cases in groups 1 and in 3 cases in groups 2, which required various types of anti-glaucoma operations. Cystic macular edema developed in one case 5 months after surgery as a result of uveitis exacerbation and was stopped by corticosteroid therapy.

Conclusion: Surgery of uveal cataracts in pts with SpA and other immuno-inflammatory diseases providing adequate pre- and postoperative anti-inflammatory therapy improves visual acuity and reduces the frequency of uveitis relapses. Monitoring of IOP is necessary in the postoperative period.

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POS0914

IS THERE AN ASSOCIATION BETWEEN AUTOANTIBODIES INDUCTION AND LOSS OF THERAPEUTIC EFFICACY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS AND PSORIATIC ARTHRITIS TREATED WITH ANTI-TNF- α AGENTS?

A. Martins¹, D. Santos Oliveira^{1,2}, F. R. Martins³, M. Rato¹, F. Oliveira Pinheiro¹, D. Fonseca⁴, B. M. Fernandes¹, S. Garcia¹, S. Pimenta^{1,5}, M. Bernardes^{1,5}, L. Costa¹. ¹Centro Hospitalar Universitário São João, Rheumatology, Porto, Portugal; ²Faculdade de Medicina da Universidade do Porto - FMUP, Center for Health Technology and Services Research (CINTESIS), Porto, Portugal; ³University Hospital Center of Algarve, Rheumatology, Faro, Portugal; ⁴Centro Hospitalar Vila Nova de Gaia / Espinho - Unit 1, Rheumatology, Vila Nova de Gaia, Portugal; ⁵Faculdade de Medicina da Universidade do Porto - FMUP, Rheumatology, Porto, Portugal

Background: Induction of autoantibodies is frequently observed in patients treated with a TNF- α blocker. According to other authors, the incidence of induction of antinuclear antibodies (ANA) and anti-double stranded DNA antibodies (anti-dsDNA) varies between 23-57% and 9-33%, respectively. However, it is unknown whether the induction of these autoantibodies affects the pharmacokinetics and bioavailability of biotreatment and, consequently, reduces the efficacy and safety of the drug.

Objectives: To analyze if there is an association between autoantibodies induction and therapeutic efficacy in a monocentric cohort of patients with axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA) treated with anti-TNF- α agents.

Methods: The authors performed a retrospective analysis of patients with axSpA and PsA treated in our University Hospital with a TNF- α blocker as first biologic agent, and analysed the autoantibodies induction rate after 12 (T12) and 24 (T24) months of therapy. Then, they investigated the influence of autoantibodies in therapeutic efficacy at T12 and T24. Clinical evaluation, laboratory findings including erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) and disease activity and functional scores (Bath Ankylosing Spondylitis Disease Activity Index – BASDAI, AS Disease Activity Score with CRP – ASDAS-CRP, Bath AS Functional Index – BASFI) were collected from reuma.pt and medical records. For PsA patients, Disease Activity Score-28-CRP (DAS28-CRP), Simple Disease Activity Index (SDAI), Clinical Disease Activity Index (CDAI) and Health Assessment Questionnaire (HAQ) scores were also collected. Patients with positive ANA (titer > 1/100) prior to anti-TNF- α therapy were excluded. Continuous variables were analyzed using a t-test and categorical variables using a Chi-square test. P-value <0.05 was considered statistically significant.

Results: In the axSpA group, 235 patients were included, 44.5% were females, mean age at diagnosis of 42.3 $\pm$ 12.4 years and median disease duration of 11.5 (IQR 6.0-21.0) years. Positive ANA were observed in 16.9% at T12 and 26.3% at T24 and positive anti-dsDNA in 3.4% at T12 and 3.8% at T24, with similar conversion rates between different anti-TNF drugs and no significant gender difference. A significant difference in ASDAS-CRP was found in axSpA patients with and without ANA at T12 (p=0.047). ASDAS-CRP was 1.16 times higher in patients with ANA comparing to patients without them. However, no difference was found in the others disease activity and functional scores at T12. Furthermore, no significant difference, including ASDAS-CRP, was found at T24. Also, there was no significant difference found when comparing patients with and without anti-dsDNA.

In the PsA group, 94 patients were included, 46.8% were females, mean age at diagnosis of 46.7 $\pm$ 11.7 years and median disease duration of 11.5 (IQR 6.5-16.5) years. Positive ANA were found in 14.9% at T12 and 21.3% at T24 and positive anti-dsDNA in 2.1% at T12 and 3.2% at T24. When comparing the groups with and without ANA and with and without anti-dsDNA at T12 and T24, no significant difference in disease activity and functional scores was found.

Conclusion: This study revealed high rates of serology conversion, similar to the rates described before. The authors found that ASDAS-CRP was higher in axSpA patients with ANA after 12 months of therapy. However, this difference was no longer evident after 24 months. No other significant difference was found

between patients with and without ANA or with and without anti-dsDNA. The authors consider that the induction of autoantibodies may interfere with the response to anti-TNF- α therapy in a short and initial period of time. Long-term follow-up data are lacking to say whether that influence will disappear consistently over the long run, as they observed after 12 months of therapy. However, they can state that, *a priori*, seroconversion should not lead to treatment suspension because of concerns about loss of efficacy.

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POS0915

SUSTAINABILITY OF IXEKIZUMAB RESPONSE AT THE INDIVIDUAL PATIENT LEVEL OVER TIME IN RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS

S. Ramiro¹, R. Bolce², D. Sandoval², A. Kronbergs², S. Y. Park², B. Wu³, J. A. Walsh⁴. ¹Leiden University Medical Center (LUMC), Department of Rheumatology, Leiden, Netherlands; ²Eli Lilly and Company, Lilly Corporate Center, Indianapolis, United States of America; ³IQVIA RDS Canada ULC, QC, Canada, Kirkland, Canada; ⁴University of Utah, Division of Rheumatology and the Department of Dermatology, Salt Lake City, United States of America

Background: Ixekizumab (IXE) has demonstrated efficacy in treating the signs and symptoms of radiographic axial spondyloarthritis (r-axSpA) in patients (pts) up to week (Wk) 52 [1]. Pts may experience fluctuations in the improvements of their symptoms, which may impact their overall quality of life [2]. Providing data at the pt level is important to support consistency and sustainability of efficacy.

Objectives: To analyse IXE response for sustainability at the individual pt level, between Wks 16 and 52.

Methods: COAST-V (NCT02696785) and COAST-W (NCT02696798) were two phase 3, multicentre, randomised, double-blind, placebo-controlled studies (adalimumab was the active control in COAST-V). Pts with active r-axSpA who were either biologic disease modifying anti-rheumatic drug (bDMARD) naïve (COAST-V) or, inadequate responders or intolerant to up to 2 TNF inhibitors (COAST-W) received IXE every 4 weeks (Q4W) or every 2 weeks (Q2W). Only IXE Q4W pts were included in the present analysis (approved dosage for the indication). Separate analyses were conducted on pts who achieved either endpoint; ASAS40 or ASDAS<2.1. The proportion (%) of pts who achieved either ASAS40 or ASDAS<2.1, at Wk 16 and at each visit out to Wk 52 (total of 8 visits) was assessed. Missing data were imputed as non-response. Heatmaps were used to depict the data analysed at the individual patient level across all visits.

Results: In COAST-V, 81 pts enrolled in the trial were initially randomised to IXE Q4W. Of those, 48% (N=39) of pts achieved ASAS40 at Wk 16 (Figure 1), of which 59% (N=23) maintained ASAS40 at every visit afterwards. In total, 85% (N=33) of the ASAS40 achievers at Wk 16 maintained ASAS40 with some (26% (N=10)) fluctuations, between ASAS40 and ASDAS20. In COAST-W, 114 pts enrolled in the trial were initially randomised to IXE Q4W. Of those, 25.4% (N=29) pts achieved ASAS40 at Wk 16, of which, 69% (N=20) maintained ASAS40 at every visit afterwards. In total, 83% (N=24), of the ASAS40 achievers at Wk 16 maintained ASAS40 with some (14% (N=4)) fluctuations, between ASAS40 and ASDAS20. Of the 81 pts initially randomised to IXE Q4W in COAST-V, 35 pts achieved low disease activity (ASDAS<2.1, LDA) at Wk 16. Of those, 54% (N=19) of pts maintained LDA at every visit afterwards. In total, 91% (N=32) of the ASDAS-LDA

Figure 1. Heatmap diagram depicting the sustained effect of IXE over time at the pt level in pts with r-axSpA from COAST-V. Each row corresponds to an individual ASAS40 responder at Wk 16.

achievers at Wk 16 maintained LDA with some (37% (N=13)) fluctuations, between LDA and high disease activity (ASDAS 2.1-3.5, HDA). Of the 114 pts initially randomised to IXE Q4W in COAST-W, 20 pts achieved LDA at Wk 16. Of those, 50% (N=10) of pts maintained LDA at every visit afterwards. In total, 95% (N=19) of the ASDAS-LDA achievers at Wk 16 maintained LDA with some (45% (N=9)) fluctuations between LDA and HDA.

Conclusion: This analysis demonstrates that pts with r-axSpA and treated with IXE Q4W who achieve ASAS40 or ASDAS-LDA at Wk 16 show a sustainable response, at the individual patient level, with similar levels of efficacy over time and at each visit out to week 52.

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POS0916

SAFETY OF BIOLOGIC TREATMENTS IN SOLID ORGAN TRANSPLANT RECIPIENTS: A SYSTEMATIC REVIEW

M. Frederic¹, W. V. Delphine², C. Prati¹, D. Wendling¹, F. Verhoeven¹. ¹CHRU Besancon, Rheumatology, Besancon, France; ²CHRU Besancon, Hepatology, Besancon, France

Background: The management of a broad spectrum of autoimmune/inflammatory diseases has been transformed with the development of biological treatments. However, little is known about their use in solid organ transplant recipients, a group of patients with high risk of serious infections and malignancies.

Objectives: To evaluate complications occurring with biologic treatments in solid-organ transplant recipients.

Methods: A systematic review of the literature was performed on the PubMed including Medline, Embase and Cochrane databases, up to 01/10/2020, to identify published case reports/series regarding the use of biologic treatments in solid organ transplant recipients in the context of chronic inflammatory diseases. Collected data were patient's characteristics (age, sex, reason for transplantation, antirejection regimen, type of biological treatment used, autoimmune/inflammatory disease treated, time between transplantation and bioterapy initiation, treatment duration) and their reported complications (deaths, infections, malignancies, graft dysfunction).

Results: 55 papers were included, representing 177 patients (131 liver, 42 kidney, 3 heart, and 1 liver-kidney transplant recipients). Inflammatory bowel diseases represented largely the most common indication of biologic treatment initiation (80.2%), followed by rheumatic diseases (7.3%), hereditary periodic fever syndromes (6.2%) and psoriasis (5.1%). Anti-TNF α were mainly used (81.4%) before anti- α 4 β 7 integrin Vedolizumab (23.7%) and anti-IL1R Anakinra (7.3%). 25/177 patients had several lines of different treatments. Median treatment duration was 13.5 months. Infections occurred in 48 patients (27.1%) through 76 recorded flares (mostly bacterial 68.4% and viral 19.7%). No therapeutic or epidemiological factor was associated with the occurrence of an infection. 16 patients (9.0%) developed malignancies, especially colorectal (4 cases, 2.3%) and skin cancers (4 cases, 2.3%) or Post-transplantation lymphoproliferative disorders (3 cases, 1.7%). Acute graft rejections occurred in 5 patients (2.8%), mostly in kidney transplants (4/5). Among a total of 177 patients, 6 deaths were identified (3.4%).

Conclusion: This review gathers, to our knowledge, the largest number of published case series/reports about the use of biological treatments in solid organ transplant recipients, providing data about their safety. Caution must be taken about eventual publication bias and the necessity of further head-to-head analysis comparing complications occurring in solid organ transplant recipients cohorts with and without biologic treatments.

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POS0917

EFFECTIVENESS AND SAFETY OF COMBINED BIOLOGICAL THERAPY IN PATIENTS WITH REFRACTORY SPONDYLOARTHRITIS

C. Valero¹, J. P. Baldovino¹, I. Llorente¹, E. Tomero Muriel¹, I. González-Álvarez¹, S. Castañeda¹, R. García de Vicuña¹. ¹Hospital La Princesa, Rheumatology, Madrid, Spain

Background: Biological therapy in combination is discouraged in the guidelines for the treatment of immune-mediated inflammatory diseases, attending to safety reasons. However, combined biological therapy could be a valid alternative in patients with highly refractory spondyloarthritis (SpA) as has been previously demonstrated in some reluctant inflammatory bowel disease patients. Published experiences in the literature are very scarce and the follow-up is limited.

Objectives: The aim of this study is to determine the effectiveness and safety of the association of biological drugs in patients with SpA and describe the clinical profile of these patients.

Methods: This is a retrospective, cross-sectional and descriptive study. We included patients with SpA who had received simultaneously at least two biological drugs with different therapeutic targets. We reviewed the database of our hospital that included all patients diagnosed with SpA meeting the ASAS criteria for axial SpA under active biological treatment.

Demographics, clinical and laboratory data, previous treatments, disease activity index (ASDAS CRP) and adverse events were collected. Remission and low activity criteria were considered according to cut-off descriptions in ASDAS CRP, <1.3 and 2.1, respectively.

Results: We identified six patients with SpA receiving combined biological therapy (Table 1). All patients showed high disease activity at the start of combination treatment and most of them presented several disease domains involvement. The average of previous biologics drugs was 5.33 $\pm$ 1.75. Four patients received an anti-TNF in combination with an anti-IL17 agent and one patient with concomitant Crohn disease was prescribed an anti-TNF combined with an anti-IL23 agent. The sixth patient, with SpA and concomitant systemic lupus erythematosus, received rituximab with an anti-IL17 (Table 1). The median treatment duration of the combined biological therapy was 12.5 months (IQR 4-43.5; range: 4-117). All patients achieved low disease activity or clinical remission at some point during follow-up, allowing for initial de-escalation of initial dose in some patients. Only one patient experienced a transient relapse (unic uveitis episode). No relevant adverse effects have been found clearly attributable to combination therapy. A 60-year-old patient with multiple comorbidities has stopped treatment due to aggravation of a previous liver cirrhosis.

Conclusion: Combined biological therapy could be an effective therapeutic alternative to patients with multidomain and refractory SpA. In our series, we provide acceptable safety data for follow-up periods that it are longer than the majority of reported cases to date.

Table 1. Main characteristics of patients with SpA and treatment schedules.

Characteristics	Patients (N= 6)		
Male, n	3		
Age at diagnosis (years)	25 (8-52)		
mean (IQR)			
Ethnicity, n	5 Caucasian; 1 Hispanic		
Smoker, n	1		
Diagnosis	3 Juvenile SpA-ERA, 2 PsA, 1 SpA + SLE		
Duration of disease (years) mean (IQR)	20.5 (5.25-33.5)		
Domains involved, n	6		
Axial	6		
Peripheral	6		
Enthesis	5		
Extra-articular	2 psoriasis (1 with aortic insufficiency), 2 uveitis, 1 Crohn disease		
HLA-B27 +, n	4		
Previous biological or targeted therapy, n			
Anti-TNF	6 (5 etanercept, 5 adalimumab, 4 infliximab, 4 golimumab, 3 certolizumab)		
Anti-IL17	6 (5 secukinumab, 1 ixekizumab)		
Jakinibs	1 (1 tofacitinib)		
Other	3 (1 anakinra, 1 tocilizumab, 1 apremilast)		
Combined biological Therapy	Treatment 1 + Treatment 2	Time of follow-up (months)	Actual state
	1.GOL 100mg/4w + SEC 150mg/1w	117	Remission
	2.ETN 50mg/1w + SEC 150mg/2w	9	*Low activity
	3.ETN 50mg/1w + SEC 150mg/4w;	16	Remission
	4.GOL 100mg/4w + SEC 150mg/2w	4	Low activity
	5.GOL 100mg/3w + RIS 250mg/12w	4	Low activity
	6.RTX 2g infusion + SEC 150mg/4w	19	Remission

*At treatment interruptionAbbreviations: ERA: enthesitis-related arthritis; ETN: etanercept; GOL: golimumab; IQR: interquartile range; PsA: psoriatic arthritis; RIS: risankizumab; RTX: rituximab SEC: secukinumab; SLE: systemic lupus erythematosus; SpA: spondyloarthritis; w: week.

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