

**DME**

# 临床流行病学

## 论文集 (1)

主编

朱世能 林果为

A Paper Collection  
of  
CLINICAL EPIDEMIOLOGY  
(Part One)

Chief Editors

Zhu Shineng, M.D.  
Lin Guowei M.D

上海医科大学出版社

Shanghai Medical University Press

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(Part One)

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上海医科大学出版社  
SHANGHAI MEDICAL UNIVERSITY PRESS

\*C0142550\*



沪新登字207号

特约编辑 刘忠英

封面设计 吴 平

2478/18  
临床流行病学论文集(1)

朱世能 林果为 主编

上海医科大学出版社出版

上海市医学院路138号

邮政编码 200032

新华书店上海发行所经销

江苏句容县排印厂排版

上海译文印刷厂印刷

开本 787×1092 1/16 印张: 22.75 字数 553000

1991年12月第1版 1991年12月第1次印刷

印数: 1-3,000

ISBN 7-5627-0091-5/R·82

科目 242-266

定价: 15.00 元

## 前 言

随着医学模式从生物医学向生物心理社会医学的转变,预防医学在整个医学中的重要地位的确立,以及流行病学方法在医学领域中的广泛应用,“临床流行病学(Clinical Epidemiology)”或“设计、测量和评价(Design, Measurement and Evaluation)”作为一门新兴的边缘学科已逐渐受到注意,并愈来愈显示其重要的作用。我校自1980年开始通过世界银行贷款和洛氏基金会支持,先后派出十余名临床医师赴国外学习临床流行病学,并于1983年引进世界银行贷款DME项目。近年来以这批专家为骨干,在临床各科广泛开展临床流行病学的教学、科研和咨询活动,并向研究生和大学生传授临床流行病学知识,每年都以一定数量的论文参加洛氏基金会资助的国际临床流行病学网年会(INCLEN)进行交流。受其影响,广大临床医师已认识到临床流行病学在临床各科医疗、科研、教学中的重要性,在论文的广度和深度上都有明显的提高。本着进一步开展学科建设和推动临床医师采用流行病学方法,提高论文水平的愿望,我们收集了我校各学院和七所附属医院临床医师近年来的有关论文63篇约30万字汇编成册,名为“临床流行病学论文集(1)”以供交流和参考。

从这些论文可以看出:①近年来临床科研方向有了很大转变,更多的临床医师已从个别病人走向广大人群,开展人群医学研究,了解疾病在人群中的分布,以及疾病的全貌。本集中有关心血管病、脑血管病、糖尿病、肿瘤、铁缺乏症以及病毒性肝炎的发病情况、危险因素调查以及预防对策等都说明了这点;②临床科研所用研究方法已从一般病例分析走向横断面调查、纵向调查、病例对照研究、队列研究、随机对照临床试验、诊断试验评价以及大系列病例分析等,丰富了研究内容,提高了研究水平,为临床科研开拓了广泛的前景。

本论文集将分集出版,既是临床流行病学科研成果的总结,也将提供国内外交流和研究生的示范教材。由于编者水平的限制,时间的仓促,相信尚有许多不足之处,敬请广大读者提出宝贵的意见。

上海医科大学 朱世能 林果为

## PREFACE

By the way of the transformation of medical model from biomedicine to bio-psycho-social medicine, the establishment of important position of preventive medicine in the medical domain, and the extensive use of the epidemiological method in the medical fields, as a new borderline subject, the "Clinical Epidemiology" or "Design, Measurement and Evaluation (DME)" has been understood and showed its importance gradually. Since 1980, supported by the World Bank Loan and the Rockefeller Foundation, more than 10 clinicians have been trained in clinical epidemiology abroad. The DME program of World Bank Loan was introduced in 1983. Recently, these key specialists have been under taking teaching, scientific research and consultant work of clinical epidemiology in many clinical departments and charging the clinical epidemiology course for the graduate and undergraduate students. There were less than 10 papers per year for communication in conference of INCLEN supported by the Rockefeller Foundation. Now many clinicians recognized the importance of clinical epidemiology in health care, scientific research and medical education in different clinical subjects. The quality of those is improving distinctly. For the advance of the subject of clinical epidemiology, the promotion of the application of clinical epidemiology method by the clinicians, and improvement of papers forward, the 63 clinical epidemiological papers collected from the schools, faculties and hospitals of Shanghai Medical University are compiled as "A Paper Collection of Clinical Epidemiology (Part I)" for communication and reference. From these papers, it is shown:

1. The direction of scientific research of clinical subjects has been changed recently. More clinicians do their research work from individual patient to the wide population. They are doing the "Community Medicine" to understand the distribution of diseases among the population and the overview of the diseases. The morbidity risk factors and prevention policy of cardiovascular diseases, cerebrovascular diseases, diabetes mellitus, tumors, iron deficiency and viral hepatitis collected in this book are the samples.

2. The method of clinical research has been changed from case analysis to case-control, cross-sectional, cohort studies, randomized controlled trial, evaluation of diagnostic tests and large series of case analysis, etc. It enriches the research content, enhances the research quality and pushes the clinical research forward. This paper collections will be published one part after another. It is a summary of the scientific researches on clinical epidemiology as well as the teaching materials for

graduate students. We think there might be some mistakes. Any opinions and comments will be welcomed.

Thank you.

**Zhu Shineng M. D.**

**Lin Gouwei M. D.**

*Shanghai Medical University, Shanghai*

# 1. INFECTIOUS DISEASES

## 1.1 INCIDENCE SURVEY AND RISK FACTOR ANALYSIS OF NOSOCOMIAL INFECTIONS

Tong Huahua, et al

*Dept. of Infectious Disease, Hua Shan Hospital, Shanghai Medical University,  
Shanghai*

Between August 1985 and July 1986, among 2 454 patients discharged from Hua Shan Hospital who were prospectively surveyed, there were 224 infections, the total infection rate was 9.13%. Pneumonia was the most frequent type of infection, and together with urinary tract infection accounted for 73.66% of all nosocomial infections. Gram negative organisms were predominant in nosocomial infections, accounting for 80% of nosocomial organisms. The most prevalent organisms were *Pseudomonas aeruginosa* and *Klebsiella pneumonia*. Antibiotic sensitivity test done on 182 strains of the organisms revealed that 67.58% were resistant to four or more commonly used antibiotics. Some of the risk factors in association with nosocomial infection were studied with single risk factor analysis and multivariate. Logistic Regression Model analysis. The highest risk factors for nosocomial infection were fatal underlying disease and systemic use of antibiotics, wound drains, use of immunosuppressive agents, tracheotomy or artificial ventilation, compromised hosts, urinary catheterization and length of hospitalization. Age and sex were also important risk factors.

## 1.2 THE EFFICACY OF HBV VACCINE IN PREVENTING THE TRANSMISSION OF HBV FROM MOTHER TO INFANT

Zhu QiYong, et al

*Children's Hospital, Shanghai Medical University, Shanghai*

This is a randomized placebo-controlled study to assess the efficacy of HBV vaccine in prevention the transmission of HBV infection from mother to 114 high risk neonates. 6 and 12 months after their birth anti-HBs was detected in 87.5, 89.6% and 93.8% respectively of the 48 vaccinated infants. Follow-up for a period of 24 months revealed that HBsAg appeared in 18.75% of the vaccinated group and 60% of the control group. The difference in incidence of hepatitis B between the two groups was 25.4%. Results suggested that the use of HBV vaccine was effective in affording a protection against HBV infection in the high risk newborns.

### **1.3 INTRADERMAL INJECTION OF HEPATITIS B VACCINE=** **A COST REDUCTION STRATEGY**

Zhu QiYong, et al

*Children's Hospital, Shanghai Medical University, Shanghai*

The efficacy of low-dose intradermally administered hepatitis B virus vaccine (HBVac) was studied in our hospital in the year 1986. In each of 26 sero-negative healthy young children of one to two years old, 2 $\mu$ g(0.1ml) of HBVac was administered intradermally (ID) on days 30 and 180. An antibody (anti-HBs) responses were induced in 7 of the 26 children (26.92%) within one month after the initial dose. 3,6 and 12 months after the first dose, the seroconversions showed a significant increase. 18 of 26 (69.23%) recipients had high levels of anti-HBs (P/N ratio>100) one year after the first dose. These results indicated that 2 $\mu$ g(0.1ml) of HBVac ID for 3 times were immunogenic in healthy young children. This would provide approximately a 90% reduction in the cost of vaccination.

### **1.4 TRANSPLACENTAL TRANSMISSION OF HEPATITIS B VIRUS**

Zhu QiYong, et al

*Children's Hospital, Shanghai Medical University, Shanghai*

Transplacental transmission of hepatitis B Virus (HBV) infection was studied in 95 neonates born from mothers who were chronic carriers of HBV. 16 of the 95 neonates had HBV markers positive (HBsAg and/or HBeAg) in their sera at birth. These neonates were unlikely to be protected by the HBV vaccine in one year follow-up study. These HBV serum markers in newborns indicate that the transmission of HBV was intrauterine rather than prenatal.

### **1.5 AN ANALYSIS OF THE CAUSATIVE ORGANISMS IN ADULT ACUTE INFECTIOUS DIARRHEAS ENCOUNTERED IN THE PAST 12 YEARS**

Zhen Delian, et al

*Dept. of Infectious Diseases, Hua Shan Hospital, Shanghai Medical University, Shanghai*

This article analyzed the pathogens of adult acute infectious diarrheas encountered in the past 12 years in Hua Shan Hospital, Shanghai Medical University. *Shigella dysenteriae* was the most common pathogen. However, *Shigella sonnei* has markedly increased in frequency since the late 70's. Parahemolytic vibrio, *Salmonellae*, *Staphylococcus aureus*, *Candida albicans* and *Clostridium difficile* were uncommon pathogens. Since 1980 *Shigella schmitzii*, *boydii*, and *shigae* have also been found. 9 strains of *Campylobacter jejuni* were isolated in 1981.



## 1.6 EVALUATION OF THE WIDAL TEST IN THE DIAGNOSIS OF TYPHOID FEVER

Sun Tao, et al

*Dept. of Infections Diseases, Hua Shan Hospital, Shanghai Medical University, Shanghai*

To determine the diagnostic value of the Widal test in typhoid fever, the authors reviewed its results obtained in 430 inpatients during the period from 1980 to 1986. It was found that a cut-off value of O titre  $\geq 1:80$ , H titre  $\geq 1:160$  showed a sensitivity of 90.5%, with a specificity of 88.4%. The causes of false negative and false positive results were discussed. It is emphasized that the results of the Widal test must be interpreted in accordance with clinical data and other laboratory findings.

## 1.7 ANTIMICROBIAL AGENT SUSCEPTIBILITY PATTERNS OF BACTERIA IN HOSPITAL AS RELATED TO THE USE OF ANTIMICROBIAL AGENTS

Tong Huahua, et al

*Dept. of Infections Diseases, Hua Shan Hospital, Shanghai Medical University, Shanghai*

A rise in antimicrobial resistance of bacteria in both community acquired and nosocomial infections poses serious therapeutic problems. To assess the magnitude and trends of resistance to the commonly used antimicrobial agents in Hua Shan Hospital, epidemiological surveillance data regarding antimicrobial agent susceptibility patterns of bacterial strains and antimicrobial consumption prior infections during a 12-month period in our hospital are presented.

From October 1, 1986 until September 30, 1987, 323 randomly selected strains from the bacteriological laboratory in Hua Shan Hospital, which has a 700-bed capacity were collected. The bacteria isolates were mostly collected from urinary tract infection (127 strains) and lower respiratory tract infection (110 strains). There were 111 community acquired infections (CA) and 212 hospital acquired infections (HA). *P. aeruginosa*, *E. coli* and other pseudomonas were the organisms most frequently associated with CA infections. *P. aeruginosa*, *K. pneumonia* and *S. aureus* were the frequent organisms in HA infections.

The surveillance data on antimicrobial consumption prior infection showed that gentamicin chloramphenicol, lincomycin and ampicillin are the most commonly used antibiotics.

Results of the in vitro susceptibility of 323 strains to 13 antimicrobial agents commonly used during the study period showed that the resistant percentage of hospital organisms against tetracycline, chloramphenicol, ampicillin and gentamicin had increased to 40-100%. Most strains were sensitive to amikacin, ceftazidime and cefotaxime. It was postulated that antibiotic overuse and misuse contributed to increased prevalence of drug-resistant bacteria in the hospital.

## 2. INTERNAL MEDICINE

### 2.1 DIABETES MELLITUS SURVEY IN CHINA

Zhong Xueli, et al.

*National Diabetes Research Cooperative Group, Epidemiologic Unit*

This paper reports the prevalence of diabetes mellitus (DM) in 14 provinces and large cities of China. Which has been extensively investigated since 1980 under the auspices of Ministry of Health supported by the Provincial Health Bureaus. 304537 subjects were investigated in which about 85% were of the Han nationality, and the others were of minority nationalities including Moslems, Mongolians, Tibetans, Miaos, Zhuangs and Uigurs. On excluding 10.358 Uigurs and using the screening method and diagnostic criteria proposed by the National Diabetes Research Cooperative Conference held in Lanzhou in 1979 and amended in Beijing in 1980, 899 overt DM (2.96‰) and 955 chemical DM (3.15‰) cases were diagnosed with a 6.09‰ prevalence rate. The standardized prevalence is 6.74‰ according to the 1964 population. Prevalence varied markedly from one district to another, ranging from the highest in Ningxia (10.62‰) to the lowest in Guizhou (1.51‰). The standardized prevalence is highest in Beijing (11.04‰) and lowest again in Guizhou (1.56‰).

Among 160.195 males standardized prevalence is 6.84‰ and among 144342 females 6.62‰, a male to female standardized ratio of 1.03, males being slightly more affected. However, on excluding influencing factors other than sex, there is no statistically significant difference,  $P > 0.05$ . So male and female subjects are equally affected in China, which differs from adult DM female predominance in foreign countries.

Though DM prevalence varies widely, the general tendency for it is to be higher in urban than rural areas. In general, DM prevalence is comparatively lower in China than in many other countries. It is closely correlated with age, sex, body weight, occupation, nationality and regional factors. All these can be considered as intrinsic and extrinsic factors of DM pathogenesis and further research is required.

### 2.2 DIABETES MELLITUS SURVEY IN SHANGHAI

Zhong Xueli, et al.

*Shanghai Diabetes Research Cooperative Group, Shanghai*

This paper reports diabetes mellitus (DM) incidence among 101624 shanghai people. 1028 cases were diagnosed, an overall prevalence of 10.12‰, and a statistically standardized prevalence of 9.29‰. These diabetics are divided into 721 overt cases (7.1‰) and 307 latent cases (3.02‰). Of the 49664 males examined, 523 cases were diagnosed (10.53‰), including 184 latent (3.7‰) and 339 overt cases

(6.83‰), Of the 51,960 females examined, 505 cases were diagnosed (9.72‰), including 123 latent (2.73‰) and 382 overt cases (7.35‰).

DM is closely correlated with age, sex, body weight and occupation. All these can be considered as intrinsic and extrinsic pathogenetic factors of this disease and further research is needed.

The ratio of overt and latent DM in this series is 2.3. The sex ratio between male and female diabetes is 1.08, males being slightly more affected than females. On excluding the influencing factors of age, body weight and occupation, the difference is not statistically significant ( $P > 0.05$ ). Latent DM strikes males more frequently while overt DM strikes females more frequently. In the latent group the male to female ratio is 1.56, in the overt group it is 0.93.

DM prevalence in both sexes, no matter whether it is overt or latent increases with age. DM age distribution is: before 40 years of age, females are more affected than males (sex ratio  $m:f < 1$ ), after 40 males are much more affected than females (sex ratio  $m:f > 1$ ). The difference is even more marked in the over 60 group, because in groups older than 60 DM male prevalence continues to show sharp increment, while in the female group, the increment is much lower.

DM according to occupation, on excluding age and overweight factors, the difference is still statistically significant,  $P < 0.01$ . The highest prevalence occurs in retired workers, housewives and then, aged cadres, etc. The lowest prevalence is in the peasant group, students excluded.

When body weight exceeds average weight by 10% it is considered overweight. DM prevalence in this overweight group is 20.88‰, 2.8 times higher than in the non-overweight group (7.49‰). This implies that obesity is an important predisposing factor in DM development and in this group DM also increases with age.

## 2.3 IDEAL BODY WEIGHT OF ADULTS IN SHANGHAI

Sha Songlin, et al.

*Shanghai Diabetes Research Cooperative Group, Shanghai*

This paper reports the data on the ideal body weight of adults aged from 15 to 75, which were collected during a survey of the prevalence of diabetes mellitus in Shanghai. A total of 101 624 subjects were investigated. Among them 49 664 were males and 51 960 females. The Han constitutes the main part, only a negligible number of 100 subjects were people of minority nationalities. All diabetics and those over 75 years old were excluded.

Besides age and sex, body height in cm without shoes and body weight in kg with a underwear were recorded. The median values of actual body weight for different sex, age and body height groups smoothed in round numbers by mathematic methods were taken as their respective ideal body weight, and were given in tabular

form. In either sex, the ideal body weight  $\pm 10\%$  was considered as the normal range of body weight. A 10% increase above normal was considered as overweight, and a 20% increase as obese.

Quete't's body mass index (BMI) were calculated according to the formula:  $BMI = \text{body weight in kg} / (\text{body height in cm})^2$ . For Shanghai population in the 15 to 19-year groups, normal BMI varied between 0.18 and 0.22,  $BMI > 0.22$  was considered as overweight, and  $\geq 0.24$  as obese. For 20-year and older age-groups, normal BMI varied between 0.20 to 0.24,  $BMI > 0.24$  was considered as overweight, and  $\geq 0.26$  as obese.

## 2.4 CLINICAL ANALYSIS OF ACUTE MYOCARDIAL INFARCTION IN SHANGHAI

Dai Ruihong, et al.

*Shanghai Myocardial Infarction Research Cooperative Group, Shanghai*

A total number of 1544 cases of acute myocardial infarction (AMI) admitted into 10 hospitals in Shanghai from 1970 to 1979 was analysed. There was a tendency that relative morbidity was increased year by year. The major causes of death in the acute stage were cardiogenic shock, arrhythmias and heart failure. The prevention and treatment of pump failure is the leading research topic for further lowering of the mortality rate of AMI hereafter. The factors influencing the prognosis in acute stage were age, sex, previous history of apoplexy, and presence of diabetes and severe complications including heart failure, shock and arrhythmias. Individual factors influencing long-term prognosis were age, sex, previous history of angina pectoris, myocardial infarction and heart failure, definite predisposing factors before AMI and rales on admission. Patients complicated with heart failure and tachyarrhythmias in acute stage had a relatively high incidence of cardiac death. According to the long-term follow up study, the average survivor rate was 72.17% and ten-year survivor rate was 69.92%. If patients could survive the acute stage, the long-term prognosis would be favorable.

## 2.5 CASE-CONTROL STUDY ON MYOCARDIAL INFARCTION

Pan Xinwei, et al.

*Shanghai Cooperative Group of Coronary Heart Disease, Shanghai*

This case-control study was made in order to clarify the risk factors for coronary heart disease (CHD). Patients who survived acute stage of myocardial infarction (MI) diagnosed with certainty clinically were chosen as index cases. Controls were matched in sex and occupation, with an age difference of less than 5 years. They were free from evidence of CHD and had negative electrocardiographic exercise tests.

Altogether, 200 consecutive MI cases admitted to our hospitals were investigated. They included 179 males and 21 females. Average ages of patients and controls were 60.5 and 60.3 years, respectively.

Association of hypertension with MI was far greater than with controls. The relative risk was 5.5-7.6 depending on the diagnostic criteria of hypertension. There was also a higher association between cigarette smoking and MI with relative risk at 3.6. No association was found with serum cholesterol level, body weight index, quantities of meat or rice intake, sleep, physical exercise, past history of diabetes mellitus or CHD family history. Hypertension and smoking are apparently the MI risk factors in this part of China.

## 2.6 ASSOCIATION OF CIGARETTE SMOKING WITH HYPERTENSION

Pan Xinwei, et al

*Shanghai Institute of Cardiovascular Diseases and Zhong Shan Hospital,  
Shanghai Medical University, Shanghai*

An investigation on the association of cigarette smoking with hypertension was made among 39 048 persons in rural area, Shanghai. After standardization prevalence rate of hypertension for smokers was much lower than that for non-smokers: 3.93% and 4.90% respectively. The difference was significant statistically ( $p < 0.01$ ). This suggests that cigarette smoking has some effect on reducing blood pressure.

## 2.7 HYPERTENSION-RISK FACTOR OF MYOCARDIAL INFARCTION

Pan Xinwei, et al

*Shanghai Institute of Cardiovascular Diseases and Zhong Shan Hospital,  
Shanghai Medical University, Shanghai*

In this study, 343 cases of acute myocardial infarction were diagnosed by the criteria of WHO; the cases and controls were individually matched in five-year age interval, same sex and occupation, and the controls had no history of coronary heart disease and Master test negative. The association between hypertension (diastolic blood pressure  $> 90$  mmHg) and acute myocardial infarction is statistically significance, [ $\chi^2 = 98.78$ ,  $p < 0.001$ ,  $\chi^2 = (|b - c| - 1)^2 / (b + c)$ ]. While the hypertension were classified by different levels (diastolic blood pressure  $> 90$  mmHg,  $\geq 95$  mmHg, systolic blood pressure  $\geq 160$  mmHg, and systolic blood pressure  $\geq 160$  mmHg or diastolic blood pressure  $\geq 95$  mmHg), the Relative Risk are 6.31, 10.53, 9.18, and 9.23, respectively. The data confirm that people with hypertension are 6~10 times as likely to be associated with acute myocardial infarction as people without hypertension.

## 2.8 PREVALENCE AND UNAWARENESS OF HYPERTENSION IN THE PETROCHEMICAL INDUSTRIAL POPULATION IN CHINA

Huang Yuying

*Dept. of Prevention and Health Care, Jinshan Hospital, Shanghai Medical University, Shanghai*

This article reports the prevalence and unawareness of hypertension in a petrochemical industrial population. Data were obtained from the First Shanghai petrochemical Complex Hypertension Survey, which was part of the first round of the Health Examination Survey Program ( $n=29\,391$ ), from May 1979 through June 1982. In this study, 27,256 workers and staffs were screened for hypertension (screening rate=92.74%) in 19 plants of the Shanghai Petrochemical Complex. The overall prevalence rate was 3.05% (standard prevalence rate=3.33%). Under the age of 60, the rates of hypertension were similar in both sexes except for the age-group 30~39 ( $p<0.01$ ). Of 830 hypertensives detected, 245 (29.52%) were unaware of their hypertension at the time of screening. Men aged from 30 to 39 had the highest level of unawareness (45.19%,  $P<0.005$ ). The importance of periodic, organized health examination surveys for early detection and control of hypertension is stressed. It is also concluded that special care should be directed toward men aged under 30.

## 2.9 THE CLINICAL SIGNIFICANCE OF U WAVE INVERSION: AN ANALYSIS OF 364 CASES

Tao Wuhua and Wei Shoude

*Jinshan Hospital, Shanghai Medical University, Shanghai*

In an analysis of 6 947 cases with abnormal electrocardiogram (ECG), 364 (5.24%) of them showed U wave inversion. Based on clinical analysis, its common causes were found to be coronary heart disease (CHD) and hypertension (HT). The correlation between the U wave inversion and the age was related with the incidence and the age of these diseases. The U wave inversion usually occurred in left-sided chest leads associated with left ventricular hypertrophy and increased left ventricular potential. The U wave inversion associated with pulmonary heart disease frequently suggested the presence of CHD or functional failure of papillary muscles. The U wave inversion associated with biphasic, flat or inversion of T wave suggested heart failure, upon improvement of which normal U wave was restored.

## **2.10 PRIMARY INVESTIGATION ON ASTHMA IN 142 035 INHABITANTS BOTH IN SHANGHAI URBAN AND JIASHAN RURAL AREAS**

**Zhu Junlong, et al**

*Dept. of Internal Medicine, Hua Shan Hospital, Shanghai Medical University, Shanghai*

An investigation on the prevalence and other data of asthma in total of 142 035 inhabitants both in Shanghai urban and Jiashan rural areas was carried out. Prevalence of asthma in the city was 6.9% while 13.2% in the rural areas. The prevalence of asthma was two times higher in urban children than in urban adults and it was twice as high as in rural adults than in urban adults, but urban children had a much higher prevalence than rural children.

Present data also showed a great difference between the asthmatic types of urban and rural patients. In adults, 64% of urban cases were considered as "extrinsic" instead of 14% in rural cases, while 52% of rural cases were due to infection ("intrinsic" asthma). Authors consider that long term breast feeding might be a main reason of the low incidence of extrinsic asthma in the rural area. The very high rate of intrinsic asthma in the rural patients might be mainly due to the higher incidences of upper respiratory infections and bronchitis.

## **2.11 FURTHER INVESTIGATION ON CLINICAL EPIDEMIOLOGY OF ASTHMA**

**Zhu Huiru, et al**

*Division of Respiratory Diseases, Dept. of Medicine Hua Shan Hospital, Shanghai Medical University, Shanghai*

An investigation of the birth season and feeding history during infant period was carried among 100 and 104 cases of asthma children at both urban and rural areas. The results were compared with those of normal children. The authors consider that exogenic asthma is related to the infants born in autumn or lacking maternal feeding during the first six months, and endogenic asthma is related to hyperreactivity of airways caused by repeated stimulation. Different styles of life, environmental conditions and feeding custom may be the causes of different types of asthma happened in urban and rural areas.

## **2.12 LIVER DISEASES IN ADULT AUTOPSY: AN ANALYSIS OF 2 665 CASES**

**Zhu Shineng, et al**

*Dept. of Pathology, Faculty of Basic Medical Sciences, Shanghai Medical University, Shanghai*

The autoptical data of 2 665 adults dating from June 1949 to May 1979 were analysed. In this series there were 506 cases with a diagnosis of primary liver

diseases, an incidence of 18.99%, topping the list of various other diseases. When the data were examined for counting the incidence of tumor additionally, tumor ranked the first, being 807 cases or 30.28% of the series. The most frequent tumor was the cancer of liver.

Schistosomiasis was the most common disease among all liver diseases. In addition, cirrhosis due to schistosomiasis occurred in 35% of this infestation. The next were nodular cirrhosis, metastatic tumors and primary carcinoma of liver in the order of frequency. Based on the autopsy data analysed, the authors suggest that eradicating schistosomiasis and preventing viral hepatitis and proper treatment given to patients of hepatitis should constitute the important measures in decreasing the incidence of liver diseases in China, especially in her eastern regions.

### **2.13 A PRELIMINARY STUDY OF POPULATION SCREENING FOR HEPATOCELLULAR CARCINOMA IN HIGH RISK POPULATION**

Yang Binghui, et al

*Liver Cancer Research Unit, Zhongshan Hospital, Shanghai Medical University, Shanghai*

From November 1983 to December 1984, 2 997 persons of high risk population of hepatocellular carcinoma (HCC) received AFP test with reverse passive hemagglutination assay for initial screening, then checked by radioimmunoassay in the OPD of our Hospital.

Fifteen cases with HCC were discovered. The discovery rate was 501/100 000. It was 34.5 times higher than that in the natural population.

The authors indicated that the persons who were aged over forty, had a history of hepatitis more than 5 years or positive HBsAg were the high risk population of HCC. Authors believe that it is necessary to advice these objects to receive the periodical screening.

### **2.14 THE RELATIONSHIPS BETWEEN GASTRIC CANCER AND GASTRIC ULCER OR CHRONIC GASTRITIS-A COHORT STUDY OF 9 141 PERSONS IN SHANGHAI**

Xu Lihua, et al

*Dept. of Internal Medicine, Hua Shan Hospital, Shanghai Medical University, Shanghai*

Gastric cancer is the most common malignant neoplasm in China. Gastric ulcer and chronic gastritis have been reported to be premalignant states of gastric cancer, but the results in the medical literatures are quite conflicting. In order to confirm the relationships between gastric cancer and gastric ulcer or chronic gastritis, a cohort study of 9,141 persons was conducted among the workers and staff members in Shanghai in 1986.



All the data came from a survey conducted in 1978. Using GI X-ray film and gastroscopes, 9 150 workers and staff members aged more than 40, whose labour insurance is in Hua Shan Hospital, were examined. Thus, all the health information of study population are known to the labour insurance system in our hospital even after retirement.

9 cases of gastric cancer were excluded out of 9 150 persons. Among the 9 141 persons, 5 908 showed normal results, 3 233 showed gastric and duodenal disorders, including gastric ulcer (150 cases), duodenal ulcer (380 cases), duodenal ulcer associated with antrum gastritis (287 cases), antrum gastritis (1 780 cases), duodenitis (408 cases), operated stomach (184 cases) and others (44 cases). 63 987 person-years were followed up. A total of 18 cases of gastric cancer were detected by pathologic examination.

Our study has shown that the incidence of gastric cancer among patients with gastric ulcer was much higher than that among normal persons. The Relative Risk (RR) was 47.3 (95%CI 24~93.2,  $P<0.001$ ), Attributable Risk (AR) 403.1/100 000 person-years (95%CI 325.4~480.9/100 000 person-years) and Standardized Incidence Ratio (SIR) standardized by the incidence rate of gastric cancer in Shanghai was 1 333 ( $P<0.001$ ). For duodenal ulcer associated with antrum gastritis, the results were as follows: RR 9.8(95%CI 3.5~27.0,  $P<0.01$ ) and AR 66.5/100 000 person-years. But in cases of duodenal ulcer without antrum gastritis or in duodenitis groups, no gastric cancer could be detected. For chronic antrum gastritis, the RR was 2.50. So, This study has further confirmed the relationships between gastric cancer and gastric ulcer or chronic gastritis.

## **2.15 RANDOMIZED CLINICAL TRIAL OF CIS-PLATINUM DIAMMINE DICHLORIDE (PDD) IN TREATMENT OF HEPATOCELLULAR CARCINOMA (HCC)**

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From Oct. 1982 to Apr. 1985, 82 patients with HCC proven by pathology were treated in our hospital. 43 treated by hepatic arterial perfusion, were randomized into PDD group: PDD 10 mg per day $\times$ 10, every 3 weeks; control group: fluorouracil (5-FU) 250mg per day $\times$ 4, every week and thio-tepa (TSPA) 10mg, twice a week. The other 39 treated by intravenous chemotherapy, were also randomized into PDD group: PDD 20 mg per day $\times$ 5, every 3 weeks; control group: 5-FU 500mg and TSPA 10mg, twice a week. The objective response rates were 31.82% (7/22) in PDD group and 23.81% (5/21) in control group by hepatic arterial perfusion, and 20.00% (4/20) in the former and 0% (0/19) in the latter who were treated intravenously. The median survivals were 8 months for all the