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THU0127 IMMUNOGENICITY AND SAFETY OF 23-VALENT PNEUMOCOCCAL VACCINE IN PATIENTS WITH RHEUMATOID ARTHRITIS: RESULTS FROM 5-YEAR FOLLOW UP

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Background: In rheumatology, comorbid infections have significant impact on patients' morbidity, mortality and quality of life. Prevention of infections is an integral part of supervision of these patients.

Objectives: The aim of the study is to investigate immunogenicity and safety of 23-valent polysaccharide pneumococcal vaccine (PPV-23) in patients with rheumatoid arthritis (RA) in a five-years period.

Methods: The study included 79 RA patients with ≥ 2 recent episodes of respiratory tract infections (bronchitis, pneumonia). 52 RA pts were treated with methotrexate (MT), 14 – with leflunomide (Lef), 13– with TNF- α inhibitors + MT. One dose (0,5 ml) of PPV-23 was administered subcutaneously without discontinuing MT/Lef or 28-30 days prior to initiation of TNF- α inhibitors. Control visits were scheduled as follows: at baseline (Visit 1), and in 1, 3, and every year after immunization. 39 out of 110 pts were followed for 24 months, 23 pts – for 36 months, 23 pts – for 48 months, and 18 – for 60 months. Standard clinical examination and lab tests were performed at each visit.

Levels of serum antibodies (AB) to Pneumococcal capsular polysaccharide were measured with VaccZymeTM PCP IgG 2 panels (The Binding Site Group Ltd, Birmingham, UK). Coefficient of post-immunization response (CPR) was determined for each patient as the ratio of AB levels at Visits II, III, IV, V, VI and VII to AB level at Visit I.

Results: 53 (67%) patients did not have any reactions to the vaccine, 26 (33%) patients indicated pain, swelling and hyperemia of the skin (diameter up to 2 cm) at the injection site of the vaccine, low-grade fever. These typical reactions following vaccination are completely regressed within days without any additional treatment. They were not associated with RA therapy and did not require changes in ist schemes.

Pronounced positive immune reaction to PPV-23 was documented in all RA patients on different therapeutic regimens as significant AB incremental growth. Significantly high level of post-immunization response still persisted after 4 and 5 years of follow-up. The proportion of responders to PPV-23 after 5 years reached 73% among RA patients. (Table).

No case of clinically or radiographically confirmed pneumonia was documented during the follow up period, although one case of interstitial viral pneumonia was registered in 6 month after immunization.

Not a single vaccination-related RA exacerbation episode or new autoimmune phenomenon was documented during the follow-up.

Table. AB dynamics in RA pts during 5-year FUP, M $\pm$ σ .

	Visit II (1 month)	Visit IV (12 month)	Visit V (24 month)	Visit VI (36 month)	Visit VII (48 month)	Visit VIII (60 month)
RA	82,20	250,62*	298,70*	107,8	140,5*	194,8*
patients	[46,00; 133,50]	[187,70; 316,90]	[175,99;420,81]	[98,2;159,4]	[107,9;208,3]	[120,1;361,4]

*p<0,05

Conclusion: Thus, all given prove the sufficient immunogenicity and safety of 23-valent pneumococcal vaccine in RA patients after 5 years of follow-up, getting different therapeutic regimens.

Disclosure of Interests: None declared

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THU0128 GLUCOCORTICOID TAPERING IN MONTHLY 1-MG DECREMENTS DOES NOT RESULT IN CLINICALLY MANIFEST ADRENAL INSUFFICIENCY IN PATIENTS WITH RHEUMATOID ARTHRITIS: LEARNINGS FROM THE PHASE 3/4 SEMIRA STUDY

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Background: Systemic glucocorticoids (GCs) are used to treat serious inflammatory diseases but are associated with adverse events. Guidelines recommend tapering GCs to the lowest possible dose and discontinuing them as soon as possible. Physicians have concerns that reductions, even from low doses, may increase disease symptoms or cause adrenal insufficiency (AI), especially in patients receiving GCs long-term. The expectation of AI risk may be inflated by false positives in cortisol testing of patients without relevant symptoms and by a lack of robustly designed GC taper trials. The international, multicenter SEMIRA trial evaluated a taper scheme in rheumatoid arthritis (RA) patients receiving tocilizumab (TCZ) $\pm$ conventional synthetic disease-modifying antirheumatic drugs (csDMARDs).¹

Objectives: To determine whether GC tapering in the SEMIRA trial resulted in any cases of AI.

Methods: Eligible patients had low disease activity or remission for ≥ 4 weeks and were receiving a stable prednisone regimen (5 mg/day) + TCZ $\pm$ csDMARDs for ≥ 4 weeks. Patients had to have received ≥ 6 months' total TCZ + GCs (prednisone equivalent 5-15 mg/day). Patients were randomly assigned (1:1) to double-blind continued prednisone 5 mg/day (n = 128) or prednisone taper (n = 131). TCZ $\pm$ csDMARDs remained stable during the 24-week study. The prednisone taper consisted of 1-mg decrements every 4 weeks starting at randomization and ending at GC discontinuation (week 16). RA flares were treated with prednisone 5 mg/day for 2 weeks. The primary assessment was maintenance of disease control with GC discontinuation. The protocol provided evidence-based guidance for diagnosis and management of AI. Confirmatory testing was recommended for patients with suspected AI, but routine precautionary ACTH stimulation testing was not mandated.

Results: In the taper arm, 65% of patients achieved "treatment success" by meeting all key secondary end point components (maintained low disease activity, experienced no flares, and had no confirmed AI necessitating replacement therapy) at week 24 versus 77% of continued patients (risk ratio for treatment success, 0.833 [95% CI, 0.714-0.972]; p = 0.021). None of the taper patients required ACTH stimulation testing, and no cases of AI were reported.

Conclusion: SEMIRA demonstrated the usefulness of a new standardized GC dose taper scheme. Two-thirds of patients receiving TCZ underwent successful tapering and could stop GCs entirely, which is higher than the spontaneous 35% discontinuation rate observed in real-world RA patients² and underscores the potential to further reduce glucocorticoid burden. Clinical AI was not observed; thus, routine laboratory testing may be unnecessary in real-world applications of this taper scheme.

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