

High HCV infection in a village at Luxi county in southwest China and its phylogenetic analysis

Xueshan Xia¹, Yue Feng¹, Wenhua Zhao², Haiping Duan³, Ping Zhao⁴, Zheng Li⁵, Binghui Wang¹, Li Liu¹ and Jiejie Dai⁶

¹Kunming University of Science and Technology, China

²Yunnan Animal Science and Veterinary Institute, China

³The People's Hospital of Luxi County, China

⁴The Second Military Medical University, China

⁵The First Hospital in Yunnan Province, China

⁶Institute of Molecular Biology-CAS, China

Occasionally, a sharp increasing of HCV infection was found in People's Hospital of Luxi county, Yunnan province of China. Most of these outpatients are resided in Baima-Zhehei, a common village in Luxi. A total of 900 plasma samples were collected including 746 from adult and 154 from children less than 12 years old. ELISA for HCV antibody and RT-PCR were conducted to detect HCV infection. Of 746 adult participants, the HCV sero-positive rate is 41.95% (313/746) and HCV RNA positive rate is 32.04% (239/746). Comparatively, the sero-positive (0.65%, 1/154) and RNA positive (0.65%, 1/154) rates of children are significant lower than that of adults. According their informed risk behaviors, using of inadequately sterilized syringe is deduced as major risk factor for their HCV infection occurred at least 15 years ago. The fragment of NS5b gene were amplified and subsequently sequenced. Of randomly selected and successfully genotyped 71 samples, 3b was determined as the predominant HCV subtype (73.23%, 52/71), followed by 1b (15.49%, 11/71) and 2a (8.45%, 6/71). As the common HCV genotypes in China, 1b and 2a haven't been detected as the predominant HCV genotype. Alternately, 3b, being identified frequently in neighbored Southeast Asian countries, was found as the most prevalent HCV genotype. Moreover, 2 cases of 6n, the common HCV genotype in SE Asia, were simultaneously revealed in this population. In MACE analysis using Beast software. these 3b strains were shown to have high relationship with 3b strains in SE Asian countries. Surprisingly, their original time was estimated as 1940s, it is far different with our suspected 1980s, the start time of opening and reforming policy in China. These findings enriched our understanding on HCV epidemic in Yunnan and is helpful for HCV prevention and controlling.

Biography

Xueshan Xia has completed his PhD from Chinese Academy of Science and then successively was taken as visting scholar in National Institute of Infectious Disease of Japan and Medicine School of University of Utah. He is the Dean of the Faculty of Life Science and Technology, Kunming University of Science and Technology, and the Director of Yunnan Provincial Center for Molecular Medicine. He has published more than 25 papers in reputed journals and has been serving as a reviewer of several journals.

oliverxia2000@aliyun.com

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