AB052. A multicenter prospective exploratory phase II study of neoadjuvant bevacizumab for newly diagnosed malignant glioma

Toshihide Tanaka[1], Ryota Tamura[2], Jun Takei[1], Yohei Yamamoto[1], Yasuharu Akasaki[1], Yuichi Murayama[1], Keisuke Miyake[3], Hikaru Sasaki[4]

[1]Department of Neurosurgery, The Jikei University School of Medicine, Tokyo, Japan; [2]Department of Neurosurgery, Keio University School of Medicine, Tokyo, Japan; [3]Department of Neurosurgery, Kagawa University Graduate School of Medicine, Kagawa, Japan; [4]Department of Neurosurgery, Tokyo Dental College affiliated Ichikawa General Hospital, Chiba, Japan

Correspondence to: Toshihide Tanaka, MD, PhD. Department of Neurosurgery, The Jikei University School of Medicine, 3-25-8 Nishi-Shimbashi, Minato-ku, Tokyo 105-8461, Japan. Email: ttanaka@jikei.ac.jp.

Background: We conducted a multicenter study for neoadjuvant bevacizumab (neoBev) for newly diagnosed glioblastoma (nGB). In this study, median overall survival (mOS) related to radiological response, of which reliability as a prediction of overall survival (OS) was explored.

Methods: A total of 15 patients with nGB were enrolled, and given ring enhancement and perifocal edema on magnetic resonance imaging (MRI). Two weeks after neoBev, the tumor volumes on T1 weighted image with contrast medium (T1CE) and fluid attenuated inversion recovery (FLAIR) were assessed. Three to four weeks after neoBev, surgery was performed. Clinical outcomes including mOS as well as the safety of neoBev were evaluated.

Results: Severe adverse events were observed in two of 15 patients as one postoperative hematoma and one wound infection. The average volume decrease rates on T1CE and FLAIR were –37% and –54%, respectively. The decrease rate on T1CE was not correlated with that on FLAIR. Based on MRI, good (GR) and poor responders (PR) on T1CE were defined as more or less of the average volume reduction rate, respectively. In addition, there was a case with discordance in tumor volume changes between T1CE and FLAIR. And OS in a discordant case was 20.4 months, which was not unfavorable. mOS of GR and PR on T1CE were 19.8 and 12.9 months, respectively. In contrast, mOS of GR and PR on FLAIR were 16.0 and 17.0 months, respectively.

Conclusions: Preoperative neoBev was confirmed a safe procedure. mOS in the present cohort was not significantly prolonged. Early tumor volume regression on T1CE but not FLAIR after neoBev therapy has a significant prognostic indicator for mOS in nGB.

Keywords: Exploratory phase II study; neoadjuvant bevacizumab (neoBev); glioblastoma; magnetic resonance imaging (MRI)

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://cco.amegroups.com/article/view/10.21037/cc0-24-ab052/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013) and approved by The Jikei University Oncology Institutional Review Board (IRB No. JKI-18-052). Written informed consent was obtained from the patient.

Cite this abstract as: Tanaka T, Tamura R, Takei J, Yamamoto Y, Akasaki Y, Murayama Y, Miyake K, Sasaki H. AB052. A multicenter prospective exploratory phase II study of neoadjuvant bevacizumab for newly diagnosed malignant glioma. Chin Clin Oncol 2024;13(Suppl 1):AB052. doi: 10.21037/cc0-24-ab052