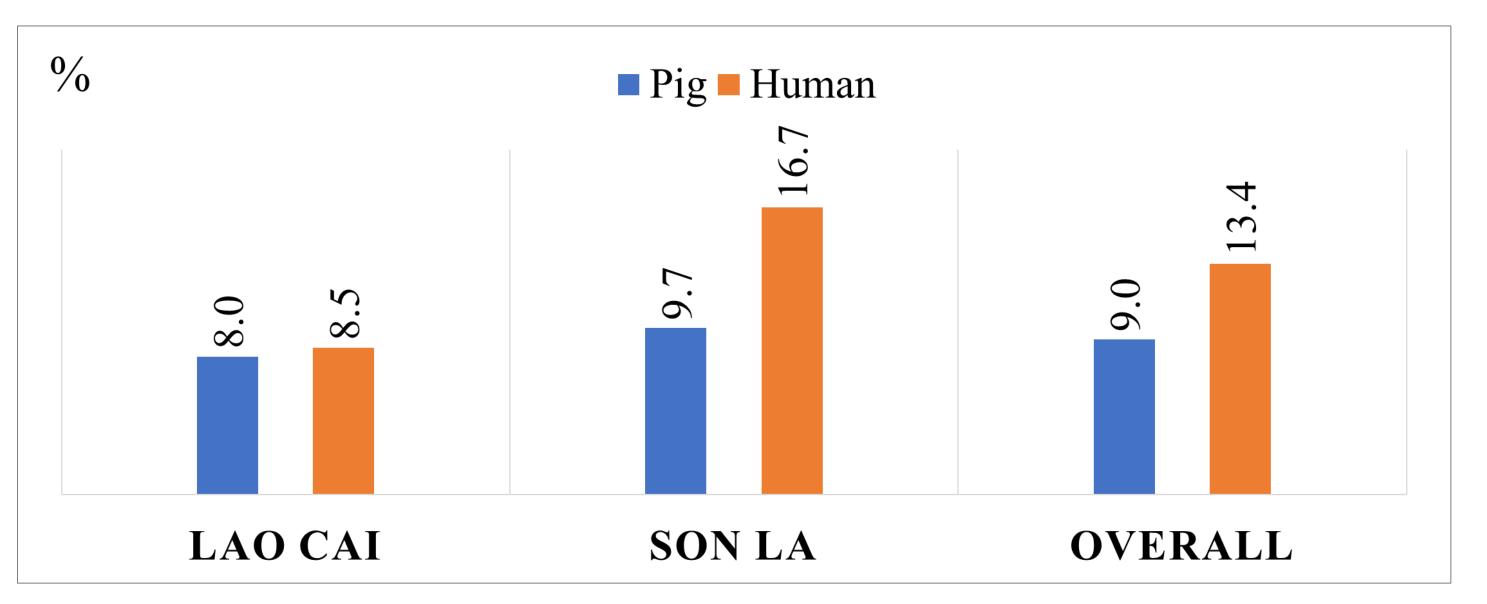


Fig 2. Seroprevalence of trichinellosis in indigenous pigs and rural communities in two provinces (%)



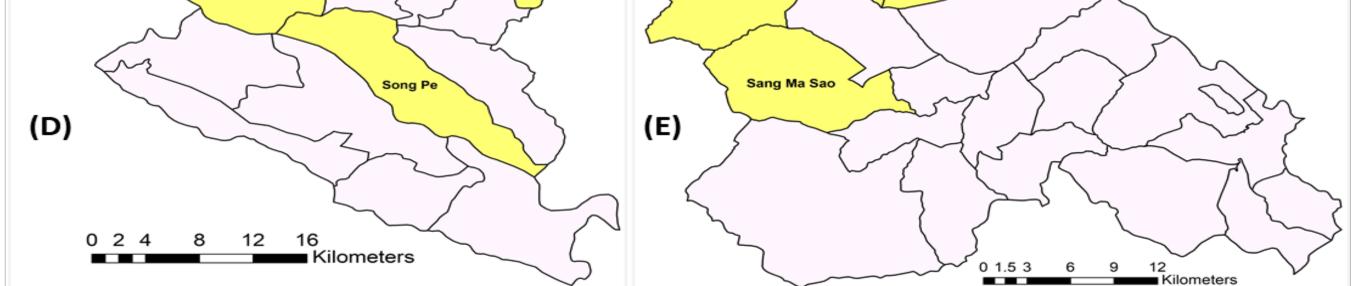


Fig 1. Map of study sites in Vietnam and two selected provinces (Son La and Lao Cai (A), two selected districts in Son La and Lao Cai provinces (B and C), and five selected communes in those two districts (D and E).

A cross-sectional study was conducted in 2021 in Vietnam in ten communes in Bac Yen district (Son La province) and Bat Xat district (Lao Cai provinces

500 indigenous pigs' serum

ELISA test kit (Priocheck, ThermoFisher) for serology test Structure questionnaires were also used to interview selected pig owners and sampled community members regarding pig raising practice, eating behavior and disease knowledge and prevention.

500 community participants

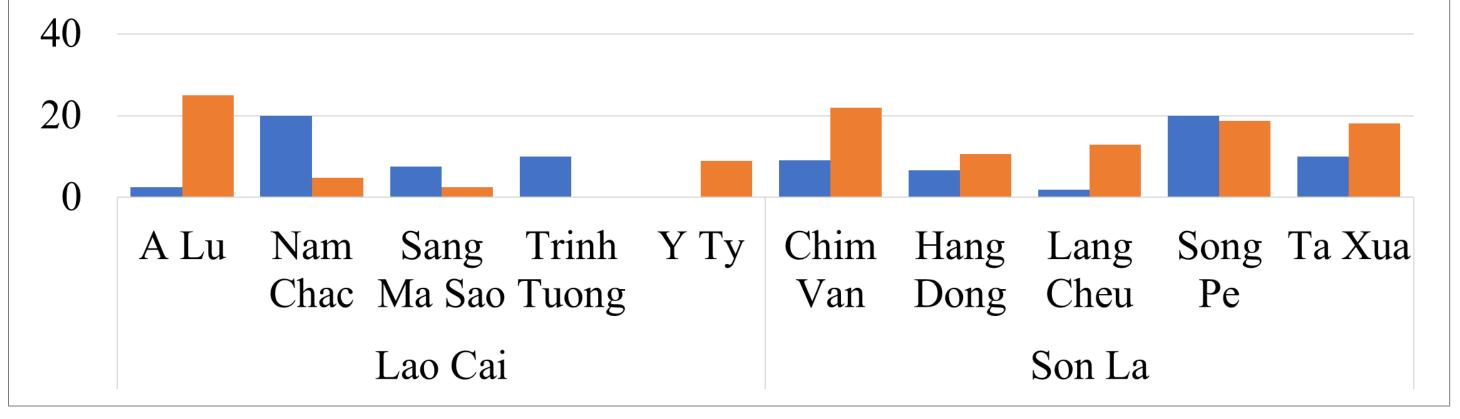


Fig 3. Seroprevalence of trichinellosis in indigenous pigs and rural communities in 10 communes in studied provinces

Factors associated with trichinellosis seroprevalence in human were raising pigs' activities (p=0.029, Fisher test) and eating raw vegetable behavior (p=0.007, Chi-square test). While factors associated with trichinellosis seroprevalence in pigs were farmer's knowledge about trichinellosis (p=0.033, Chi-square test)

4. CONCLUSIONS

Seroprevalence in both pigs and humans in northern Vietnam were relatively high, especially in the endemic province, which suggested the

3. RESULTS

The result shows that seroprevalence of trichinellosis in indigenous pigs and humans were 9.0% (45/500, 95% CI: 6.7-11.9) and 13.4% (67/500, 95% CI: 10.6-16.8), respectively. Trichinella seroprevalence in human was significantly higher in Son La (16.7%) compared to in Lao Cai (8.5%), but not for seroprevalence in pigs.

possibility of Trichinella spp. circulation in the community and indigenous pigs. Animal and public health awareness for the northern communities and pig farmers, i.e., using One health approach, are necessary to improve prevention and control this disease.

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16th International Symposium of Veterinary Epidemiology and Economics (ISVEE 16) Connecting Animals, People, and their shared environments



August 7-12, 2022 Halifax Convention Centre Halifax, Nova Scotia, Canada