

论著

国际航行船舶外来医学媒介生物传入风险的logistic回归分析

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摘要:

【摘要】 目的 探索国际航行船舶外来医学媒介生物传入的风险因素。方法 采用1:4频数匹配的分析性流行病学研究方法,在2007年来港国际航行船舶中选择媒介阳性船舶170艘,随机选择对照船舶680艘进行调查,并以非条件logistic回归法分析筛选与媒介检出相关的风险因素。结果 校正混杂因素及变量间的干扰后,总吨位的OR值为0.711(95%CI:0.497~1.016)、到达季节的OR值分别为OR春 vs.冬=3.413、OR夏 vs.冬=3.328、货物种类的OR值为3.541(95%CI:1.495~8.383)、曾检出媒介生物的OR值为31.213(95%CI:8.250~118.093)、船员国籍分布的OR中外籍vs.中籍值为0.402(95%CI:0.173~0.938)、免予除鼠证书签发日期的OR值为1.372(95%CI:1.117~1.684)。结论 经多因素量化分析,筛选出与船舶媒介生物携带相关的6项风险因素,且差异均有统计学意义,为国际航行船舶外来媒介生物风险评估及预警系统的建立提供理论基础。

关键词: 国际航行船舶 外来媒介 logistic回归 截获

Logistic multivariate regression analysis of risk factors associated with introduction of exotic medical vectors by international navigation ships

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Abstract:

【Abstract】 Objective To explore risk factors associated with introduction of exotic medical vectors by international navigation ships. Methods A frequency-matched design of epidemiological study was applied in this study. A total of 170 vessels in which medical vectors were detected and 680 controls randomly selected among all of the vessels arriving at Ningbo port in 2007 were investigated, and vector risk factors were screen out by unconditioned logistic multivariate regression. Results Six risk factors included: gross tonnage (OR=0.711, 95%CI:0.497-1.016), arriving season (OR sp vs.wi=3.413, OR su vs.wi=3.328), cargoes varieties (OR=3.541, 95%CI:1.495-8.383), vector-positive records (OR=31.213, 95%CI:8.250-118.093), nationality of crews (OR=0.402, 95%CI:0.173-0.938), issuance date of Deratting exemption certificate (OR=1.372, 95%CI:1.117-1.684). Conclusion Six risk factors were screened out by multivariate quantitative techniques, which would provide theoretic basis for the construction of Risk Assessment and Early Warning System.

Keywords: International navigation ship Exotic medical vectors Logistic regression Capture

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