FRI0070

COST-EFFECTIVENESS OF BIOLOGIC AGENTS FOR RHEUMATOID ARTHRITIS WAS SUPERIOR TO TRADITIONAL/CONVENTIONAL DMARDS WHEN ANALYSED WITH NUMBER NEEDED TO TREAT(NNT) METHOD

K. Harigane¹, Y. Mochida¹, K. Sahara¹, N. Mitsugi². ¹Center For Rheumatic Diseases; ²Orthopaedic Surgery, Yokohama City University Medical Center, Yokohama, Japan

Background: Recently biologic agents are widely used for patients with rheumatoid arthritis (RA). Biologic agents are reported to have higher effectiveness than other disease-modifying anti-rheumatic drugs (DMARDs) including methotrexate (MTX), however, those new agents are more expensive.

Objectives: This study evaluated the cost-effectiveness of biologic agents for RA using number needed to treat (NNT) method. NNT is an index for determining the number of patients who need to be treated in order to reach a patient toward to clinical goal when a new treatment is introduced.

Methods: Fifty-three patients with RA was included in this study. These patients were introduced biologic agents between September 2012 to ^{March 2017} and continued same agent up to 24 weeks. NNT was calculated based on disease activity score (DAS28-ESR) and clinical disease activity index (CDAI) at 24 weeks. Ninety-four patients were investigated as a control group who treated with DMARDs. In addition, actual healthcare cost including doctor's fee, laboratory examination, prescription fee, and cost of biologic agents in each patient were calculated based on hospital's medical receipt, then averaged and compared between two groups.

Results: In biologic group, tocilizumab (TCZ) were used for 20 patients, golimumab (GLM) for 14 patients, etanercept (ETN) for 13 patients, and other biologics for six patients. In control group, 66 patients administered MTX and/or conventional DMARDs (csDMARDs), and 28 patients administered only csDMARDs. In biologic group, 53 patients (79.2%) achieved remission in DAS28-ESR, and 24 patients (45.2%) achieved remission in CDAI. On the other hand, the rate of remission was 61.7% and 23.4% respectively in control group. NNT was 1.26 (DAS28) and 2.21 (CDAI) in biologic group, and 1.62 and 4.27 respectively in control group. In biologic group, NNT based on DAS28-ESR of each agent was 1.11 of TCZ, 1.30 of ETN, 1.40 of GLM, and 1.50 of others (table 1). The total actual healthcare cost in the study period was 7,812.5 Euro (1044066 JPY; 1 Euro=133.6 JPY, in December 2017) in biologic group and 583.8 Euro (78020 JPY) in control group.

	Number	Ave. DAS28-ESR	Remission	ARR	NNT
Biologic group	53	1.92	42	0.79	1.26
TCZ	20	1.58	18	0.90	1.11
GLM	14	2.10	10	0.71	1.40
ETN	13	2.05	10	0.77	1.30
others	6	2.56	4	0.67	1.50
Control group	97	2.39	58	0.62	1.62
MTX	66	2.30	41	0.61	1.61
csDMARDs	28	2.63	17	0.61	1.65

	Number	Ave. CDAI	Remission	ARR	NNT
Biologic group	53	4.31	24	0.45	2.21
TCZ	20	2.94	11	0.55	1.82
GLM	14	5.10	5	0.36	2.80
ETN	13	4.52	7	0.54	1.86
others	6	6.58	1	0.17	6.00
Control group	94	5.43	22	0.23	4.27
MTX	66	5.19	16	0.24	4.13
csDMARDs	28	6.00	6	0.21	4.67

Conclusions: The total actual health care cost of biologic group was much higher than DMARDs group, however, the cost-effectiveness of biologics was superior to DMARDs from the stand point of NNT.

REFERENCE:

- [1] Alberto B, et al. Efficacy and Treatment Costs of Monotherapy with bDMARDs in the Treatment of Rheumatoid Arthritis in Patients Intolerant to or Inappropriate to Continue Treatment with Methotrexate. *Adv Ther* 2016;33:1360–73.

Disclosure of Interest: K. Harigane: None declared, Y. Mochida: None declared, K. Sahara Grant/research support from: Takeda Pharmaceutical Company Limited, Daiichi Sankyo Company, Limited, Mitsubishi Tanabe Pharma Corporation, Teijin Limited Chugai Pharmaceutical Co., Ltd, Astellas Pharma Inc., N. Mitsugi: None declared

DOI: 10.1136/annrheumdis-2018-eular.2362

FRI0071

OUTCOMES FROM RHEUMATOLOGY AND REPRODUCTIVE HEALTH CLINIC 2013–2016

K. Murray¹, L. Moore², C. O'Brien³, A. Clohessy³, C. Brophy³, P. Minnock², A. B. Mongey^{1,2}, E. Molloy^{1,2}, O. FitzGerald^{1,2}, S. Higgins³, M. Higgins³, F. McAuliffe^{3,4}, D.J. Veale^{1,2}. ¹Saint Vincent's University Hospital, Dublin 4; ²Our Lady's Hospice, Dublin 6; ³National Maternity Hospital, Dublin 2; ⁴UCD Perinatal Research Centre, School of Medicine, University College Dublin, Dublin, Ireland

Background: A multidisciplinary approach to pregnancy in women with rheumatic diseases will ensure best outcomes for mother and baby.¹

Objectives: In 2013, we developed a dedicated nurse-led multidisciplinary Rheumatology Reproductive Health Clinic (RRHC) in order to provide a multidisciplinary service.

Methods: 98 women attended the RRHC from January 2013–16. They were prospectively assessed for age, diagnosis, medications, use of assisted reproductive technology (ART) and pregnancy outcomes.

Results: The mean (range) age was 35 years.^{19–48} The majority of patients had rheumatoid or psoriatic arthritis. The characteristics of the patients is summarised in table 1 and their outcomes in table 2. 24 women were on a biologic DMARD therapy at the time of conception. 10 discontinued in the first semester and 5 in the second trimester. 9 continued throughout their pregnancies. 90% of women surveyed were "very satisfied" with the physical and emotional support received in the clinic.

Abstract FRI0071 – Table 1. Patient Characteristics

Diagnosis	Number of Patients
Rheumatoid Arthritis	41
Psoriatic Arthritis	16
Ankylosing Spondylitis	8
Systemic Lupus erythematosus	7
Juvenile Idiopathic Arthritis	3
Chronic Regional Pain Syndrome	3
Granulomatosis with Polyangiitis	3
Reactive Arthritis	2
Behçet's Disease	2
Sicca Syndrome	2
Takayasu's Arteritis	2
Raynaud's Syndrome	2
Fibromyalgia Syndrome	2
Sarcoidosis	1
Mixed Connective Tissue Disease	1
Systemic Sclerosis	1
Total	98

Abstract FRI0071 – Table 2. Outcomes

Outcome	Number of Patients
Information gathering only	10
Pregnancy achieved	62
Using Assisted Reproductive Technology	3
Actively trying to achieve	26
Total number of pregnancies	88
Births	76
Mothers who had one birth only	49
Mothers who had two births (including one set of twins)	27
1st trimester pregnancy loss	11
2nd trimester pregnancy loss	1
Neonatal death (renal aplasia diagnosed in utero)	1
Breastfeeding continued to 6 week postpartum review	21
Total number of women	98

Conclusions: This is the first report of results from a multidisciplinary RRHC. These data show high levels of successful pregnancy outcomes and patient satisfaction.

The majority of patients had an inflammatory arthritis. Successful pregnancy outcomes were achieved in 70% of women actively trying to conceive. 38% of