

## ABSTRACTS OF FREE PAPERS – EPIDEMIOLOGY

# Prevalence of epilepsy in a rural population of Central Lao PDR

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**Background and Objective:** Epilepsy is one of the most important neurological disorder worldwide. The World Health Organization has estimated that the prevalence of active epilepsy is approximately 8 per thousand of the general population.<sup>1</sup> The proportion is especially high in Africa and South America. In Asia the prevalence of active epilepsy varies between 3.8 to 7.0 per thousand. Lao is one of the poorest countries in South east Asia. Risk factors of epilepsy such as neurological infections, peri-natal disorders, consanguinity are prevalent. However, little epidemiological information on epilepsy is available. This study aims to assess the prevalence of epilepsy in a rural district of Lao PDR and to describe the clinical and epidemiological profile of the disease.

**Methods:** The study was carried out in the rural district of Hinheub, Vientiane province, 120 km north from the capital town, between February and June 2003. Possible cases of epilepsy were detected by door-to-door screening of the whole population of 8 randomly selected villages by using an internationally validated and standardized questionnaire.<sup>2</sup> Additional possible cases were identified by key-informants of the study villages (teachers, voluntary health care workers). Confirmation of epilepsy was based on clinical examination. Possible cases were re-visited in February and March 2004 and examined by an experienced neurologist. An EEG was performed at the district hospital on 24 confirmed cases.

**Results:** Two hundred and seventy seven possible cases of epilepsy were identified among 4310 interviewed subjects. One hundred and ninety four possible cases (70%) underwent a clinical examination for confirmation, which resulted in 25 confirmed cases of epilepsy. Six additional epilepsy cases were diagnosed in patients who were identified by key-informants. A crude prevalence of 7.2 cases of epilepsy per thousand populations was found. The estimated prevalence-rate was 9.7 per thousand. This assessment was based on the hypothesis of an equal rate of epilepsy in compliant (those who were re-examined for confirmation) and non-compliant subjects. There were more male than female epilepsy patients (sex-ratio 18 : 13). Mean age was 22 years. Generalized epilepsies (61%) were commoner than partial epilepsies (29%). The remaining cases (10%) were not classifiable. Thirty nine percent of patients had more than one seizure types. An EEG was obtained from 24 patients. In half (12) of the patients abnormalities were diagnosed. Only one of the 31-epilepsy patients was currently under treatment (phenobarbital).

**Conclusion:** This is the first attempt to assess the prevalence of epilepsy in Lao PDR. The observed prevalence is considerably lower than what was expected for a developing country with a high burden of parasitic infections. Therefore, infections such as cysticercosis might not be significant contributors to the overall disease rate. Further studies are warranted to confirm the findings for the entire country.

## References

1. World Health Organization. Epilepsy: Epidemiology, aetiology and prognosis. *Fact Sheet \_WHO*, N°165, February 2001.
2. Preux PM, Druet-Cabanac M, Debrock C, Tapie P, Dumas M et le Comité de recherche sur l'épilepsie et de l'Institut d'épidémiologie neurologique et de neurologie tropicale de Limoges. Questionnaire d'investigation de l'épilepsie dans les pays tropicaux. *Bull Soc Pathol Exot* 2000; 93: 276-8.