

的危害程度。根据数学模型的微分方程，可以计算出各年龄组脑血管病死亡率的“每龄增长率”，以及这种增长率在年龄每增长一定岁数时的“增长倍数常数”。这两个指标均可用以比较不同人群脑血管病的危害程度。

A Mathematical Model of Age Distribution of Cerebrovascular Diseases Mortality Xue Guangbo, et al., Second Military University of Medicine, Shanghai

There was a tendency that the mortality of cerebrovascular diseases increased with age. The data from several population groups were mathematically analogized, and the mathematical model of age distribution of stroke mortality was established by using the exponential curve,  $y = 10^{a+bx}$ . The model gave an account of the law of age distribution of stroke mortality. The increment quantity of the stroke mortality in various age groups when age increased one year could be calculated by using the differential equation  $dy/dx = \ln 10 b 10^{a+bx}$  from the exponential curve equation,  $y = e^{a+bx}$ . Further, “the increment multiple constant” of the increment quantity of stroke mortality with age groups could be calculated. The constant might be used as a new index for comparison with risk degree and age distribution law of stroke among various populations. In addition, the model might be used to predict death cases and mortality of stroke in a population.

**Key words** Mathematical model of epidemiology Stroke

## 参 考 文 献

1. 史荫绵, 等. 上海市虹口区75万余人口中脑血管病流行病学调查分析. 中国神经精神疾病杂志 1985; (3): 4.
2. 冯而娟, 等. 上海市卢湾区30年脑血管病流行病学资料分析. 中华神经精神科杂志 1983; 16(2): 105.
3. Kagan A, et al. Dietary and other risk factors for stroke in Hawaiian Japanese men. Stroke 1985; 16(3): 390.
4. Takeya YO, et al. Epidemiologic studies of coronary heart disease and Stroke in Japanese men living in Japan, Hawaii and California: Incidence of Stroke in Japan and Hawaii. Stroke 1984; 15(1): 15.
5. Kuller LH, et al. Epidemiology of Stroke. Schoenberg BS, et al, eds. Neurological Epidemiology: Principles and Clinical Application, New York, Raven Press, 1978: 281-311.
6. MacMahon SW, et al. Blood pressure levels and mortality from Cerebrovascular disease in Australia and the United States. Am J Epidemiol 1984; 120(6): 865.
7. 上海第一医学院卫生统计学教研组. 医学统计方法. 上海科技出版社, 1979: 91~99.
8. 杨树勤主编. 中国医学百科全书. 医学统计学. 上海科技出版社, 1985: 170~171.
9. 周怀梧. 数理医药学. 上海科技出版社, 1983: 17~58.
10. Frome EL, et al. Use of poisson regression models in estimating incidence rates and ratios. Am J Epidemiol 1985; 121(2): 309.
11. 薛广波, 等. 脑血管病死亡率年龄分布的数学模型—指数曲线  $y = ae^{bx}$  的模拟. 第二军医大学学报 1986; 7(2): 106.

## 鲜、冻猪肉沙门氏菌带菌调查报告

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1986年6月, 为了解猪肉沙门氏菌带菌情况, 我们对常德市鲜、冻猪肉进行了调查。

鲜猪肉系采集农贸市场正在销售的个体户或集体承包点的样品; 冻猪肉系采集冷冻厂样品。检验方法均按1985年卫生部颁发的《食品卫生检验方法》(微生物学部分)进行。生化反应按肠杆菌科编码进行鉴定, 除葡萄糖+, 赖氨酸、鸟氨酸、硫化氢、卫茅醇、枸橼酸盐阳性外, 靛基质、乳糖、苯丙氨酸、尿素酶均为阴性。

本次对40份猪肉作了调查, 其中鲜猪肉30份, 检出沙门氏菌6株(均被沙门氏噬菌体完全裂解), 其中鸭沙门氏菌1株, 纽兰沙门氏菌1株, 阿哥纳沙门氏菌(蔗糖阳性变种)1株, 阿哥纳沙门氏菌1株, 阳性率为20%。说明常德市鲜猪肉沙门氏菌污染严重, 有可能通过直接或间接的方式而引起人类食物中毒, 应引起高度重视。冻猪肉10份没有检出沙门氏菌, 可能是冻猪肉在屠宰过程中是程序化作业污染机会少, 或是样品少不足以说明问题之故。