



Cross-Cultural Insights in Neurology: Clinical and Research Experience in Zhengzhou, China



Lucy An¹, Dr. Xinyu Zhao^{2,3}

¹ Faculty of Medicine and Health Sciences, McGill University, ² Division of Clinical Medicine, Zhengzhou University ³ Department of Neurology, First Affiliated Hospital of Zhengzhou University

INTRODUCTION

- During the month of July 2024, I had the opportunity to shadow in the neurology department at the First Affiliated Hospital of Zhengzhou University under the supervision of Dr. QianYi He and Dr. XinYu Zhao. During my stay, I was able to interview patients and complete their medical history in both the inpatient and outpatient departments, as well as learn about the diagnosis and management of different neurological conditions.
- The First Affiliated Hospital of Zhengzhou University is a Class A tertiary hospital in the Henan Province of China. Over the decades, it has grown into one of China’s largest and most advanced medical institutions. With 4 different campuses, the hospital has 96 clinical and technical departments and 236 wards. It handles over 6.9 million outpatient visits annually, with more than 520 000 discharge of patients and 305 000 operations.
- The medical and research team I was with had a focus on Alzheimer’s disease (AD). The ATN framework is a key tool for diagnosing and understanding Alzheimer’s disease:
 - Amyloid (A): Accumulation of amyloid-beta plaques in the brain is an early sign of AD, which can be detected through PET scans or CSF tests that show elevated amyloid levels
 - Tau (T): Tau protein tangles are another biomarker than can be assessed by PET scans or CSF tests for phosphorylated tau (p-tau).
 - Neurodegeneration (N): Brain cell loss, particularly in areas responsible for memory and cognition, can be assessed through structural MRI or tests for total tau (t-tau) in CSF.
- During my clinical observership, I had the chance to witness one of the first intravenous administration in China of Lecanemab to treat Alzheimer’s disease by binding and clearing beta-amyloid (Aβ) aggregates in the brain. As the first approved anti-Aβ antibody drug in 20 years, this not only brings hope for treatment of AD and opens up new paths for experimental medicine.
- In addition to my clinical observership, I took part in a Phase II clinical trial of SHR-1707, a humanized anti-Aβ monoclonal antibody.



OBJECTIVES

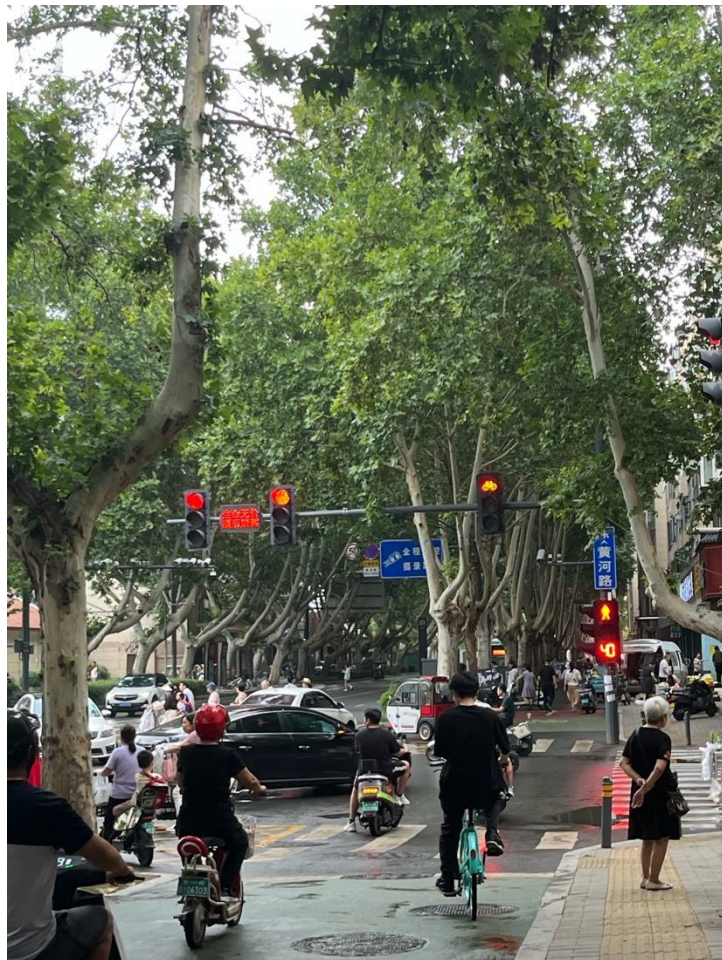
- Clinical observership
 - Understand the healthcare system and different disease prevalence in China.
 - Understand the basic mechanism of AD, and the available pharmacological treatments.
- Research: assess the effectiveness of SHR -1707 and ensure that there are no adverse outcomes.

METHODS

- Inclusion criteria:
 - Voluntary participation, informed consent form signed jointly with legal guardian
 - Age 55-85 years old
 - Weight 45-100 kg, BMI 19-32 kg/m²
 - Memory loss for > 6 months, with disease course being a gradual onset and slow progression
 - Meet the criteria for mild cognitive impairment of Alzheimer’s disease (MMSE 20-28 points)
 - If the patient is symptomatic and receiving treatment for Alzheimer’s disease, keep the regimen stable for > 3 month before screening
 - Central amyloid protein PET scan shows changes in Alzheimer’s disease
 - Stable caregiver to help patient participate in the entire study
- SHR-1707: humanized anti-Aβ mAb
- Treatment duration: double-blind treatment period of 26 weeks + extended treatment period of 52 weeks.
- Visit frequency: once a week for the first 5 visits, once every 2 weeks for the next 11 visits (double-blind treatment period).

RESULTS

- Cultural and Professional Differences
 - Observation: The mixed (public and private) healthcare system in China contrasts sharply with Canada’s public system, leading to difference in how healthcare services are accessed and delivered.
 - Approach: I observed and adapted to these differences, gaining valuable insights into how these factors influence patient-physician interactions and the delivery of care.
- Language Barrier
 - Challenge: While I am fluent in Mandarin, navigating professional medical terminology in a fully immersive Mandarin-speaking environment posed some challenges.
 - Approach: To overcome this, I stayed after work to translate patient files in English and understand them, ensuring I would understand their explanations in daily rounds.
- Healthcare System Pressures
 - Concern: The healthcare system in China faces considerable pressures, with hospitals often overwhelmed by high patient volumes and complex cases, which can lead to physician burnout and resource constraints.
 - Insight: This deepened my understanding of the common challenges that healthcare systems face globally and underscores the important of finding sustainable solutions.
- Global Health Awareness
 - Remark: Living and working in a new cultural setting made me more aware of the privileges I have, especially in terms of access to healthcare and education in Canada.
 - Insight: This experience cultivated a stronger sense of empathy and reinforced my commitment to practicing healthcare with cultural sensitivity and a deeper understanding of the diverse circumstances of patients



- Zhengzhou, the vibrant capital of the Henan province, is a bustling city that seamlessly blends ancient history with modern development. Despite its rapid urbanization and growth, Zhengzhou maintains a warm, welcoming atmosphere. During my time in China, I also had the opportunity to explore other cities, notably Qingdao, Kunming, and Tianjin, each offering its own unique cultural experiences and perspectives.

- The people I encountered were incredibly hospitable and eager to share their culture and knowledge, making my stay truly memorable. Their kindness and openness created a supportive environment that eased my transition and enriched my professionally and personally experience.

- This trip also offered a unique opportunity to immerse myself in Chinese culture and reconnect with my roots. Being in Zhengzhou fostered a sense of connection to my heritage that I hadn’t fully explored before. Engaging with patients, staff, and students both within and outside of the hospital context deepened my understanding of cultural values and perspectives. This experience not only strengthened my cultural identity but also gave me a profound appreciation for the ways in which culture shapes healthcare practices and patient interactions.

CONCLUSION

- In conclusion, this exchange has been an invaluable learning experience, sparking my continued interest in research and global health initiatives. The challenges I encountered and the insights I gained have not only enhanced my clinical knowledge but also broadened my understanding of healthcare delivery in different cultural contexts. I am eager to apply these lessons in future opportunities and contribute to global health efforts and to become a better physician.

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Lucy An
M.D.,C.M. Class of 2027
lucy.an@mail.mcgill.ca