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**TRANSLATIONAL RESEARCH OF H-TYPE  
HYPERTENSION AND STROKE PREVENTION**Xu Xiping *Biomedical Institute, Shenzhen University, Guangdong, China*

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Stroke is a major cause of morbidity and mortality worldwide. Hyperhomocysteinemia (HHcy) is associated with an increased risk of stroke. Furthermore, the individuals with a combination of HHcy and hypertension (H-type hypertension) were substantially more likely to have prevalent stroke compared to individuals without either condition. Randomised clinical trials using homocysteine-lowering therapy with folic acid significantly reduced the risk of stroke, particularly in the regions where the food was not fortified with folate. China is among the highest in stroke mortality and morbidity in the world with the greatest number in stroke death. According to the third national survey on the cause of death, stroke has become the leading cause of death in China and its mortality and morbidity have been increasing at an accelerated rate over the past 20 years. Previous preventive strategy of stroke with focus on conventional risk factors including hypertension, dyslipidaemia, smoking, diabetes mellitus, and obesity, has been proven insufficient and ineffective. Recent studies have indicated that a rapid increasing trend of stroke morbidity and mortality is caused by HHcy, which is associated with the C677T polymorphism of the 5, 10 methylenetetrahydrofolate reductase gene (MTHFR) and low intake of folic acid. Today there are nearly 1500 genetic tests available from clinical and commercial laboratories on well-established genetic mutations as well as genetic variants that are thought to predispose individuals to a higher risk for certain diseases. It has been advocated that there should be a specific regulation on issues such as the proficiency, ethics, and cost-effectiveness of these genetic tests - MTHFR 677C/T is among the most popular polymorphism tested for nutritional genomics purposes due to its involvement in hyperhomocysteinemia and folate metabolism. This presentation will discuss the emerging risk factor - HHcy and the new prevention strategy for stroke. By identifying high risk and high responsive individual with MTHFR 677TT genotypes, tailor medications and lifestyle changes are recommended to pre-empt disease and to reduce disease burden and costs.