

Possible critical region associated with late-onset spasms in 17p13.1–p13.2 microdeletion syndrome: a report of two new cases and review of the literature

Naohiro Yamamoto¹, Shin Okazaki¹, Ichiro Kuki¹, Naoki Yamada¹, Shizuka Nagase¹, Megumi Nukui¹, Takeshi Inoue¹, Rie Kawakita², Tohru Yorifuji², Takao Hoshina³, Toshiyuki Seto³, Toshiyuki Yamamoto^{4,5}, Hisashi Kawawaki¹

¹ Division of Pediatric Neurology, Osaka City General Hospital, Osaka, Japan

² Division of Pediatric Endocrinology and Metabolism, Osaka City General Hospital, Osaka, Japan

³ Department of Pediatrics, Osaka City University Graduate School of Medicine, Osaka, Japan

⁴ Tokyo Women's Medical University Institute for Integrated Medical Sciences, Tokyo, Japan

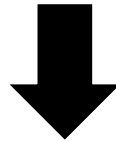
⁵ Institute of Medical Genetics, Tokyo Women's Medical University, Tokyo, Japan

17p13.1-13.2 microdeletion syndrome

- congenital anomaly syndrome with characteristic facial features and multiple malformations
- is seldom a cause of epilepsy

Late-onset spasms with 17p13.1-13.2 microdeletion syndrome

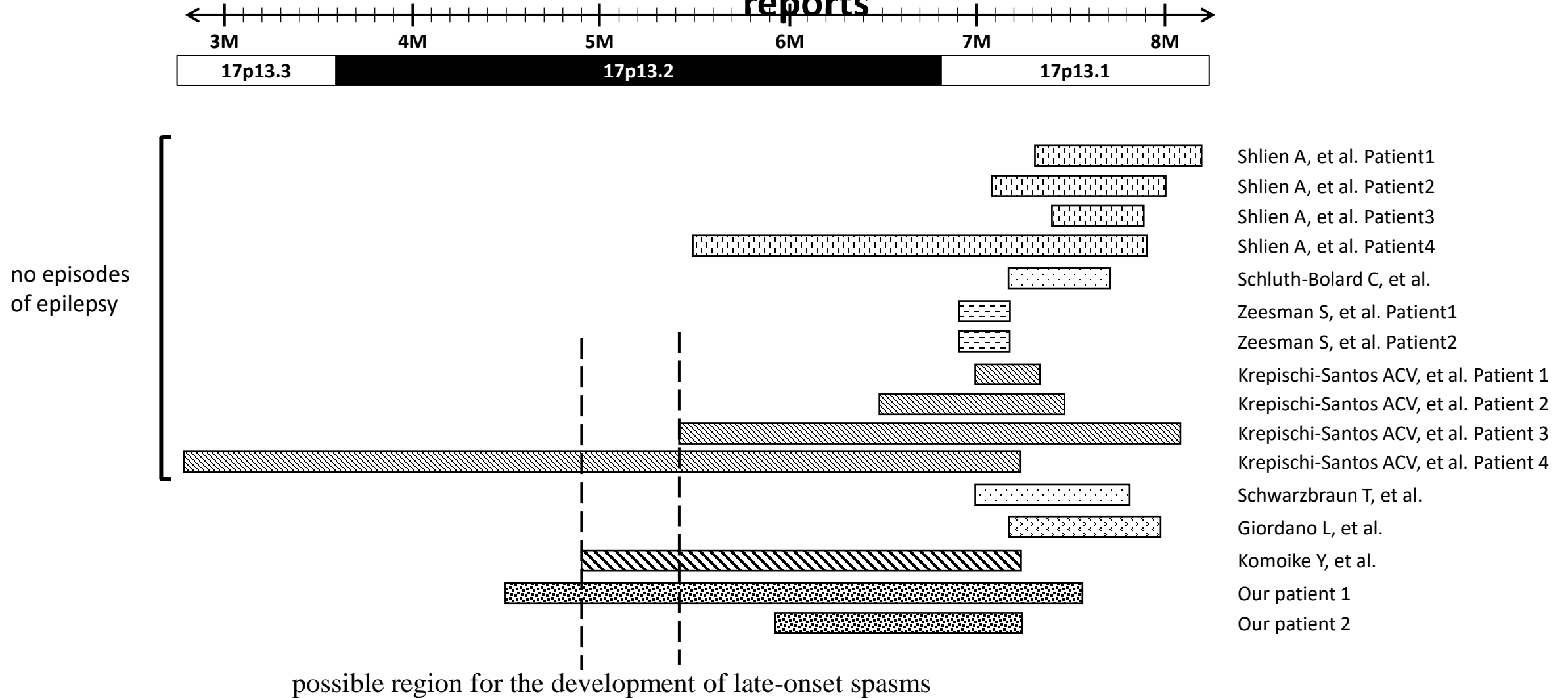
- Only one case reported with late-onset spasms



In this case report we discuss

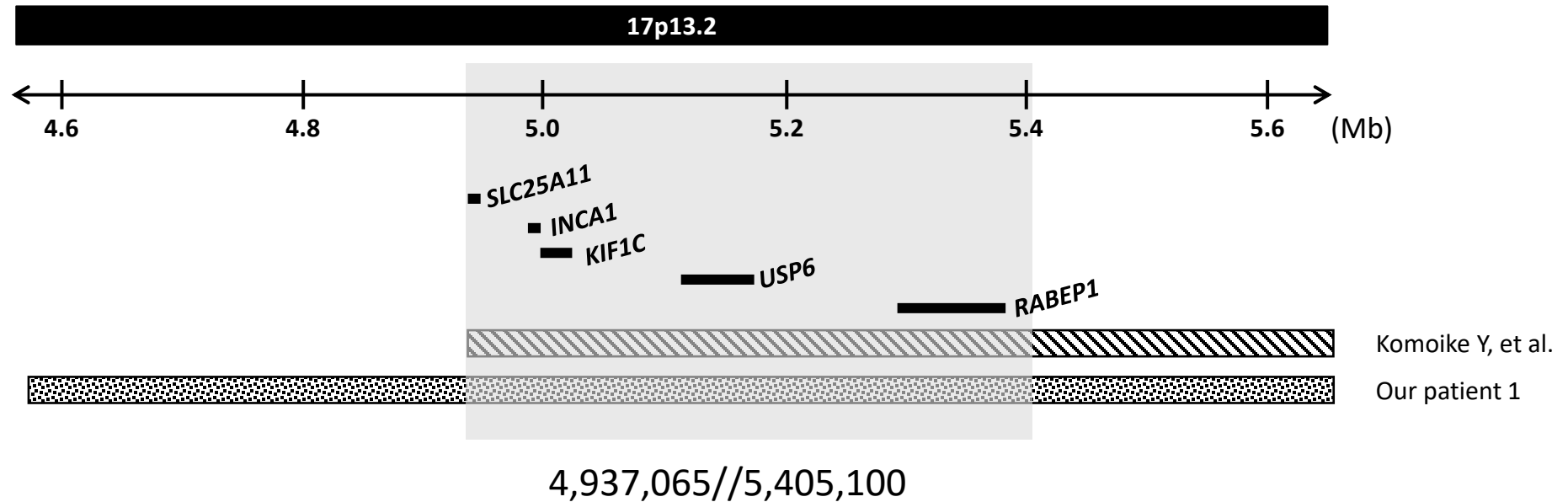
- the possible region in the development of late-onset spasms

The locations of the deleted regions and epilepsy-related genes in previous reports



- We considered the possibility that the common mutation region, excluding the mutation site of the case with 17p13.1-13.2 microdeletion in which no epilepsy was reported, might be involved in the development of late-onset spasms.

Possible region involved in the development of late-onset spasms



- A decrease in NMDA receptor expression, NMDA receptor destabilization or accumulation of neurotoxic substances caused by the *USP6* gene deletion might be involved in the development of late-onset spasms