The presentation by Dr. Tang and Dr. Fang was based on the following research.
November 2002 AHA Meeting, Boston, MA., USA

1_The Living Situation Of Community-Lived Demented Elderly People In Beijing

Wu Zhen_Meng Chen_Meng Jiamei

Department of Social Medicine_Xuanwu Hospital, Capital University of Medical Science

Chinese Journal of Geriatrics_15_6__322- 324_1995

Abstract_OBJECTIVE: to understand the present status of the demented people living in community. **BACKGROUND**: Studies on the living condition of demented aged people is still few in China. It is the first report of the kind in China. **DESIGN/METHODS**: The sample was chosen from urban district and rural counties in Beijing by a random sampling method. The baseline investigation was carried out in 1992 and 3257 cases aged 55-92 years were surveyed. In this paper only data from 1715 case who was over 60 years and had complete data were included.

RESULTS: 1. Demographic feature: Among 1715 cases 88 cases were diagnosed as demented, The prevalence rate 5.1%. It increased with the advance of age, much higher in female. The ratio of male to female is 1:2.5. 2. Family life and social contact: It is suggested that demented elderly had lower position in the families. 5.6% of demented elderly considered themselves not respected by the family members, significantly higher. 50.3% of them still participated in decision making, much lower than their non-demented counterpart.. 44.3% of the demented people did not have any intimate friend to talk with, while in nondemented , 27.3%. 3. Economic status: The demented had lower socio-economic status. 55.8% in the nondemented group lived financially independent, while in demented the rate is only 10.9%. 4. Physical function and care burden: The physical function of demented elderly was much poorer, for about two thirds of them had difficulty in at least one item of ADL, in other group the rate is 1/3. 5. Medical care: 72.7% of demented people had to pay the cost completely by themselves. 35.6% of them confessed that the medical expense was a heavy burden. 43.2% complained certain kinds of difficulties when seeking medical service, such as financial shortage, poor transportation facilities, or difficulty getting about. The percentage of reporting such an inconvenience in demented group was ten percentile higher than non-demented counterpart, suggesting that more serious difficulty in seeking medical treatment. **Conclusion**: The demented people were inferior to the non-demented people in terms of family support, social contact, economic status and medical care.

2_Predictive Value of Some Health Indicators to Mortality in the Elderly

Tang Zhe_Wu Xiaoguang_Meng Chen_Liu Xianghong_Zhou Yufang

Department of Social Medicine_Beijing Geriatric Clinical and Research Center

Chinese Journal of Gerontology, 17(4):194-196, 1997

Abstract: It is reported in this paper the predictive value of some health indicators to death in 3257 elderly people aged 55 years and above. Among 3257 original respondents 363 died during the two years after baseline survey in 1992. The difference between two groups of survivors and non-survivors in the variables of self-reported health (SRH), activity of daily living (ADL), instrumental ADL (IADL), history of chronic diseases and some results from physical examination at the baseline study were analysed to evaluate their predictive value to death. It is found that variables of ADL, IADL and SRH are valuable indicators. The presence or absence of chronic diseases together with

the number of chronic diseases does not appear to be significantly associated with death after two years. However, among chronic disease sufferers the mortality in the persons who reported the impact of diseases on daily living was higher than that in the persons who did not report such an influence, which implies somewhat predictive significance to the outcome. The physical examination showed that dead persons averagely had had a lower Body Mass Index (BMI) (classified as thin), and lower mean level of serum lipid than survivors.

3_Depressive Symptoms Between Urban And Rural Elderly People In Beijing

Chen Meng, Zhe Tang

Department of Social Medicine_Beijing Geriatric Clinical and Research Center

Xuanwu Hospital, Capital University of Medical Science

Chinese Journal of Geriatrics, 20(4):196-198,2000

Abstract: An investigation of the prevalence of depression between urban and rural elderly residents in Beijing, the analysis of the symptoms' characteristics, and its associated factors are reported in the paper. It is found that the median of CES-D in the sample was 3. With usual cutoff point of 16, 13.4% of the elderly were classified as depressed. The standardized rate reached 12.9%. Living area, sex and age are important indicator for depression symptoms, for the prevalent rates in women, in old-old persons and in mountain farmers were higher than that in their counterpart. However the educational attainment is not a significant factor for depression. The logistic analysis showed that there are both similarity and clear difference in associated factors between urban and rural elderly people. Self rated health, perceived economic well-being and frequency of contact with other family members are the similar important predictors of the occurrence of depressive symptoms for senior citizens in all three living area. What is different for them is the relative importance of these factors, as well as such demographic characters like age and gender. It is concluded that rural farmers, especially mountain elderly people have a much higher rate of depressive symptoms, which may attribute to their less financial income, less inferior living standard, poorer physical health status compared with elderly people living in other part of Beijing. It is also implied that the influential factors for urban elderly people are assorted covering both demographic characters, socio-economic status, familial life and health condition. Therefore endeavor and education aimed at different aspects of life should be taken into account when mental health of the elderly people is concerned .

4_Longitudinal Observation Of The Predisposing Factors On Cognitive Change Among Elderly People In Beijing, China

Meng Chen, Tang Zhe

Beijing Geriatric Clinical and Research Center, Xuanwu Hospital, Beijing, PR China

Chinese Journal of Geriatrics, 19(3):211-214,2000

Abstract: Objective To analyze relative important factors affecting cognitive change alone with age advancing by longitudinal observation. **Method** 1227 cases of community lived elderly sample aged 55 and over were tested with Short mental test of MMSE both in 1992 and 1997. Other information about demographic, living, and health condition of the subjects were collected in 1992, and were analyzed as potential predictors. **Result** among the cognitively intact subjects 24.4% decreased more than 2 points in 5 years interval on their MMSE achievement. Multivariate analysis showed that those subjects who score around cutoff points tend to decline further. Other factors

which predict deterioration in MMSE include demographic character as age, educational attainment, and residential area. Among health related factors which were less important, level of activity of daily living (ADL) in baseline time was a significant predictor, together with the onset of stroke in recent five years. Further observation stratified by age verified that factor impacting cognitive change among young old or old old is somehow dissimilar. **Conclusion** Determinants on cognitive decline are age, education, residential area, and failure in physical function, history of cerebrovascular diseases is the sole important chronic disease in terms of predictor of cognitive change.

5_Cognitive Change And Its Predictive Value Among Elderly People In Beijing

Meng Chen, Tang Zhe

Korean Journal of Research in Gerontology_8: 91-103, 1999

Beijing Geriatric Clinical and Research Center, Xuanwu Hospital, Beijing, PR China

Abstract: Objective: To observe the longitudinal change of cognitive function of elderly people. **Method**: 1803 community lived people were tested with MMSE at baseline and followed up five years later. **Result**: 42.9% of 1225 people who had cognitive impairment at baseline survey were found to be dead in follow up survey, the death rate is much higher than that of cognitive intact person, which is 19.45%. Among 1335 cases who finished MMSE test twice the mean score of MMSE at follow-up was 23.35, 0.42 lower than original mean score. The rate of people identified as abnormal by education adjusted cutoff point also increased from 8.24% to 17.8%. Viewed individually 51.9% of them remained unchanged in MMSE score , 24.5% decreased and 23.6% scored higher after five years. Old people aged 70 or above, less educated, and people who scored around or lower than cutoff point were more likely to decline. **Conclusion:** The performance of MMSE has certain predictive value to the outcome of elderly people, and cognitive decline in community lived people is quite slow.

6_Longitudinal Observation on Cognitive Function in Elderly: Beijing Longitudinal Study on Aging (BLSA)

Chen Meng, Zhe Tang, Piu Chan

Beijing Geriatric Clinical and Research Center, Xuanwu Hospital of Capital University of Medical Sciences, Beijing, 100053, PR China

Chinese Journal of Geriatrics, 19(3):211-214,2000

Abstract: OBJECTIVE: To study cognitive function longitudinally in the elderly, and to identify risk factors associated with cognitive decline in a community population in Beijing. **BACKGROUND:** Longitudinal study on age-related changes of cognitive function and its associated risk factors is of significance in understanding the mechanisms underlying brain aging as well as early diagnosis, clinical course, and potential interventions for dementia. **METHOD**: The study subjects include a representative cohort of 3257 people older than 54 who were selected using a multi-level stratified sampling method. Participants first enrolled in 1992 were administered a questionnaire and the modified MMSE as the measurement of cognitive function, which were re-administered to the cohort in 1997 follow-up. Current report was focused on the change of cognitive function in community elderly people and the associated factors to its declination. **RESULTS**: In 1992, 2047/3257 subjects completed the MMSE. The mean MMSE score was 23.16±4.25. Based on the education-adjusted cutoff standards, 241 people (11.77%) had abnormal cognitive function. The differences between age groups, educational groups, and residential areas of urban

and rural area are all statistically significant. In the 1997 survey, 225 subjects (11.0%) were missing. 409 (19.9%) had died. Among the remaining 1413 subjects who are alive and traced, 18 (0.9%) refused, 58 (2.8%) failed to repeat MMSE due to hearing loss or sick, and 1337 (94.6%) finished the MMSE retest. The mean score for MMSE retest was 23.36±5.89, which is not significantly different to the 1992 mean score. However, the number of persons scoring in the abnormal range rose significantly to 17.8% (P<0.01). Compared to baseline testing, 51.9% (694/1337) experienced little change in their MMSE score. 23.6% of the subjects (315/1337) increased 3 or more scores in MMSE (mean change: 4.13±1.32), which may reflect the fluctuation of cognitive status under various health status or mood, or flexibility of test result at different time. While another 24.5% (328/1337) declined more than 2 score (mean change: 6.09±3.67). Among the declined, 157 out of 328 (47.9%), in other word 11.7% of total re-test sample, dropped from normal at baseline to abnormal. In this declined group more subjects (34.2%) were diagnosed as demented than in the group without cognitive decline. More subjects in very old age group, female gender, poor educated, and rural living experienced decrease in their MMSE score. The health status appeared to be less important, only dependency in daily activity and newly onset of cerebrovascular diseases in the past 5 years predicted cognitive declination. **CONCLUSION:** The majority of elderly people keep good cognitive function, and only 10% of community lived aged people may experience obvious decline in cognitive function. Demographic variables and physical function may predict cognitive decline. It is indicated that the longitudinal observation on cognitive function may help in identifying group with high risk for developing dementia.

7_Longitudinal Study (1992-1997) on the Mental Condition of Aged People in Beijing

Xiang Manjun_Tang Zhe_Meng Chen

Journal of Capital University of Medical Science, 22(suppl.1): 6-61, 2001

Dept of Social Medicine, Beijing Geriatric Clinical and Research Center, Beijing 100053 China

Abstract : **Object** Studying on the psychological changes along with increasing of age for the aim of providing better services to the elderly. **Method:** In the project of "longitudinal studying on Aging in Beijing" 3257 cases of community lived over 55 yrs old people were surveyed on 1992. The sample was collected by multi-stratification and random selection method from urban XuWu district and rural area. This same sample was followed-up on 1997.Comparison was made on the 2229 cases whom were found on 1997. Interview was made by trained interviewer through questionaire. Psychological well-being was examined by revised Philadelphia Geriatric center morale scale. Depressive symptom was examined by general adopted CES-D scale and Revised MMSE for cognition. SPSS soft package used for data-base establishment and horizontal and longitudinal analysis. **Result:** 1. The averaged score in morale scale get in 1992 is higher than that of 1997. It suggests that the psychological well-being declined as increasing of age. 2. The percentage of people with dull feeling within last month is 11.3% in 1992 survey but increases to 29% in 1997,especially in people over 80 yrs group the percentage without dull feeling dropped 30%. 3.People with depression symptom examined by CES-D increased from 13% to 19.7%. The change is more prominent in the older age group. 75% of those who reported feel dull frequently in 1992 had depression symptom in 1997 and 50% of them are newly developed. **4.**Cognition decreased with increasing of age. Range of decreasing in MMSE score is quite large in older old. 5.Psychological change is intimately related to the living situation of the aged. Those lack of intimates or without fun in their life are more likely to develop depression. **Conclusion:**

Negative impact on psychological well being of aged people along with increase of aging is prominent. In addition to increasing of age, lack of social communication and mental careness is important related factor. For realization of healthy aging emphasis should be put on physical as well as mental health.

8_Prevalence of Parkinson's Disease in Beijing, China

Piu Chan[1,2], Caroline M Tanner[2], Lijie Zhao[1], Chen Meng[1], Gangzhi Wei[1], Zhe Tang[1], J. William Langston[2], Jiamei Meng[1],

1, Beijing Geriatric Clinical and Research Center, Beijing, China, 2, Sunnyvale, CA, USA,

Neurology, **54(Suppl 3): A348_2000**

Abstract : **OBJECTIVE**: To determine the prevalence of Parkinson's Disease (PD) in Beijing, China. **BACKGROUND**: The reported prevalence of PD varies in different ethnic populations. In earlier reports, PD prevalence in mainland China was much lower than in non-Asian populations, but PD prevalence in the Kinmen island was similar to that in non-Asians. These differences may reflect real differences in disease frequency, or differences in study methods. This study addresses this question. **DESIGN/METHODS**: In 1992, a multi-step stratified random sampling method was used to select a cohort whose geographic distribution, socioeconomic, age and education levels were similar to the Beijing population older than *55.* All participants were examined by a single neurologist, who used uniform diagnostic criteria for PD. **RESULTS**: 2090 of 3257 people selected for the study were examined (including 1033 men and 1057 women). The overall age and gender-adjusted prevalence of PD was 1.39% in people older than 55 in Beijing. More men (0.97%) than women (0.43%) had PD. The adjusted prevalence of PD increased with age: the frequencies of PD were 1%, 1.2% and 1.86% in people in age groups 55-64*,* 65-74 and old than 74, respectively. PD was more frequent in the rural (1.87%) area as compared to the mountain (1.33%) and urban areas (1.2%). **CONCLUSIONS**: PD prevalence in Beijing, China, is similar to that reported for non-Asian populations. Earlier reports of low prevalence may reflect different study methods. Alternatively, PD frequency in Beijing may have increased as environmental conditions have changed.

9_The impact of hypertension on mortality of elderly people in Beijing

Tang Zhe, Xiang Manjun, Wu Huijie

Department of Social Medicine, Xuanwu Hospital, Capital University of Medical Science, beijing 100053 China

Chinese Journal of Internal Medicine, 38(11):771-772,1999

[Abstract] Objective To study the impact of hypertension on outcomes of elderly by a longitudinal survey of death occurring in a sample of Beijing residents. **Method** Data comes from a project on epidemiology of hypertension began on 1993. Occurrence and causes of death was recorded and analyzed in 3225 cases of the original sample found in following-up study carried on 1998. **Results** Death rate of whole hypertensive people (28.5%) is higher than normotensive(22.6%). Among them the mixed type and systolic hypertension impact severely on the death rate. The effect of hypertension on the outcome is more prominent in people below 75 years of age and BP taken in basal survey is highly correlated with the death rate. Risk of death increases in people either with low or high b.p. Co-morbidity of stroke higher up the death rate markedly. Death rate in all causes and or stroke is less in treated group. **Conclusion** 1.Prevention and treatment of hypertension can reduce death rate due to all causes or stroke. 2.Antihypertansives should be used cautiously and individually. 3.Male and aged below 75 years must pay more attention in epidemiology of hypertension.

[Key words] Hypertension; Older population; Outcome

10_Prevalence of Dementia in Chinese Elderly: The Beijing Longitudinal Study on Aging (BLSA)

Zhe Tang [1], Chen Meng [1], Huiqing Dong [2], Weidong Zhou[2], Baoquan Min[2], Yanli Zhang[2], Peijie Yang[2], Hongjun Liu[1], Xinqing Zhang[2], Piu Chan[1,2]

[1] Division of Epidemiology, Beijing Geriatric Clinical and Research Center

[2] Department of Neurology, Xuanwu Hospital, Capital University of Medical Science

Beijing, 100053, PR China

Chinese Journal of Geriatrics, 22(4): 244- 246, 2002

Abstract_Objective: The purpose of this project is to determine the prevalence of dementia in the elderly in Beijing, China. **Background**: There is limited information of the distribution of dementia in the Chinese elderly though a lower prevalent rate was reported by a few previous studies. **Method**: A representative community population of 3257 subjects older than 55 in Beijing was selected using a multi-level stratified sampling method in 1992 for studying aging. In 1997, there were 2788 who were available and participated in the study. A two-stage method was applied to identify subjects with dementia. All subjects who failed the MMSE test based on an education-adjusted cutoff as well as a proportional of subjects who scored normal on MMSE underwent a further examination to ascertain the presence of dementia. A diagnosis of dementia was made using the criteria of DSM-III-R and NINCDS-ADRDA. **Result**: 208 people were identified as having dementia by DSM-III-R criteria. 201 of them with an age of or older than 65. The crude prevalence of dementia was 7.5% in the population aged 60 years and older, and 8.7% in the population aged 65 years and older. Adjusted by the age constitution of the elderly population in Beijing derived from the fourth national census in 1990, the age and gender adjusted prevalence was 5.1% and 7.3% in population aged 60 and over or aged 65 and over, respectively. Among the demented cases, AD composed of 67.3%, VD 20.7%, mixed dementia 10.1%, and other dementia 1.9%. The prevalent rate was higher in female, elderly people in rural area, and poor educated individuals. **Conclusion**: The prevalence of dementia in people older than 59 in Beijing is about 5.1%, which is similar to what has reported for the Western countries. It appears that female gender, rural living, and illiteracy are associated with an increase for dementia. The findings from the current study are similar to what has been reported for the Western countries. This may reflect an increase in rate of dementia in China in more recent time. Alternatively, this may reflect methods more similar to those used in Western countries.

11_The relationship between BMI and hypertension and all-cause mortality in the elderly populaton in Beijing

Fang Xianghua, Tang Zhe_Xiang Manjun, Liu Hongjun, Chen Biao, Meng Chen, Wu Xiaoguang, Diao Lijun, Liu Xianghong,

Dept of Epidemiology and Social Medicine, Xuanwu Hospital, Capital University of Medical Sciences, Beijing 100053 China

Chinese Journal of Epidemiology, 23(1): 28-31, 2002

ABSTRACT_Objective To study the relationship between BMI and hypertension and all-cause mortality in the elderly population in Beijing. **Subject and methods** In 1992, a cohort of 3257 people older than 55 years old and more was selected from 3 different areas of Beijing, i.e. urban and suburbs(both plain and mountain areas). The information on the physical condition, history of chronic disease, self—perceived health, smoking and drinking status was collected.. The blood pressure, body height and weight were measured among 2086 of 3257 elderly. **Results** The BMI was decreased with the age, while the prevalence of hypertension was increased with age. Meanwhile the prevalence of hypertension increased with age as well as BMI.. By the Aug 1997, there were totally 422 elderly died,

and the 5-year cumulative rate was 20.2%(422/2086) . There was a reverse relationship between BMI and all-cause mortality. Lower BMI was associated with higher mortality risk(hazard ratio (HR) highest vs lowest =0.38, 95% confidence interval 0.29—0.49. After controlling for age, gender, resident place, hypertension as well as self-perceive health status and cognition function, low BMI remained a significant and independent predictor to death. **Conclusion** The distribution of BMI was different among elderly from the youth. The findings suggest that it should be careful to control the body weight among the edlerly hypertensives.

12. Demographic Determinants for change in Activities of Daily Living : A Cohort Study of the Elderly People In Beijing

Jiang JM[1], Tang Z[2], Meng C [2] and Makoto FUTATSUKA[1]

[1] Department of Public Health, Kumamoto University, School of Medicine, Japan
[2] Beijing Geriatric Clinical and Research Center , Beijing ,China
Japonic Journal of Epidmiology, 12(3):280-286,2002

ABSTRACT_ To describe changes in activities of daily living (ADL) of community-dwelling Beijing elderly people, observed for 8 years, and to identify the demographic characteristics that predict the functional change. Four sets of interview data from1992 to 2000 were used to evaluate changes among Beijing elderly aged 55 years and over. Results revealed that prevalence of disability increased from 3.9% to 7.1% during the 8 years of follow-up with the average increasing rate of disability was 0.41% per year. Meanwhile an increasing likelihood of recovery from disability is observed with age and time. Women, aged 75 or more, experienced higher disability than men though it was in the opposite for younger ages. In addition, certain demographic subgroups (such as women, unmarried, illiterate and living in non urban area) appeared to be at higher risk for ADL impaired. The patterns of ADL change is in both the direction of improvement and declination. Demographic variables emerged as a significant predictor in estimating functional outcomes. Furthermore, it is recommended that the demarcation factor for the evaluation of ADL should be 75 years of age.
Key words: ADL, age-period-cohort analysis, elderly