Ameliorative Catalytic Model of Age-Specific Prevalence of Leprosy Simulated by Using Microcomputer *Yang Zhongmin, Institute of Dermatology CAMS, Nanjing*

This paper advances an ameliorative catalytic model to imitate age-specific prevalence rates for leprosy by using microcomputer for eight prefectures in Jiangsu province with analyses of results. The author considers that the distribution of age-specific prevalence of leprosy tallies with the ameliorative catalytic model. It is a curve of S shape which slowly goes up at beginning then faster rising and reaching a plateau after the point of peak. The curve is reflected in characteristics with a longer latent period, longer course of the disease and lower incidence.

Through analysing and comparing the practical leprosy prevalence in eight prefectures with three parameters of the catalytic model, it is obviously that the prevalence was positive correlation with parameter a and negative correlation to parameter b, k. Therefore parameters — a, b, k in the two-stage catalytic model respectively represents the force of infection, the speed of eliminating the disease and an indicator of the effect of control disease.

Catalytic models may be used to simulate and analyse the disease data in various periods, regions or masses for comprehensive evaluation of the force of infection, ability to eliminating disease in a population and the effect of control programme.

Key words   Catalytic model   Two-stage catalytic model   Force of infection   Age-specific prevalence of leprosy

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济南市健康人群流行性出血热隐性感染初步调查

济南军区军事医学研究所   杨占清   张素芹   孟祥瑞

为了解流行性出血热（EHF）流行后在健康人群中隐性感染情况，评价人群免疫水平，于1987年8月我们应用间接免疫荧光技术（IFAT）对济南市既往无EHF病史，近期又无明显发热以及其他类似EHF症状的部分健康人与临床确诊为EHF病人的血清进行了EHF抗体检测。试验用EHF细胞抗原片购于南京军区后勤部军事医学研究所；羊抗人IgG荧光抗体系上海生物制品研究所生产（批号8601）；血清标本分别由济南市传染病医院检验科和基建工程八局职工医院提供，保存－20℃冰箱备用。镜检用透射光式荧光显微镜。

本次共检测济南市健康人血清472份，EHF抗体阳性者16份，阳性率3.39%；检测EHF现症病人26例，阳性者25例，阳性率为96.15%；检测肝炎病人20例，未发现阳性者。其中男性阳性率4.09%，女性2.78%，二者无明显差别。不同年龄组EHF抗体阳性率除20岁以下未查出阳性者外，21岁以上各年龄组均有阳性，但各年龄组间无明显差别。上述结果较国内十三省（市）调查结果（1.53%）和李镐汪等用黑线姬鼠肺抗原片检测城市正常人群结果（1%）略高，但与邻近的江苏省（2.83~3.10%）、安徽省（4.0%）、河南省（4.6%）和山东济宁市（3.7%）等疫区报道的基本一致。