



COMPARING SYMPTOMS OF KALACHI SLEEPING SYNDROME WITH KNOWN DISEASES AND CONDITIONS TO DETERMINE CLASSIFICATION OF CAUSAL AGENT. INCIDENCE DENSITY SAMPLING CALCULATIONS

Zhalmagambetov B., Byron Crape

Nazarbayev University(Nur-Sultan, Kazakhstan)

bzhalmagambetov@nu.edu.kz

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Introduction. In 2011 some of the residents of Kalachi were afflicted with a sudden acute syndrome, where they would abruptly fall into an immediate abnormal sleep. These episodes of losing consciousness could happen anywhere and anytime. By the end of 2015, news reports estimated that 1 out of every 4 residents had developed this syndrome. Both children and adults were afflicted. Males and females were equally affected with no gender preference. The overall purpose of the study is to characterize signs and symptoms of the sleeping syndrome to confirm or reject the likely classification of causal agents, based on the various hypotheses. Those include viruses, fungi, bacteria, chemicals, radiation, mass sociogenic illness, and gases such as carbon monoxide and carbon dioxide intoxications. Second purpose will be to assess the risks of developing the syndrome 1st, 2nd and 3rd times through incidence density sampling calculations.

Methods: Analyses on comparisons and contrasts with signs and symptoms and frequencies of signs and symptoms of the Kalachi sleeping syndrome with those produced by various potential causal agents, as reported in the published scientific literature. The statistical package SPSS was utilized for data management and statistical applications. Analyses on the risks (overall hazard) of developing disease the first time versus the second or third time, to determine if the sleeping syndrome conveyed any "immunity", utilized a probabilistic theoretical method sometimes utilized in survival analysis related to time to episode, called incidence density sampling.

Results: Among the leading reported symptoms were spinning head, headache followed by fatigue and memory loss, significantly less number of people reported fever. The probability of getting 1st episode equals to 0.2014 and 2nd episode equals to 0.3314. There is a statistically significant high chance to get 2nd episode if one already had a previous case ($p=0.005$). Finally, for the 3rd episode equals to 0.2615.

Conclusion: Symptomatically and in line with the previous household investigation current hypothesis of incapacitant water transmission seems reasonable. Infectious nature of the cause is less likely due to absence of immunity after the first exposure as it is evidenced from density sampling calculations.