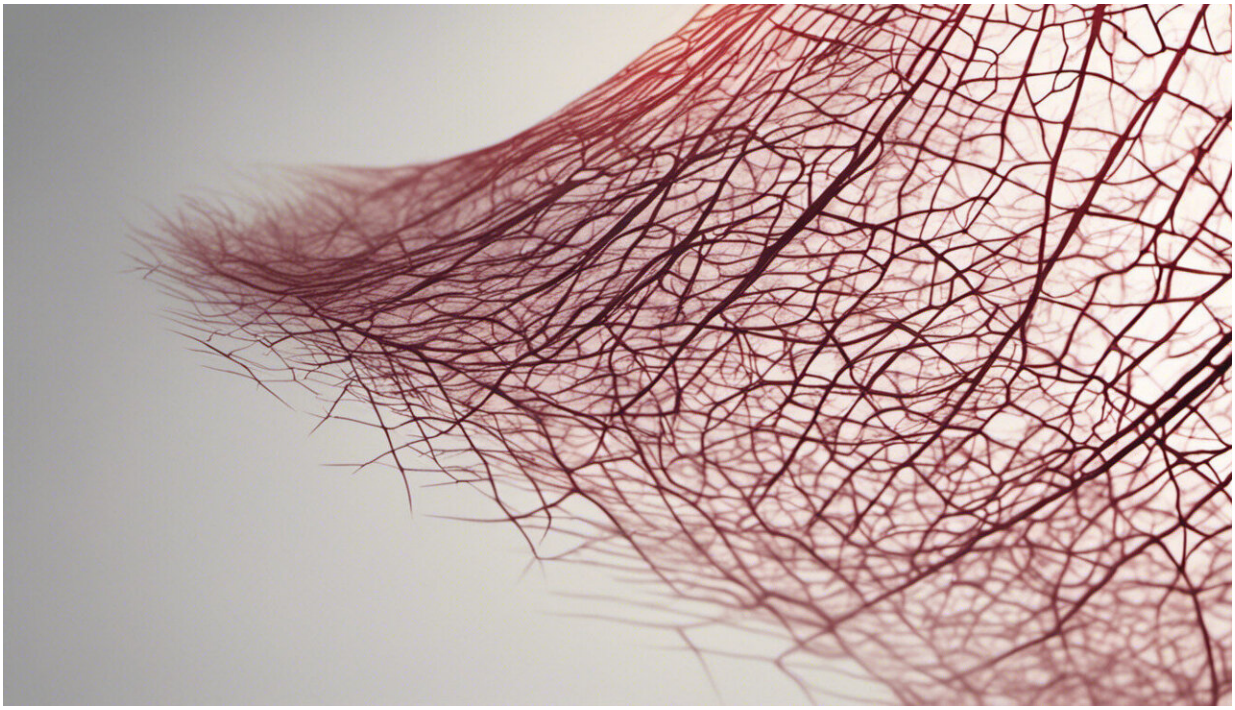
Different genetic features found in Chinese dementia cohort

June 19 2017, by Gabrielle Dunlevy



Credit: AI-generated image (disclaimer)

Genetic screening of Chinese patients with frontotemporal dementia (FTD) indicates that different genetic constitution in different populations could cause the same disease.

FTD is a progressive, degenerative brain disease. It primarily affects

individuals younger than 65 years old.

UNSW Conjoint Associate Professor Yue Huang and researchers from four Shanghai-based institutions tested the four most common FTD causative genes in Chinese patients.

Through genetic screening, they detected gene mutations in 5% of patients, with the work recently published online in the journal *Current Alzheimer's Research*.

Associate Professor Huang says seven FTD causing genes have been found, and it was interesting to note the genetic differences in the 82 patients recruited in Shanghai between 2011 and 2015.

"In contrast to Western FTD cohort, mutation in C9orf72 gene was absent in our patients," she says.

"In addition, we found a novel mutation site in tau gene.

"Genetic studies in different populations will enhance our understanding about diverse clinical features of a disease."

FTD comprises of 10–20% all dementias worldwide. In a country as large as China, that amounts to a significant population.

Genetic modifying therapy might provide a cure for those FTD patients carrying mutant genes, Associate Professor Huang says.

"Different populations share environments, diets, and other characteristics that may lead to genetic changes," she explains.

"In addition, random genetic changes, genetic mutations could also occur in a certain population, but not in others.

"Patients from different population groups have the same disease clinically, but their underlying genetic causes are different, indicating the disease-causing mechanisms differ and different therapeutic approaches may be considered to treat the same disease in different population groups.

"For these reasons, it is important to study disease causing-gene mutations in different populations."

Another key part of Associate Professor Huang's work is to raise awareness of FTD and its genetic cause in China, through translation and publications of research.

While visiting Shanghai in 2008, her search with the Chinese medical searching engine (Wanfang) found only seven papers with "FTD" in the title from 1998 to 2008, while in the past 10 years, there are 75 papers with "FTD" in the title.

More information: www.eurekaselect.com/151900

Provided by University of New South Wales