

Effect of Half-Dose Abatacept on Rheumatoid Arthritis in Patients Older Than 65 Years who's Body Weights Were Less Than 65 kg

Wataru Shimada¹, Yasunori Itoh¹, Shigeshi Mori², Masao Akagi², Masato Kamiya³, Satoshi Souen³, Masakatsu Saitoh⁴, Osamu Matsuo⁵ and Hiraku Kikuchi^{1*}

¹Department of Orthopaedic Surgery, Sakai Hospital Kinki University Faculty of Medicine, Osaka, Japan

²Department of Orthopaedic Surgery, Kinki University Faculty of Medicine, Osaka, Japan

³Department of Orthopaedic Surgery and Rheumatology, Nara Hospital Kinki University Faculty of Medicine, Nara, Japan

⁴Department of Orthopaedic Surgery, PL Hospital. Osaka, Japan

⁵Kinki University Faculty of Medicine, Osaka, Japan

***Corresponding Author:** Hiraku Kikuchi, Department of Orthopaedic Surgery, Faculty of Medicine, Sakai Hospital Kinki University, Osaka, Japan.

Received: July 07, 2015; **Published:** August 07, 2015

Japan is progressing into an aging society, with its elderly population (> 65 years) reaching 25.1% in 2013 [1]. Many of the elderly have rheumatoid arthritis (RA). Biological products are the new treatment of choice for RA [2]. However, reports of biological products administered for aged RA are few [3]. Aged patients often have chronic RA, with rather low body weights and many medical complications [4]. In this study, we administered half-dose abatacept (ABT; Orencia®, Bristol-Myers Squibb and Ono pharmaceutical Co., LTD. 250 mg/month or 125 mg/2 weeks) to RA patients who did not require methotrexate (MTX) and antibiotic for infection. The patients were selected according to the following criteria: age older than 65 years, body weight < 65 kg, and disease duration > 1 year. The aged (mean ± SD [range]) of the enrolled patients was 73.1 ± 6.6 years [65-90 years; 5 men and 45 women] at the starting points, and 73.6 ± 6.2 years [66-91 years; 3 men and 33 women] at the end of study. They showed a height of 151.5 cm, a mean body weight of 50.3 kg (BMI: 21.9). The previous treatment was performed with naïve biological products (27 cases), second-line biological products (23 cases), MTX combination (16 cases), a combination with other anti-RA agents (17 cases), and steroid combination (30 cases).

Half-dose ABT was continued in 28 (56%) of 50 cases at 8 weeks, 26 (57%) of 46 cases at 12 weeks, 21 (54%) of 39 cases at 24 weeks, and 19 (53%) of 36 cases at 52 weeks. The 28-joint Disease Activity Score (DAS 28) significantly decreased owing to the half-dose ABT regimen as follow; 4.9 ± 1.1 before the half-dose ABT, 3.7 ± 1.3 (p < 0.01) at 8 weeks, 3.0 ± 1.2 (p < 0.01) at 12 weeks, 2.9 ± 1.1 (p < 0.01) at 24 weeks, and 2.8 ± 1.0 (p < 0.01) at 52 weeks. The DAS 28-Creative protein (CRP) score significantly recovered as depicted in Figure 1. Furthermore, the following DAS 28-CRP items also showed a significant decrease from before ABT to 52 weeks after ABT; tender joint score, from 6.8 ± 4.6 to 2.5 ± 1.4; swollen joint score, from 6.0 ± 4.5 to 0.8 ± 1.1; patient's visual analog scale (VAS) score, from 61.0 ± 17.2 to 30.5 ± 20.3; physician's VAS score, from 57.2 ± 18.3 to 27.7 ± 14.2; and CRP, from 3.0 ± 2.8 to 0.5 ± 0.6 mg/dL. The matrix metalloproteinase-3 level decreased from 285 ± 234 to 131 ± 99 ng/mL. The osteoporosis treatment was continued during the study. No serious side effect was observed during the clinical study. Thus, the half-dose administration of ABT to the RA patients older 65 years whose body weights were < 65 kg was effective, without any serious side effects. This regimen costs less, which benefits RA patients and the healthcare system [5]. Hence, a new mode of administering half-dose ABT may open another era to RA treatment.

Keywords: Abatacept; Half-dose; over 65 years; Rheumatoid arthritis

Citation: Hiraku Kikuchi, et al. "Effect of Half-Dose Abatacept on Rheumatoid Arthritis in Patients Older Than 65 Years who's Body Weights Were Less Than 65 kg". *EC Orthopaedics* 2.1 (2015): 52-53.

Bibliography

- Japanese Cabinet Office, CAO.
- Smolen (2014): 28.
- Genevay (2007): 62.
- Singh (2011): 78.
- Curtis (2015): 41.

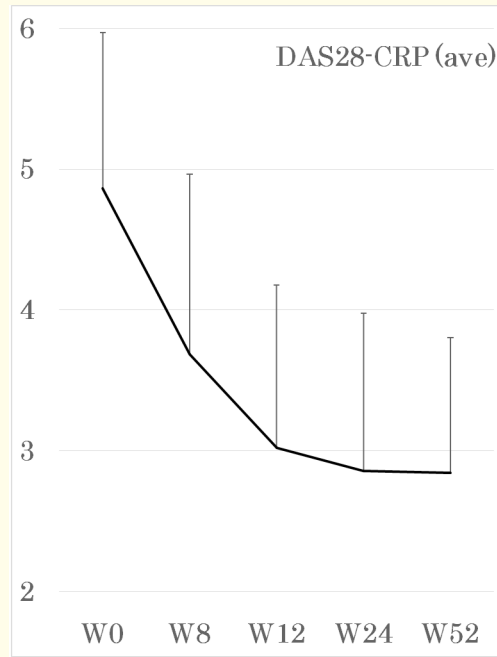


Figure 1: Changes of the average DAS 28-CRP after initiation of ABT for a year.