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DOI: 10.1136/annrheumdis-2019-eular.2373

AB0405 ADALIMUMAB THERAPEUTIC DRUG MONITORING TEST VALIDATED FOR MEASURING ABP 501 BIOSIMILAR

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Background: Promonitor[®]-ADL test is routinely used to monitor IBD patients treated with adalimumab (ADL). ABP 501 (adalimumab biosimilar; Amgen) was authorised throughout the European Union in March 2017 and has been recently launched in several countries. Therapeutic drug monitoring (TDM) is broadly used as an aid for patient management. However, all TDM tests available should be properly validated against each new approved biosimilar in order to ensure safe application for patient monitoring as these may guide dose adjustments.

Objectives: Here we validate the suitability and performance of Promonitor-ADL CE-marked test for quantification of the adalimumab biosimilar ABP 501 in comparison to the reference adalimumab drug (Abbvie).

Methods: The validation study was in accordance with the design requirements established in the Clinical & Laboratory Standards Institute (CLSI) guideline EP17-A2 (Lower Limit of Quantification, LLOQ) and EP10-A3 (imprecision and bias). CLSI guidelines set a standard for the diagnostic industry accepted by all regulatory agencies. LLOQ was determined with four independent human serum sample matrices per each of three low level ADL concentrations, replicated three times per two lots of Promonitor-ADL (Progenika, Spain) kits for each drug, the reference drug and the adalimumab biosimilar ABP 501, over three days by one operator. Imprecision was evaluated using three replicates of five human serum sample matrices representative of clinically relevant ADL concentrations and spanning the measurement range of Promonitor-ADL, run on one instrument with one kit lot by one operator over six non-consecutive operating days and one run per testing day, with an acceptance criteria of CV%≤20%.

Results: The LLOQ of Promonitor-ADL for the adalimumab biosimilar ABP 501 and reference adalimumab were 0.34 mg/mL and 0.36 mg/mL, respectively. LLOQ values met accuracy goal proposed based on total error ≤25% and precision. The imprecision of Promonitor-ADL calculated by estimating the components of variance due to within-run and between-day factors meet the accuracy goals proposed at all concentration levels of ABP 501 vs the reference adalimumab (CV% between 5% and 10%). The bias study showed that Promonitor-ADL can equally measure the active moiety ADL either in the reference biologic ADL or in the biosimilar ABP 501. The test is able to quantify the adalimumab biosimilar ABP 501 in the measurement range of 0.9 to 10.9 mg/mL with a bias estimate of -0.089 to 0.306 mg/mL and an overall imprecision of 6% to 9%. The measurement range includes the recommended clinical decision points.

Conclusion: Promonitor-ADL test can equivalently measure either the reference ADL or the approved adalimumab biosimilar ABP 501 with the same sensitivity, precision and accuracy.

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DOI: 10.1136/annrheumdis-2019-eular.2360

AB0406 THE POTENT WEAPON FOR RHEUMATOID ARTHRITIS-INTERSTITIAL LUNG DISEASE : RITUXIMAB EXPERIENCES

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Background: Rheumatoid arthritis (RA) is a common inflammatory disease with unknown etiology and systemic involvement (1). About 40% of RA

patients have extraarticular involvement. Lung involvement is the most common extraarticular finding. The use of rituximab (RTX) in the treatment of rheumatoid arthritis- interstitial lung disease (RA-ILD) has been increasing in recent years (2).

Objectives: To present our rituximab experience in patients with RA-ILD.

Methods: Between April 2015 and April 2018, sixteen patients with RA-ILD who were followed up with RTX treatment in our university internal medicine-rheumatology department were included in this study. High resolution computed tomography (HRCT), carbon monoxide diffusion measurement (DLCO), pulmonary function test (PFT) and routine laboratory tests were examined.

Results: The median age of the patients was 68 years (min: 52-max: 77). 4 patients (25%) were male and 12 (75%) patients were female. Four of our patients (25%) were active smokers. Non-specific interstitial pneumonia (NSIP) was seen in 10 (62.5%) patients and usual interstitial pneumonia (UIP) was seen in 6 (37.5%) patients. Before RTX, 8 patients were receiving methotrexate and 8 patients were using leflunomide. Four patients had anti-TNF (tumor necrosis factor) treatment. Median during treatment time was 6 months. Other features of the patients are summarized in Table 1. All patients had dyspnea with exertion before treatment. The Forced Vital Capacity (FVC) median was% 70 and DLCO was% 66. Although 2/16 patients received cyclophosphamide treatment, there was no clinical response and then RTX treatment was started. Protocol of treatment was every 6 months (days 0 and 15 days 1 g). After 6 months, FVC values improved with NSIP pattern (p= 0.04). There was no improvement in the UIP pattern but remained stable (Table 2). Clinically, patients' exertional dyspnea improved. There were no serious side effects in the follow-up of the patients.

Conclusion: There is no valid guideline for RA-ILD treatment. Patient-based decision-making is important in the treatment of these patients. In recent years, RTX seems to be quite effective in RA-ILD. However, long-term and extensive studies are needed in terms of maintenance treatment and possible side effects.

REFERENCES

- [1] McInnes IB, G. Schett, The pathogenesis of rheumatoid arthritis. *N Engl J Med* 2011; 365: 2205-19.
- [2] Deborah Assayag, Joyce S. Lee, Talmadge E. King, Jr., Rheumatoid Arthritis Associated Interstitial Lung Disease: A Review, *MEDICINA (Buenos Aires)* 2014; 72: 158-165

Table 1. Clinical and epidemiological Features of the RA patients

Age	68 (min:52-max:77)
Gender: Male	4 (25%)
Female	12 (75%)
Serology: Positive	14 (87.5%)
Negative	2 (12.5%)
Smoking history	4 (25%)
Medication: Methotrexate	8 (40%) patients
Leflunomide	8 (40%)
Anti-TNF	4 (20%)
Duration of disease	10 years
Duration of treatment	6 months
IAH pattern: NSIP	10 (62.5%)
UIP	6 (37.5%)

Table 2. The FVC and DLCO values of pre- and post- treatment

	UIP	NSIP	
Pre FVC	70	76	
Post FVC	70	80	p=0.04
	p>0.05		
Pre DLCO	65	70	
Post	66	71	p>0.05
DLCO	p>0.05		

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.7559